SUPREME AUDIT INSTITUTION OF INDIA
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Report of the Comptroller and Auditor General of India on Public Health Infrastructure and Management of Health Services in the State

Government of Odisha
Health & Family Welfare Department

Report No. 7 of the year 2024
(Performance Audit-Civil)

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Preface

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

The Report contains significant results of the Performance Audit of 'Public Health Infrastructure and Management of Health Services in the State' relating to Health and Family Welfare Department, Government of Odisha.

The instances mentioned in this Report are those, which came to notice in the course of test audit for the period 2016-17 to 2021-22 as well as those which came to the notice in earlier years, but could not be reported in the previous Audit Reports. Instances relating to the period subsequent to 2021-22, have also been included, wherever necessary.

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

Executive Summary

EXECUTIVE SUMMARY

Public health infrastructure plays a significant role in making available, the resources, materials and facilities to individuals, for ensuring good health, and also by providing to communities/ States, the wherewithal to prevent diseases, respond to emergencies and deal with challenges to health. The framework for strengthening health infrastructure in India is guided by the National Health Policy, 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 Goals (SDG 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.

Despite gradual improvement in health status over the years, preventable mortality and morbidity has remained high in the State. ln view of the criticality of the healthcare facilities, in providing necessary healthcare to the citizens, the Government spending on the same, and the significant gaps in the available health infrastructure, the Performance Audit of *'Public Health Infrastructure and Management of Health services in the State'* was taken up. An attempt has been made in this Report, to assess adequacy of funding, health infrastructure, human resources, availability of drugs and equipment, and management of healthcare and emergency services, in healthcare facilities at different levels. This Report aims at identifying the areas, that require systemic corrections and improvement.

Key Findings

Health Infrastructure

Availability of healthcare facilities in the State, was not in consonance with the IPHS norms. There was a significant shortfall against these norms, in the State, with 27 *per cent* shortage in Sub-centres (SCs), 23 *per cent* in Primary Health Centres (PHCs) and 12 *per cent* in Community Health Centres (CHCs). Despite the shortages, the Government had not approved the proposals for creation/ upgradation of 72 health institutions in the State, as of 31 March 2022.

Augmentation and improvement of health infrastructure was delayed, on account of the tardy pace of construction of hospital buildings in the State. Execution of 456 works, approved during FYs 2016-17 to 2019-20, by the National Health Mission, Odisha, had not been completed, even after two to five years of approval, though ₹165.95 crore had been incurred on these works.

Provision of residential accommodation for the staff of the hospitals, was quite inadequate, compelling them to reside outside the hospital vicinity. In seven test-checked District Headquarters Hospitals (DHHs), only 312 (25 *per cent*) staff quarters were available for 1,269 staff, whereas only 272 staff quarters (14 *per cent*) were available for 1,919 teaching and non-teaching staff, in the two test-checked MCHs. Hostel accommodation facilities for students, in both the test-checked MCHs, were insufficient, due to which, the students were constrained to stay in the staff quarters and unsafe buildings.

Against the requirement of 91,392 hospital beds, as per the National Health Policy, 2017, only 32,767 beds (64 *per cent* shortage) were available in the State, seriously impacting hospital functions, as it is the primary cause of denial of admission, cancellation of surgeries and delays in emergency admissions. There were 42 *per cent* and 49 *per cent* shortages of beds in the DHHs and CHCs of the State, respectively, as compared to IPHS norms. Due to shortage of beds, patients were being treated on the floors or in congested environment, by placing additional beds.

Human resources

The human resources, available in hospitals across the State, were not in consonance with the IPHS norms. The doctor to population ratio in Odisha was 1:1,622 against the World Health Organisation norm of 1:1,000. For staff nurses, the ratio was 1:3,829, against the norm of one nurse for 300 people. The overall vacancy of specialist doctors in the State was 49 *per cent*, as compared to the sanctioned strength, whereas it was 40 *per cent* for Medical Officers. In case of Staff Nurses/ Nursing Officers, 30 *per cent* posts were vacant.

The vacancy in the cadre of doctors (including specialists), was 40 *per cent* in DHHs, whereas it was 58 *per cent* in CHCs. There was a shortage of 28 *per cent* MBBS doctors in PHCs, which were the first point of contact of the rural people, to a qualified doctor in the public health system. Huge gap in availability of specialists in CHCs of the State, was noticed, as 58 *per cent* of sanctioned posts were vacant.

Shortage of human resources in MCHs, hampered medical education and research work, and compromised the quality of tertiary healthcare services.

Healthcare services

Community Health Centres were found deficient in providing specialised OPD services to the patients, due to absence of specialist doctors. Five out of the 14 test-checked CHCs, lacked all the prescribed specialised OPD services. Basic amenities like seating arrangements and toilet facilities, for OPD patients, were found inadequate in the test-checked hospitals.

IPD wards in DHHs and MCHs lacked central oxygen supply. In two test-checked MCHs, only 325 beds (42 *per cent*) had the facility for central oxygen supply, against the requirement of 775 IPD beds. There were considerable gaps related to the availability of in-patient services, as most of the test-checked DHHs failed to provide Psychiatry, Skin and VD, Dental and Trauma Care services.

Accident and Trauma Care Centres for strengthening and boosting the emergency services, were not available in four of the seven test-checked DHHs. The TCCs in other three DHHs, lacked infrastructure and manpower. Dedicated TCC for Pandit Raghunath Murmu Medical College and Hospital, Baripada had not been created and the equipment worth ₹3.04 crore, was lying idle.

There was a serious dearth of emergency services. None of the seven test-checked DHHs, had dedicated emergency services, equipped with mobile X-ray/ laboratory services, OT facilities, emergency beds and separate manpower. Emergency equipment such as ventilators, oxygen concentrators, *etc.*, supplied to the health facilities were found idle, due to non-provisioning of ancillary

infrastructure and equipment. The CHCs also lacked blood storage units to meet the emergency requirement, as nine of the 14 test-checked CHCs had no blood storage units.

Maternity and New-born Services

Significant deficiencies were observed in all three major components of maternity services (Antenatal care, Intra-partum care and postnatal care), despite the fact that the Maternal Mortality Ratio (136) and Infant Mortality Rate (36.3) in the State had remained behind the national average of 103 and 35.2, respectively. Also, the Neo-natal mortality rate of the State remained at 27, compared to the national average of 24.9.

Support and auxiliary services including diet, laundry, mortuary, *etc*., were also deficient, in terms of availability of infrastructure and equipment, as compared to the norms of IPHS.

Diagnostic services

The full range of Radiology services were not available in any of the test-checked DHHs/ CHCs. The DHHs of Bhadrak, Kandhamal and Nuapada were most deficient in terms of having radiology services. Prescribed pathology services for extending evidence based healthcare to the public, were underprovided in the test-checked hospitals, due to shortage of skilled manpower and essential equipment. Important investigations like cytology, bone marrow aspiration, brucellosis, *etc*., were not carried out in most of the test-checked DHHs.

Drugs and equipment

Government was not successful in providing an uninterrupted supply of essential drugs to patients in public healthcare facilities, in terms of its own prescribed essential/ critical drug list. There was a short supply of 53 *per cent* of the indented quantity of essential drugs and medical consumables to public health facilities, during FYs 2016-17 to 2021-22. Monitoring/ supervision of supply chain management of drugs and medical consumables was inadequate, leading to stock out and expiry of essential medicines. It was noticed that 6.07 crore units of essential drugs, valued ₹11.68 crore, had expired during FYs 2016-17 to 2021-22. The norms and parameters prescribed for storage of medicines, were also not followed for ensuring efficacy of procured medicines.

Hospitals were not fully equipped with essential equipment, in terms of IPHS/ National Medical Council norms. In test- checked DHHs, the shortfall in equipment ranged from 47 *per cent* to 57 *per cent*, compared to the IPHS norms. Test-checked CHCs and PHCs were also found lacking in essential equipment. Equipment and medical devices were lying idle/ non-functional, in hospitals, due to non-provisioning of the required infrastructure and manpower. Non-availability and idling of equipment, impacted the delivery of healthcare services in hospitals, as well as medical education in the MCHs.

Regulatory issues

Bio-medical waste management in the State was inadequate. About 10 to 50 *per cent* of the healthcare facilities, functioning in the State, had no authorisation from the State Pollution Control Board, during the period from FYs 2016-17 to 2021-22. Besides, 48 *per cent* of the healthcare facilities had defaulted in regular

submission of their annual reports to the SPCB. Equipment like autoclaves and shredders, costing ₹52.64 crore, supplied to the healthcare facilities for bio-medical waste management, were found idle, due to non-provisioning of ancillary civil infrastructure.

Administration of the Odisha Clinical Establishment (Control and Regulation) Act and Rules made thereunder, was deficient, as the clinical establishments were found functioning without valid registration. Inspection of clinical establishments by the Inspecting Authorities, was either absent or inadequate.

Implementation of Central and State sector health schemes

Implementation of the disease control programmes in the State, under NHM, suffered due to inadequate manpower, low spending efficiency *etc*., impacting programme outcomes adversely. The State suffered from shortage of human resources, in critical positions, at the district level, affecting successful implementation of the programmes. The activities approved in Programme Implementation Plans for implementation of various disease control programmes, were not carried out fully to achieve the desired goals/ targets set in the National Health Policy/ SDGs.

Implementation of the National Programme for Health Care of the Elderly, for providing dedicated comprehensive healthcare to the elderly people, was not adequate and efficient, despite availability of funds. Only 9 to 20 *per cent* of the available funds under the programme, were utilised, during FYs 2016-17 to 2021-22. Dedicated geriatric wards for treatment of the elderly people, were not available in five of the seven test-checked DHHs. Similarly, funds allocated under the National Tuberculosis Elimination Programme and National Leprosy Eradication Programme (NLEP) were not fully utilised, as there were unspent balances of ₹22.24 crore under these two programmes, as of March 2022.

Sustainable Development Goal

The Odisha State Indicator Framework (OSIF) was not fully aligned with the National Indicator Framework, for monitoring progress on Sustainable Development Goal 3 (SDG 3). Mapping of the schemes and the department, with the targets in the OSIF, was inadequate. Instances of non-provision of funds or low expenditure for schemes mapped to the goals, were also noticed. The Department had neither set the targets for the health indicators, for the districts, nor had it prepared any roadmap, for the districts, to achieve the SDG goals.

Recommendations:

1. ***State Government may take suitable steps to address the gaps in human resources in the health sector, as also to rationalise the manpower in hospitals across the State, based on appropriate criteria, such as patient load or population. A periodic review of the vacancies may be conducted in all hospitals, in order to ensure timely recruitment of doctors, nurses and paramedical staff.***
2. ***Hospitals may maintain records for absconding cases and analyse the reasons of absconding, and take appropriate action for addressing the shortcomings for delivering quality healthcare service to patients.***

3. ***State Government may draw up an action plan to prioritise the provisioning of most essential healthcare services such as emergency, trauma care services, etc. It may adopt and implement IPHS norms fully, in provisioning OPD, IPD and Emergency services, ensuring availability of essential equipment and human resources.***
4. ***State Government may ensure availability of round-the-clock accident and trauma care services, along with functional ICU facilities, for critically ill patients, requiring highly skilled lifesaving medical aid.***
5. ***Essential radiology and pathology services, as per IPHS, may be ensured in hospitals, in view of increasing reliance on diagnostics, for treatment of patients.***
6. ***OSMCL may put in place a real-time Inventory Management System, with deployment of Point-of-Sale Terminals, at all DDCs, to clearly establish the actual availability of stocks of medicines, at all the hospitals and PHCs, on a real-time basis, for use by both the officials of the Corporation, as well as the healthcare facilities. Besides, the system should also enable a two-way communication and/ or work flow system, to assess and communicate the requirements, in the event of medicines getting exhausted earlier than the estimated time, due to heavy demand, or in case of medicines being over-stocked, due to slow movement/ demand, etc.***
7. ***State Government may ensure availability of the full range of essential equipment, at all levels in hospitals. It may also ensure correlation between the availability of infrastructure, manpower and equipment, to avoid idling of medical equipment and medical devices.***
8. ***The Department and its field functionaries may maintain a database of the approved works and coordinate with the line departments to monitor execution of the works, for ensuring their completion and handing over the same to the user agencies, as per the schedule.***
9. ***State Government may ensure fully equipped SNCUs, as per the MNH toolkit and IPHS, for treating critically ill newborns, in district hospitals.***
10. ***State Government may enhance its health budget and expenditure for healthcare services, to ensure the availability of adequate and quality healthcare infrastructure and services.***
11. ***The Mission Director, NHM may ensure optimum utilisation of funds received under various National Health Programmes, through effective implementation and monitoring.***
12. ***State Government may review the manpower position relating to mental health professionals and fill up the vacancies there against, with a view to ensuring quality mental healthcare services to patients, under the programme.***
13. ***State 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, as per NHP and SDG.***

14. ***State Government may take effective steps for filling up the vacancies and implementing the activities under NLEP more efficiently, with focus on high-endemic districts to eliminate the disease from the State.***
15. ***State Government may intensify the programme related activities in high burden districts with continuous monitoring and critical evaluation, for eliminating malaria from the State.***
16. ***State Government may strengthen the monitoring mechanism for achieving the targets for screening of various diseases, so that effective and timely treatment can be provided.***
17. ***State Government may ensure strict adherence to the BMW Management Rules, in order to provide an infection-free environment in the hospitals.***
18. ***State Government may ensure construction of effluent treatment plants in all DHHs.***
19. ***State Government may ensure creation of the required infrastructure, before procurement of biomedical equipment, so that the procured equipment is made functional, for treatment of bio-waste.***
20. ***The Health and Family Welfare Department may strengthen the enforcement mechanism and ensure regular inspections, so that all the clinical establishments, functioning in the State, comply with the provisions of the Odisha Clinical Establishment (Control and Regulation) Act and Rules.***
21. ***The Department may initiate disciplinary action for the laxity by the clinical establishments which were not registered under the OCE Act, but were issued trade licenses.***
22. ***State Government may take early steps to implement the action points, outlined in the OSIF, such as the development of a dashboard, Odisha SDG Index, baseline report, etc., and strengthen the monitoring mechanism, at all levels, for achieving the SDG goals and targets.***

Chapter 1

Introduction

CHAPTER 1

INTRODUCTION

The focus of India's National Health Policy, 2017, is to strengthen the trust of the common man in the public healthcare system, by making it predictable, efficient, patient-centric, affordable and effective, with a comprehensive package of services and products that meet the immediate healthcare needs of most of the people. The policy also recognises the pivotal importance of the Sustainable Development Goals (SDG) in ensuring healthy lives and promoting well-being for all at all ages.

As per the NITI Aayog's report (Health Index, June 2019), the State of Odisha ranked 19, among 21 larger States, in the Health Index, with only Bihar and Uttar Pradesh, behind. Its position, in regard to the Health Index in the reference year (2017-18), in fact, deteriorated from the base year (2015-16), by 3.46 points. As such, there is a vast scope for improvement in the healthcare services at all levels, in order to enhance the faith of patients, in the services rendered by Government hospitals.

In this context, the performance of the public healthcare system, in the State of Odisha, is critical in achieving the goals of the National Health Policy and SDG - 3 (Health and Well Being), for the country as a whole. This assumes importance, as the health indicators, in Odisha, lag behind the national average, in a number of cases, as shown in **Table 1.1.**

Table 1.1: Health Indicators of Odisha, compared to India

Sl. No.	Health indicator[1]	Odisha		India	
		2016	2021	2016	2021
1	Total Fertility Rate (TFR)	2.1	1.8	2.2	2.0
2	Institutional deliveries	85.3	92.2	78.9	88.6
3	Neo-natal Mortality Rate (NMR)	28.2	27.0	29.5	24.9
4	Infant Mortality Rate (IMR)	39.6	36.3	40.7	35.2
5	Under 5 Mortality Rate (U5MR)	48.1	41.1	49.7	41.9
6	Maternal Mortality Ratio (MMR)	150 (2018)	136 (2019)	113 (2018)	103 (2019)
7	Birth Rate	18.6	18 (2019)	20.4	19.7 (2019)
8	Death Rate	7.8	7.1 (2019)	6.4	6.0 (2019)

(Source: National Family Health Survey (NFHS)-5, Sample Registration Systems (SRS) and Economic Survey, India, 2021-22)

[1] **TFR**: Average number of children that would be born to a woman (15-49 years); **Institutional Deliveries**: Proportion of deliveries conducted in public and private health facilities against the number of estimated deliveries during the year; **NMR**: Number of neonatal deaths in a given year per 1,000 live births in that year; **IMR**: Number of infant deaths in a year per 1,000 live births during the year; **U5MR**: Number of child deaths of less than 5 years per 1,000 live births during the year; **MMR**: Annual number of maternal deaths per 1,00,000 live births; **Birth Rate**: The number of live births per 1,000 estimated midyear population, in a given year; **Death Rate**: The number of deaths per 1,000 estimated mid-year population in one year, at a given place

Thus, while the State is behind the national indicators in regard to certain health indicators, such as NMR, IMR and MMR, its position is slightly better in regard to TFR, institutional deliveries, U5MR, as compared to the National average.

1.1 Public Healthcare System in the State

The landscape of public healthcare facilities in Odisha, is structured into three levels, for providing primary care, secondary care and tertiary care, under the administrative control of the Health and Family Welfare Department, as discussed in **Table 1.2.**

Table 1.2: Three tier system of healthcare services in the State

Primary Healthcare Service	Provided through Primary Health Centres (PHCs) and Sub-centers (SCs). A Sub-centre is the first point of contact between the health care system and the community. PHCs serve as the first port of call for a patient, to a qualified doctor in the public health system. While an SC is headed by an Auxiliary Nurse Midwife (ANM)/ Health Worker (Female), MBBS doctors look after the PHCs.
Secondary Healthcare Service	Community Health Centres (CHCs), Sub-Divisional Hospitals (SDHs) and District Headquarter Hospitals (DHHs), constitute the secondary level of the public healthcare system. These health facilities provide curative and specialist healthcare services to the community. CHCs provide referral healthcare for cases from the PHCs, as also for patients in need of specialist care, approaching the centre directly. DHHs are responsible for providing comprehensive secondary health care services, at an acceptable level of quality.
Tertiary Healthcare Service	Tertiary healthcare refers to the third level of the health system, in which specialised consultative care is provided, usually on referral from primary and secondary medical care centres. Specialised intensive care units, advanced diagnostic support services and specialised medical personnel, are the key features of tertiary healthcare. Under the public health system, tertiary care service is provided by Medical College and Hospitals (MCH) and advanced medical research institutes.

(Source: Indian Public Health Standards)

The healthcare facilities available in the State, as of March 2022, are given in **Table 1.3.**

Table 1.3: Healthcare Facilities in the State

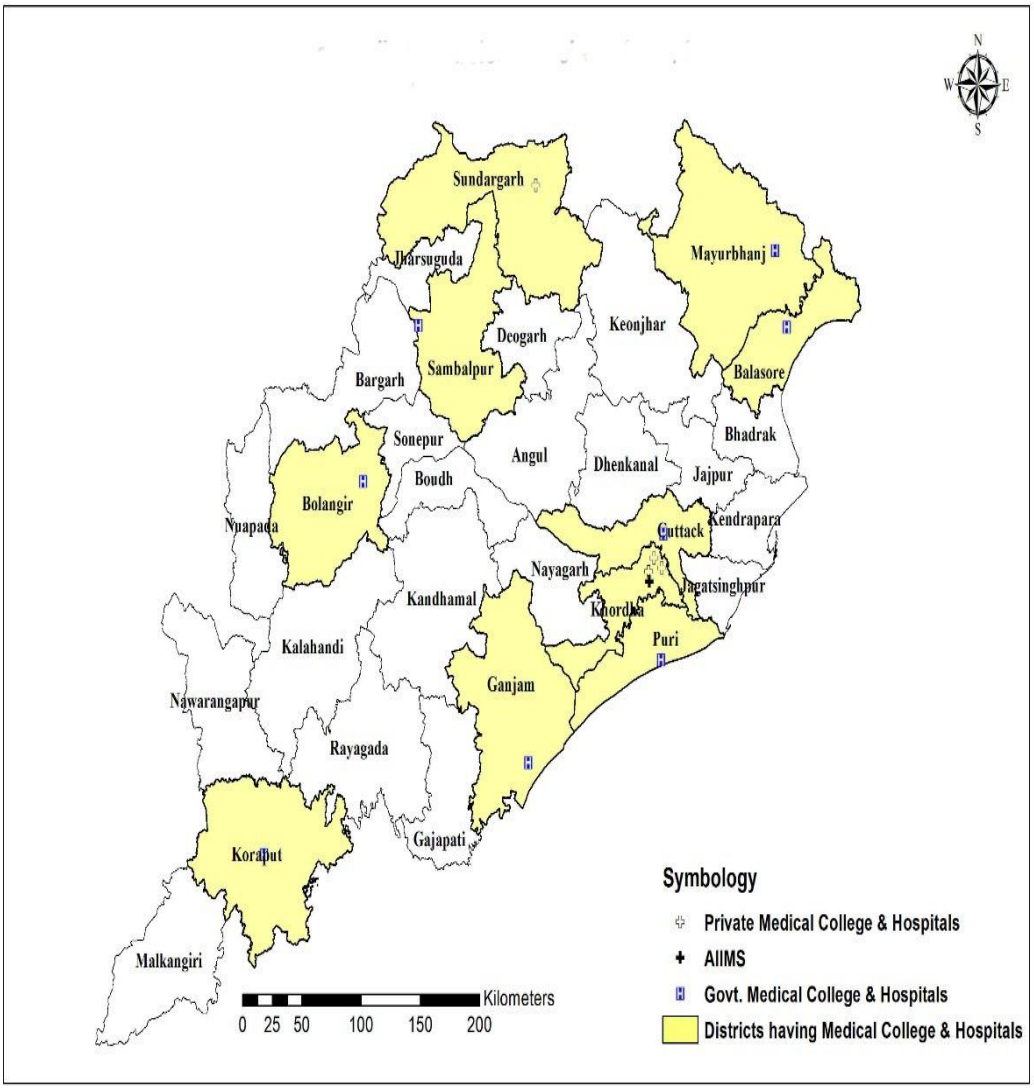
Sl. No.	Healthcare Facilities	Number
1	Government Medical Colleges and Hospitals	8
2	Private Medical Colleges and Hospitals	4
3	Super Specialty Hospitals	3
4	District Headquarter Hospitals (DHH)[2]	32
5	Sub-Divisional Hospitals (SDH)	32
6	Community Health Centres (CHC)	382
7	Primary Health Centres (PHC)	1,340
8	Sub-Centres (SCs)	6,688

(Source: Data provided by the Directorate of Health Services, National Health Mission, Odisha)

[2] Including: (i) Capital Hospital, Bhubaneswar and (ii) Rourkela Government Hospital, Rourkela, being the two major hospitals in the State, with District Headquarter Hospital status

The availability of Medical Colleges and Hospitals and the All India Institute of Medical Sciences (AIIMS), is shown in **Map 1.1**.

Map 1.1: Districts having MCHs and AIIMS



The status (May 2023) of MCHs functioning in the State, including four new MCHs established during 2018-23, is given in ***Appendix 1.1***.

1.2 Organisational set-up

The Health and Family Welfare (H&FW) Department, GoO, is responsible for the management of healthcare services in the State. It formulates policies for providing health care services, with the assistance of its different Directorates.

In addition, the Odisha State Medical Corporation Limited (OSMCL) handles procurement of drugs, consumables and equipment, and their supply to various healthcare institutions in the State. Further, the Drug Controller, Odisha, issues licenses for drug manufacturing and sales establishments, Drug Testing Laboratories, Blood banks, *etc*. The detailed organisational structure of the Department is given in ***Appendix 1.2***.

1.3 Audit Objectives

The Performance Audit of 'Public Health Infrastructure and Management of Health Services in the State' was undertaken with the objective of assessing the following:

1. Adequacy of funding for healthcare services in the State
2. Availability and management of the healthcare infrastructure in the State
3. Availability of drugs, medicines, equipment and other consumables, to meet the requirements of the beneficiaries adequately
4. Availability of necessary human resources (doctors, nurses, paramedics, *etc*.) at all levels
5. Adequacy and effectiveness of the regulatory mechanisms for ensuring quality healthcare services in the public/ private healthcare facilities
6. Whether spending on health has improved the health and wellbeing of the people, as per SDG - 3
7. Efficiency of the State Government in Emergency Management

1.4 Audit Criteria

The audit criteria for the Performance Audit are derived from:

- National Health Policy, 2017
- Sustainable Development Goals
- Indian Public Health Standards (IPHS), 2012
- NHM Assessor's Guidebook and guidelines issued from time to time
- Kayakalpa Guidelines
- Indian Medical Council Act, 1956 / National Medical Commission Act, 2019
- Minimum Standard Requirements Regulations, 1999
- Clinical Establishment Act, 2010
- Odisha Clinical Establishment Act, 1991 and rules made thereunder
- Bio Medical Waste Management and Handling Rules, 1998 and Bio Medical Waste Management Rules, 2016
- Atomic Energy Regulatory Board guidelines for imaging units, *etc*.
- Standard Operating Procedures for management at COVID-19 hospitals/ units, GoO
- Odisha Budget Manual, and
- Departmental/ Government policies, rules, orders, manuals and regulations.

1.5 Scope and Methodology

The Performance Audit was conducted during January to August 2022, covering the period from financial years (FYs) 2016-17 to 2021-22. The Audit

methodology involved scrutiny of records at the Health and Family Welfare (H&FW) Department, Directorates and sampled units. Audit also involved document analysis, collection of information through questionnaires/ proforma, response to audit queries/ observations, patient-surveys through structured questionnaires, *etc*. Besides, joint physical inspection of hospital assets, sub-stores and civil works, was also conducted. Analysis of the database of the web application (*e-Niramaya*) used by the OSMCL and hospitals was also conducted, through data-analysis tools, such as Microsoft Excel.

An Entry Conference was held on 7 January 2022, with the Additional Chief Secretary to Government of Odisha, H&FW Department, wherein the audit objectives, audit criteria, audit scope and methodology, were discussed.

The draft report was issued to the H&FW Department on 1 November 2022. The responses received from the Department have been suitably incorporated in the Report.

1.6 Audit Sampling

At the State level, the H&FW Department, with eight Controlling units, was selected for the Performance Audit. Two out of seven MCHs established prior to 2018 and seven out of 30 DHHs, had been selected, using the random sampling method. Similarly, two CHCs, under each DHH (total 14 CHCs), were selected, using the random sampling method. One PHC, under each sampled CHC, had been selected on judgmental basis. The details of sampling units are given in ***Appendix 1.3.***

Keeping in mind the limitation of resources, the sampling strategy was designed to capture and evaluate appropriate amounts of unbiased data, to ensure that the Performance Audit was able to pick up variations across the entire audit period. Thus, a questionnaire was designed for the audit, to capture data at different frequencies - yearly, monthly and weekly.

To ensure variations/ coverage in the data recorded on monthly basis, different months of the audit period were covered. For this, each year was divided into four quarters and the middle month of each quarter was selected for capturing data for indicators, reported at monthly frequency. Following this, to capture weekly frequency, the first week of the selected months was selected, to maintain consistency.

Details of the years, months and weeks selected, are given in **Table 1.4.**

Table 1.4: Details of months and years, sampled for audit check

Year	Quarter-1	Quarter-2	Quarter-3	Quarter-4	Weeks selected
2016-17	May 2016				1-7 May 2016
2017-18		August 2017			1-7 August 2017
2018-19			November 2018		1-7 November 2018
2019-20				February 2020	1-7 February 2020
2020-21	May 2020				1-7 May 2020
2021-22		August 2021			1-7 August 2021

1.7 Structure of the Report

This report has been structured, keeping in mind the major components of healthcare, *i.e.* (i) Introduction, (ii) Human Resources, (iii) Healthcare Services,

(iv) Availability of Drugs, Medicines, Equipment and Other Consumables, (v) Healthcare Infrastructure, (vi) Financial Management, (vii) Implementation of Central and State sector health schemes, (viii) Adequacy and Effectiveness of the Regulatory Mechanisms and (ix) Sustainable Development Goal 3.

Audit findings, relating to the identified components, have been discussed in detail, in the succeeding chapters.

1.8 Acknowledgement

Audit acknowledges the co-operation of the H&FW Department, Government of Odisha, Directorate/ Controlling offices and the field functionaries, in the conduct of the audit.

Chapter 2

Human Resource

CHAPTER 2

HUMAN RESOURCES

The human resources, available in hospitals across the State, were not in consonance with the IPHS norms. There were huge gaps between the availability and requirement of specialists in CHCs. Further, there were significant shortages of staff nurses and paramedics in hospitals. Pathological investigations were hindered in the hospitals, wherever Laboratory Technicians were not deployed as per the sanctioned strength and/ or IPHS. The deployment of medical staff was not rational, for ensuring optimum utilisation of the scarce manpower.

Shortage of human resources in MCHs hampered medical education and research work, and compromised the quality of tertiary healthcare services.

2. Adequacy of human resources

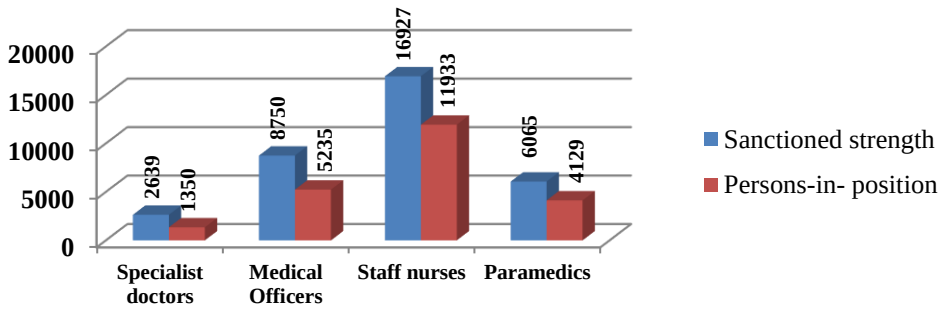
For effective and efficient functioning of a healthcare facility, adequate human resources need to be provisioned. The number and type of staff required, in terms of specialists, medical officers, nurses, allied health professionals and administrative support staff, are outlined in the IPHS.

The doctor to population[3] ratio in Odisha is 1:1,622[4], against the World Health Organisation (WHO) norm of 1:1,000. For staff nurses[5], the ratio was 1:3,829, against the norm of one nurse for 300 people.

2.1 Availability of human resources in the healthcare institutions of the State

Audit observed that there were acute shortages of doctors, nurses and paramedics, in the entire State. Details of the persons-in-position as of March 2022, *vis-a-vis* the sanctioned strength, in the healthcare facilities of the State, are given in **Chart 2.1.**

Chart 2.1: Sanctioned strength and persons-in-position



(Source: Data furnished by Director of Health Services, Odisha)

[3] Population as per Economic Survey 2021-22, Government of Odisha

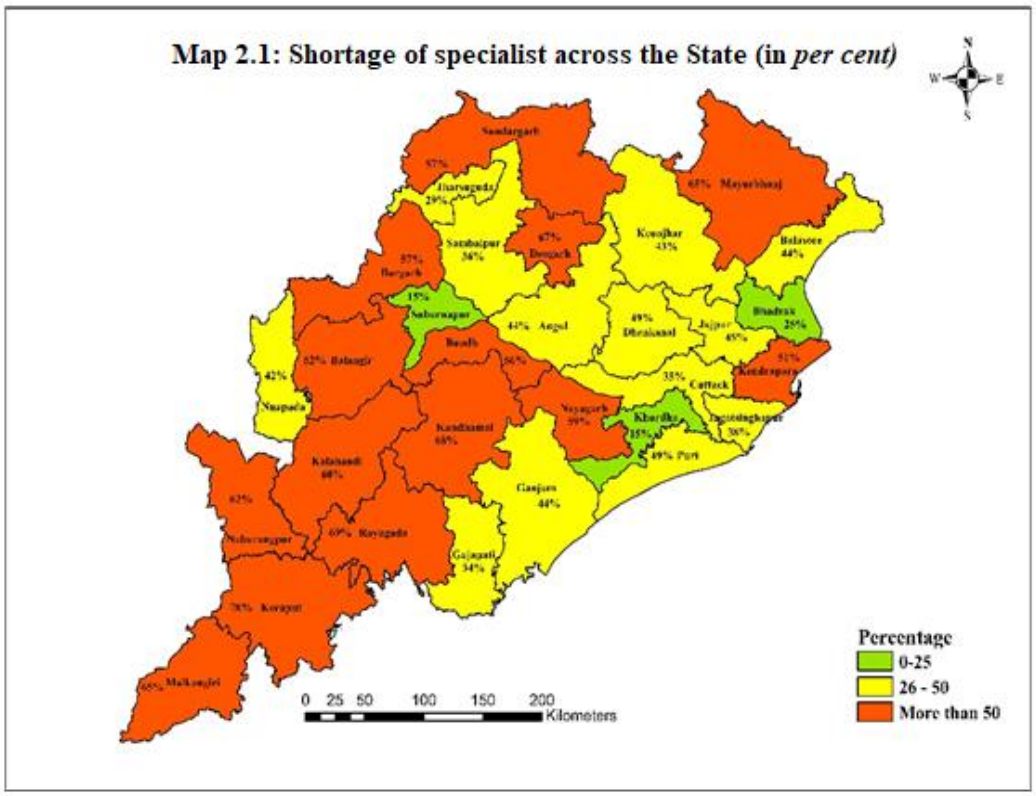
[4] Considering the total Allopathic doctors registered under the Odisha Council of Medical Registration, as on 31 March 2022

[5] Data furnished by the Director of Nursing, Odisha

From the **Chart 2.1**, it is evident that there were shortages across all categories of human resources in the healthcare facilities. The overall vacancy of specialist doctors in the State was 49 *per cent, as* compared to the sanctioned strength, whereas it was 40 *per cent* in the cadre of Medical Officers (MOs). In case of Staff Nurses/ Nursing officers, 30 *per cent* posts were vacant.

Compared to the sanctioned strength, shortages in the cadres of specialists and doctors, were more than 50 *per cent* in 14 and 6 districts, respectively. Similarly, more than 50 *per cent* shortage of staff nurses was noticed in four districts. The district-wise shortage of manpower in different cadres is given in ***Appendix 2.1***. The shortage of specialist doctors in the districts, is shown in **Map 2.1**.

Map 2.1: Shortage of specialist across the State (in *per cent*)



An analysis of the specialists and doctors, deployed in the healthcare facilities of various districts, showed that there were more than 60 *per cent* vacancies, in the specialists' category, in eight districts[6], while there were more than 60 *per cent* vacancies, in the cadre of doctors, in two districts (Deogarh: 67 *per cent*; Nabarangpur: 65 *per cent*) as compared to their sanctioned strength. In two districts (Deogarh and Nabarangpur), more than 60 *per cent* vacancies existed in both categories of doctors *i.e.*, specialists and MOs. Similarly, there was a shortfall of more than 60 *per cent* staff nurses/ Nursing Officers, in the healthcare facilities of two districts[7], against the sanctioned strength.

Thus, there was disproportionate deployment of doctors and staff nurses in the districts of the State, in comparison to the sanctioned strength.

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6 Koraput (78 *per cent*); Rayagada (69 *per cent*); Kandhamal (68 *per cent*); Deogarh (67 *per cent*); Malkangiri (65 *per cent*); Sundargarh (65 *per cent*); Mayurbhanj (65 *per cent*); Nabarangpur (62 *per cent*)

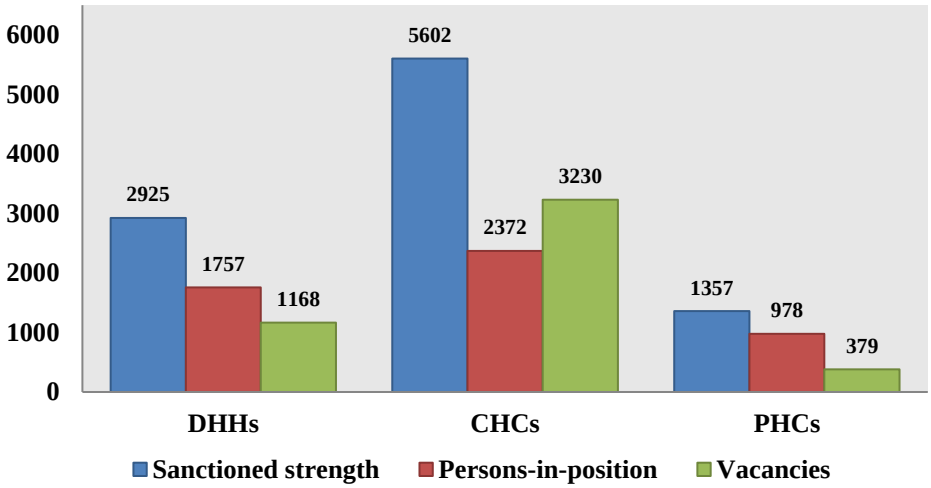
7 Boudh (62 *per cent*); Jagatsinghpur (68 *per cent*)

The availability of human resources, in the secondary and primary healthcare facilities of the State, is discussed in succeeding paragraphs.

2.1.1 Manpower position of doctors in DHHs, CHCs and PHCs

Audit observed that a significant number of posts of doctors (including specialists), sanctioned for the healthcare facilities, had not been filled in. The sanctioned strength, persons-in-position and the vacancy position in the secondary (DHHs and CHCs) and Primary (PHCs) healthcare facilities of the State, as of March 2022, is shown in **Chart 2.2**.

Chart 2.2: Sanctioned strength and persons-in-position of doctors in healthcare facilities of the State



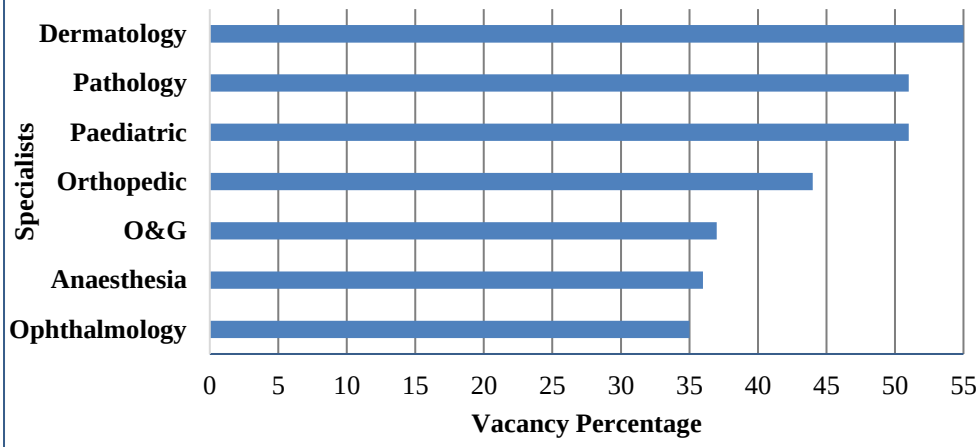
(Source: Data obtained from the Director of Health Services, NHM, Odisha)

It would be seen from the above that the vacancy in the cadre of doctors (including specialists), was 40 *per cent* in DHHs, whereas it was 58 *per cent* in CHCs. There was a shortage of 28 *per cent* MBBS doctors in PHCs, which were the first point of contact of the rural people, to a qualified doctor in the public health system. Shortage of doctors in healthcare facilities hinders delivery of quality healthcare services to the public, as discussed in ***Paragraph 2.1.4***. The DHH-wise position of doctors is given in ***Appendix 2.2.***

2.1.2 Non-availability of specialist doctors in hospitals

The State Government had sanctioned 824 posts of specialist doctors in the DHHs, to provide comprehensive secondary healthcare services, at an acceptable level of quality. Against this sanctioned strength, only 523 (63 *per cent*) specialists were available in the DHHs, as of March 2022. Department-wise availability of specialists in DHHs of the State, is given in ***Appendix 2.3.*** The vacancy position of specialist doctors, across seven specialisations, is given in **Chart 2.3**.

Chart 2.3: Vacancy of specialists in the State (Percentage)

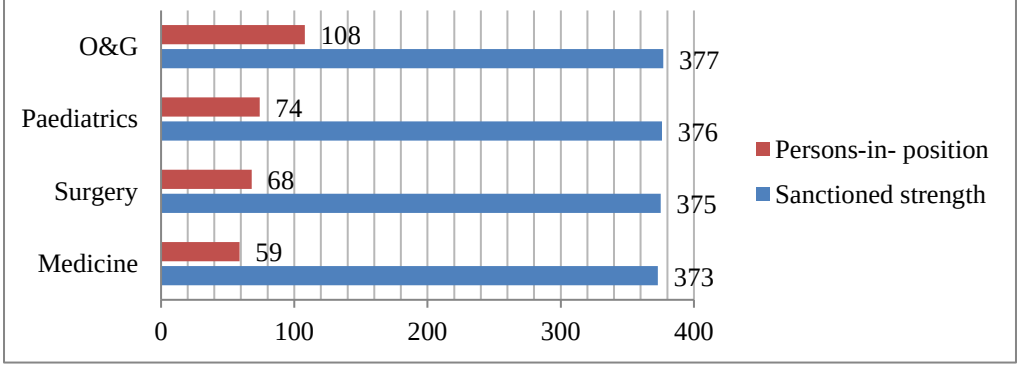


(Source: Information furnished by DHS, Odisha)

In percentage terms, the vacancy position of specialists in the DHHs of the State, was maximum in the Dermatology category (55 *per cent)*, followed by Pathology (51 *per cent*) and Paediatric (51 *per cent*).

Similarly, 1,501 specialist posts had been sanctioned, to provide four key essential specialised services[8] in CHCs, against which only 309 (21 *per cent*) specialists were in position, as of March 2022. Thus, there was a shortage of 79 *per cent* specialists in CHCs. The specialist-wise sanctioned strength and persons-in-position, in these four key categories, are shown in **Chart 2.4.**

Chart 2.4 : Availability of specialists in CHCs



(Source: Data obtained from DHHs)

Audit observed that Medicine specialists were not available in CHCs of nine[9] districts, whereas CHCs in 10[10] districts had no surgery specialists. Similarly, O&G specialists were not available in CHCs in six[11] districts, and Paediatricians

[8] Medicine; O&G; Surgery; Paediatrics

[9] Deogarh, Dhenkanal, Gajapati, Kandhamal, Kendrapara, Malkangiri, Nabarangpur, Raygada, Sambalpur

[10] Bolangir, Deogarh, Dhenkanal, Gajapati, Kandhamal, Malkangiri, Nabarangpur, Raygada, Sambalpur, Sonepur

[11] Deogarh, Gajapati, Kandhamal, Malkangiri, Raygada, Sambalpur

were not available in any of the CHCs of nine[12] districts. Consequently, delivery of specialised medical services in the CHCs of these districts was restricted, due to the absence of specialists.

2.1.3 Availability of staff nurses and paramedics in hospitals

Audit observed shortage of staff nurses and paramedics in DHHs, CHCs and PHCs, compared to the sanctioned strength. The sanctioned strength and persons-in-position, as of March 2022, is given in **Table 2.1**.

Table 2.1: Sanctioned strength and persons-in-position in hospitals

Hospitals	Staff nurses			Paramedics		
	Sanctioned strength	Persons-in position	Shortage (*Per cent*)	Sanctioned strength	Persons-in- position	Shortage (*Per cent*)
DHHs	3,677	2,573	1,104 (30)	906	731	175 (19)
CHCs	3,497	2,367	1,130 (32)	1,909	1,244	665 (35)
PHCs	2,156	753	1,403 (65)	2,715	2,220	495 (18)

(Source: Data obtained from DHHs, NHM, Odisha)

Thus, there was shortage of staff nurses and paramedics at all levels of healthcare facilities. Significant shortage of staff nurses was noticed in PHCs, compared to the sanctioned strength, influencing the medical care of patients in rural areas. The DHH-wise availability of staff nurses and paramedics is given in ***Appendix 2.2.*** The institution/ district-wise position of clinical manpower in CHCs and PHCs, is given in ***Appendix 2.4*** and ***Appendix 2.5*** respectively. Even the sanctioned strength of staff nurses for PHCs in the State was less than the IPHS norm. Against the requirement of 4,020[13] staff nurses, the State had sanctioned 2,156 staff nurses for the PHCs.

2.1.4 Availability of clinical manpower[14] in the test-checked hospitals

Audit noticed that the human resources available in the test-checked hospitals were not as per the IPHS norms. Availability of manpower, in the test-checked DHHs, CHCs and PHCs, is discussed below:

2.1.4.1 Manpower in District Headquarters Hospitals

The requirement and availability of clinical manpower, in the test-checked DHHs, as of March 2022, is given in **Table 2.2**.

Table 2.2: Requirement and availability of manpower, in the test-checked DHHs (as of March 2022)

DHH	Bed strength (function-al)	Minimum manpower required, as per IPHS[15]			Persons-in-position		
		Doctors, including specialists	Staff nurses	Paramedics	Doctors, including specialists	Staff nurses	Parame-dics
Bhadrak	336	50	135	66	44	58	19
Dhenkanal	300	50	135	66	32	80	22
Kandhamal	236	34	90	42	36	161	17

[12] Bargarh, Deogarh, Dhenkanal, Gajapati, Kandhamal, Malkangiri, Nabarangpur, Nayagarh, Raygada

[13] Minimum three staff nurses each for 1,340 PHCs as per IPHS 2012 norm

[14] Doctors, staff nurses, paramedics

[15] IPHS norm for 300 beds considered for DHHs with bed strength between 252 and 336; IPHS norm for 200 beds considered for DHH, Kandhamal, which had 236 beds; and IPHS norm for 500 considered for DHH, Puri, which had 451 beds

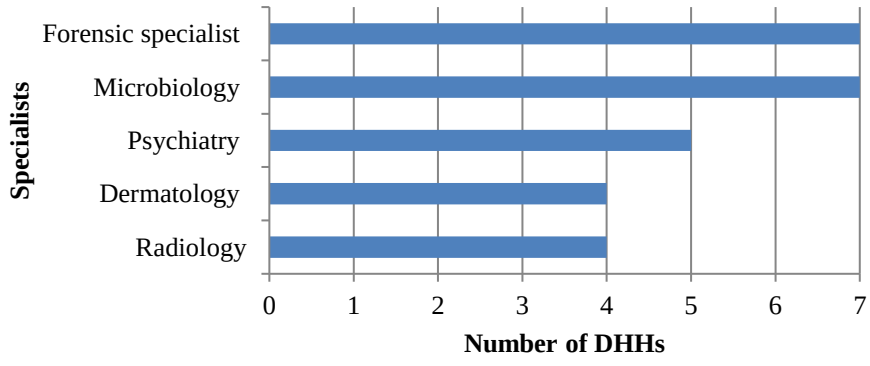
DHH	Bed strength (functional)	Minimum manpower required, as per IPHS[15]			Persons-in-position		
		Doctors, including specialists	Staff nurses	Paramedics	Doctors, including specialists	Staff nurses	Paramedics
Nabarangpur	252	50	135	66	21	95	15
Nuapada	315	50	135	66	20	90	20
Puri	451	68	225	100	41	99	43
Sundargarh	330	50	135	66	36	103	24
Total		**352**	**990**	**472**	**230**	**686**	**160**

(Source: IPHS norms and data obtained from the test-checked DHHs)

Audit observed that:

- The persons-in-position of clinical staffs in DHHs, as detailed in ***Appendix 2.2***, provided by the DHS, Odisha, did not match with that of the staff position given in the table above. Thus, there was no correlation between the data maintained at district and State levels relating to the staff position at hospitals.
- Forensic specialists were not available in any of the test-checked DHHs and Microbiologists were available only in DHHs, Sundargarh and Dhenkanal. Shortage of specialists in four[16] other categories, ranged between 67 and 81 *per cent* of the requirement, in the seven test-checked DHHs.
- Against the requirement of three Anesthetists (IPHS 2012), only one was available at DHH, Bhadrak. Due to the shortage of Anesthetists, the ICU in the Trauma Care Centre at the DHH, Bhadrak, was not functional and patients in need of critical care, were being referred to SCB MCH, Cuttack. Resultantly, the lives of these critical patients remained at risk, as they had to cover a distance of about 100 kms, to avail medical care at the MCH, Cuttack.
- Maximum vacancies, against five specialist posts, in the test-checked DHHs, are shown in **Chart 2.5.**

Chart 2.5: Vacancies of specialists in the test-checked DHHs



(Source: Data furnished by the test-checked DHHs)

[16] Anesthesia (67 *per cent*); Radiology (77 *per cent*); Pathology (81 *per cent*); Psychiatry (71 *per cent*)

Audit noticed that the distribution of specialist doctors, in the test-checked DHHs, was asymmetric, as shown in **Table 2.3**.

Table 2.3: Asymmetric deployment of specialists in the test-checked DHHs

Specialists	Bhadrak (336 beds)		Dhenkanal (300 beds)		Kandhamal (236 beds)		Puri (451 beds)	
	R	A	R	A	R	A	R	A
Surgery	3	5	3	1	2	2	4	5
O &G	4	3	4	3	3	4	6	2
Paediatrics	4	1	4	2	3	5	5	2

(Source: Data furnished by the test-checked DHHs)
(R for requirement as per IPHS and A for availability)

Audit observed that:

- A higher number of O&G specialists and Paediatricians had been deployed at DHH, Kandhamal, as compared to the IPHS norms, whereas, a lower number of such specialists had been posted in the DHHs of Puri and Bhadrak. Similarly, five surgery specialists had been deployed, against the requirement of four, in DHH, Puri, contrary to the position at DHH, Dhenkanal, where only one specialist was available against the requirement of three.
- There were a high number of vacancies of staff nurses/ nursing officers in two DHHs (Bhadrak and Puri), with only 34 to 46 *per cent* of the requirement against these posts being available. Due to the shortage of staff nurses, patient care in these hospitals was hampered and there was a high amount of workload on the existing staff, adversely affecting the quality of patient care.
- Availability of Paramedic staff in the test-checked DHHs, was below 40 *per cent* in six of the test-checked DHHs, while it was above 40 *per cent* in DHH, Puri. Due to shortage of laboratory technicians, diagnostic and radiology services were either inadequate or were not being provided to the patients. This had also resulted in idling of equipment, as discussed in ***Chapter 4***.

2.1.4.2 Availability of manpower for Operation Theatres

As per IPHS, an Operation Theatre (OT) is generally expected to have a team of surgeons, anesthetists, nurses (sometimes pathologist and radiologist), to operate upon or care for the patients. Besides, 4 to 14 OT technicians should be available in a district hospital, depending upon its bed capacity.

Audit, however, observed that OT technicians had not been positioned in any of the test-checked DHHs. Staff nurses and OT Assistants were, however, available.

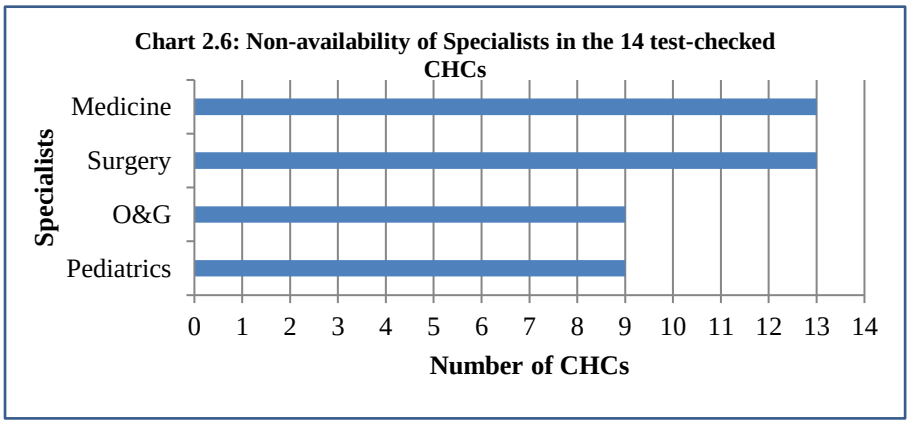
The H&FW Department stated (February 2023) that IPHS norms would be followed to provide required manpower.

2.1.5 Manpower in Community Health Centres

In the 14 test-checked CHCs, there was acute shortage of clinical manpower for delivering essential medical services. Availability of doctors in these CHCs, during FY 2021-22, is detailed in ***Appendix 2.6.*** Audit observed that:

- Medical Superintendents, responsible for overall administration/ management of the hospitals, including monitoring of NHM programmes, had not been posted in six[17] of the 14 test-checked CHCs. General Duty Medical Officers/ Specialists, available in these six CHCs, had to look after the duty of the Medical Superintendent, which indirectly held back delivery of related medical services to the patients in these CHCs.

- As per IPHS, 2012, against the requirement of 56 specialists in four key categories (Medicine, Surgery, O&G and Pediatrics) in 14 test-checked CHCs, 42 (75 *per cent*) were not in position, as shown in **Chart 2.6.**



(Source: Information furnished by the test-checked CHCs)

A Medicine specialist was available only in CHC, Komana, whereas a Surgery specialist was available only in CHC, Basudevpur. Similarly, O&G specialists and Pediatricians were available in only five[18] of the 14 test-checked CHCs. Thus, there was a significant gap between the requirement and availability of specialists in CHCs, due to which delivery of specialised medical care, including maternity and neonatal services to the patients in the locality, had suffered.

- The position of staff nurses and paramedics, in CHCs, was also not encouraging. Against the requirement of 140 staff nurses in the 14 test-checked CHCs, only 69 (49 *per cent*) were available, during FY 2021-22.

- There was a shortage of nine laboratory technicians in the test-checked CHCs, which had hampered diagnostic services in the hospitals. For example, pathological tests, such as blood urea, blood cholesterol, liver function test, kidney function tests, lipid profile, *etc.*, were not being conducted in CHC, Barapada, despite availability of equipment and infrastructure, due to the absence of laboratory technicians. Similarly, the blood storage unit, at CHC, Basudevpur, was not functional, due to want of technicians.

[17] Basudevpur; Lahunipada; Khajurikata; Sriramchandrapur; Raikia; Komana

[18] O&G specialist: Basudevpur; Lahunipada; Khariar Road; Papadahandi; Nimapada; Pediatricians: Basudevpur; Kuarmunda; Khariar Road; Komana; Nimapada

Thus, there were significant shortages of medical manpower in the test-checked CHCs, as compared to the IPHS norms, influencing the hospital care of patients in the locality.

2.1.5.1 Irrational posting of dentists in CHCs

Audit noticed that dental surgeons had been posted in CHCs, without supply of dental equipment to the concerned CHCs and *vice versa*, as detailed in **Table 2.4**.

Table 2.4: Position of dental surgeons and dental equipment with CHCs

District	CHCs with Dentists, but no equipment	CHCs with equipment, but no Dentists
Bhadrak	5	0
Dhenkanal	7	0
Nabarangpur	0	4
Sundargarh	11	3
Puri	14	0
Total	**37**	**7**

(Source: Data obtained from the test-checked DHHs and JPI)

It would be seen from the above that dental surgeons had been posted in 37 CHCs, across five of the test-checked districts, despite dental equipment, with dental chairs, not having been made available. Contrary to this, dental equipment had been supplied to seven CHCs, where no Dentists were in position. Thus, there was no correlation between the posting of dentists and supply of dental equipment. Resultantly, the Dentists in CHCs could not provide appropriate dental care to the patients, without the necessary equipment. On the other hand, these equipment supplied to CHCs, without posting of dentists, remained idle/ non-functional, at the cost of the State exchequer.

The H&FW Department stated (February 2023) that the proposal for revamping public health system had been under active consideration of Government, and the situation in regard to manpower position in hospitals would improve by 2025.

2.1.6 Manpower in Primary Health Centres

To ensure round-the-clock access to public health facilities, PHCs are expected to provide 24-hour services, with basic Obstetric and Nursing facilities. Under NHM, PHCs are to be operationalised for providing 24 X 7 services, in various phases, by placing at least three staff nurses in these facilities. PHCs are also expected to play a key role in increasing the number of institutional deliveries, which would help in reducing maternal mortality.

Audit observed that the required manpower, as per the IPHS norms, was not available in the test-checked PHCs, during FY 2021-22. There were acute shortages in the categories of Auxiliary Nurse-Midwife (ANM)/ Staff Nurse, Laboratory Technician (LT), Health Worker (HW), Health Assistant (HA)/ Lady Health Visitor (LHV) *etc.*, in the PHCs. The manpower position, as available in the test-checked PHCs, during FY 2021-22, is given in **Table 2.5.**

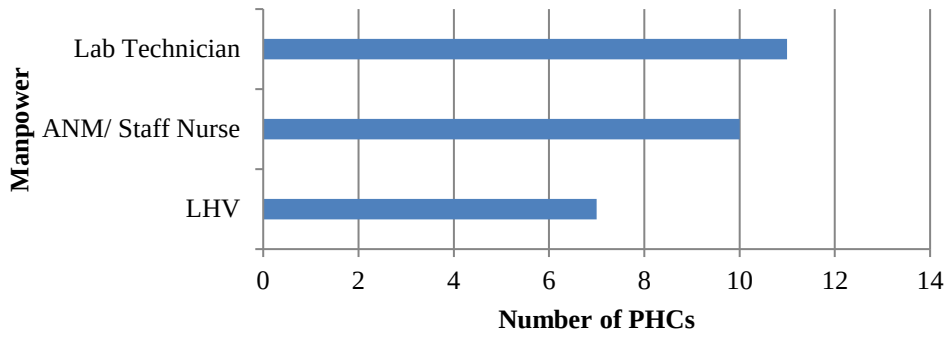
Table 2.5: Availability of human resources in the test-checked PHCs

PHC	Medical Officer (MBBS)	Availability of Clinical Manpower in the test-checked PHCs						
		Pharmacist	ANM (Staff Nurse)	Health Worker (Female)	Health Worker (Male)	Health Assistant (Female)/ LHV	LTs	Sanitary Worker/ watchman
Sabarang	Yes	Yes	No	No	No	Yes	No	No
Ertal	Yes	Yes	No	Yes	No	Yes	No	No
Rasol	Yes	Yes	No	No	No	No	Yes	Yes
Joranda	Yes	Yes	No	Yes	No	Yes	No	Yes
Khuntagaon	No	Yes	No	No	No	Yes	Yes	Yes
Andalijambahal	Yes	Yes	No	Yes	No	No	No	Yes
Indragarh	Yes	Yes	No	No	No	No	No	No
Ranjabrodi	Yes	Yes	No	No	No	No	No	No
Darlimunda	Yes	Yes	Yes	Yes	No	Yes	No	Yes
Tarbod	Yes	No	Yes	Yes	No	No	No	No
Kodinga	Yes	Yes	Yes	Yes	No	Yes	No	No
Maidarpur	Yes	Yes	Yes	Yes	No	Yes	No	No
Badanigaon	Yes	Yes	No	No	No	No	No	Yes
Fakirasahi	Yes	Yes	No	Yes	No	No	Yes	Yes

(Source: Data obtained from the test-checked PHCs)

It would be seen from the above that, out of the 14 test-checked PHCs, staff nurses and LTs were available only in four and three PHCs, respectively. HWs (Male) were not available in any of the test-checked PHCs, whereas female HWs were positioned in eight PHCs only. The vacancy position of three key posts, in the test-checked PHCs, is given in **Chart 2.7**.

Chart 2.7 : Non-availability of manpower in the 14 test-checked PHCs



(Source: Information furnished by the 14 test-checked PHCs)

Due to shortage/ non-availability of human resources in PHCs, essential clinical services were not being provided to the patients. A few such examples are given below:

- In the absence of LTs, the full range of diagnostic/ laboratory services were not available in the test-checked PHCs. Only routine malaria tests and rapid testing of blood sugar, were being conducted. Other investigations, such as haemoglobin, urine albumin and sugar, RPR (Rapid Plasma Regain), tests for syphilis, blood grouping and RH typing, ECG, *etc.*, were not being conducted.

- Absence of staff nurses/ ANMs contributed to inadequate maternity services. Deliveries at PHC, Sabrang, had been stopped, since March 2021, due to non-availability of ANMs.
- No allopathic doctor was available at PHC, Khuntagon, during the entire period of 2016-22 and the patients were being treated by Ayush doctors. Due to absence of MBBS doctors, at three[19] PHCs, Pharmacists were treating the patients.

In the test-checked hospitals, the availability of doctors, nurses and paramedics, as compared to the requirement, as per the IPHS norms, varied significantly and was not necessarily linked to the number of beds in the respective hospitals, or to their patient loads.

2.1.7 Manpower in Sub-Centres

As per IPHS norms, there should be minimum one ANM/ HW (Female) and one HW (Male) in each SC. Audit noticed that the required manpower was not available in the SCs. Against the sanctioned strength of 7,237 ANM/ HW (Female) for 6,688 SCs in the State, 6,716 persons were in position, as of March 2022. Similarly, only 3,499 HW (Male) were available against the sanctioned strength of 4,953, with 29 *per cent* vacancies. The district-wise manpower position in SCs is given in ***Appendix 2.7.***

2.1.8 Availability of manpower in health institutions under AYUSH

The delivery of quality AYUSH healthcare services in hospitals/ dispensaries largely depends on adequate availability of manpower. The availability of manpower in AYUSH hospitals and dispensaries, as of March 2022, is given in **Table 2.6**.

Table 2.6: Sanctioned strength and persons-in-position in AYUSH health institutions

Posts	Sanctioned strength	Persons-in-position	Vacancy	Percentage of vacancy
Ayurvedic Medical Officer	690	574	116	17
Ayurvedic Assistant	620	393	227	37
Homoeopathic Medical Officer	595	490	105	18
Homoeopathic Assistant	570	353	217	38
Unani Medical Officer	9	3	6	67
Unani Assistant	9	2	7	78

(Source: Data obtained from the Directorate of AYUSH)

Table 2.6 shows that vacancies in different posts, compared to sanctioned strength, ranged between 17 *per cent* and 78 *per cent*. There were substantial vacancies in the cadres of Ayurvedic/ Homeopathic/ Unani Assistants in AYUSH dispensaries. Absence of required manpower affects optimal development and propagation of the AYUSH systems of healthcare in hospitals and dispensaries. The district-wise manpower position under AYUSH system for Ayurveda, Homeopathy and Unani is given in ***Appendix 2.8, Appendix 2.9***, and ***Appendix 2.10*** respectively.

[19] PHC, Ertal (Bhadrak): Pharmacist treated 15,852 patients, during FYs 2018-19 and 2019-20.
PHC, Ranjabrodi (Kandhamal): Pharmacist treated 20,384 patients, during FYs 2016-17 to 2021-22.
PHC, Darlimunda (Nuapada): Pharmacist treated 6,883 patients, during FYs 2019-20 and 2020-21.

2.2 Human resources in MCHs

Schedule II of MSRR, 1999, prescribes the minimum requirements of teaching staff (Professors, Associate Professors, Assistant Professors and Senior Residents/ Lecturers), as well as non-teaching staff, in each medical college and its attached teaching hospitals. Any shortfall in this regard, is expected to result in admission restrictions being imposed by the National Medical Council (NMC). The H&FW Department is responsible for sanction and filling up of all teaching and non-teaching posts, in Government MCHs.

The data made available to Audit by the DMET, Odisha, showed vacancies in all cadres of teaching and non-teaching staff, across the MCHs of the State, affecting both-medical education, as well as patient care in the hospitals. Overall vacancies in the cadre of Professors was 27 *per cent*, compared to the sanctioned strength, as of March 2022. There were maximum vacancies in FM MCH, Balasore (48 *per cent*), followed by SJ MCH, Puri (43 *per cent*). The details of manpower position of teaching staff are given in ***Appendix 2.11***.

Similarly, there were 36 *per cent* vacancies in the cadre of Nursing Officer/ staff nurses, whereas vacancy of Paramedics was 37 *per cent* in the MCHs, as detailed in ***Appendix 2.12.***

2.2.1 Shortage of teaching and non-teaching staff in test-checked MCHs

Scrutiny of records of two of the test-checked MCHs, showed extensive vacancies of teaching faculty, as shown in **Table 2.7**.

Table 2.7: Vacancies in the cadre of teaching and non-teaching staff in two MCHs

Post	Pandit Raghunath Murmu Medical College & Hospital			Maharaja Krishna Chandra Gajapati Medical College & Hospital		
	Sanctioned Strength	Available	Vacancy (*per cent*)	Sanctioned Strength	Available	Vacancy (*per cent*)
Medical College						
Professor	20	15	5 (*25*)	37	34	3 (*8*)
Associate Professor	28	22	6 (*21*)	77	61	16 (*21*)
Assistant Professor	45	38	7 (*16*)	160	148	12 (*7*)
Total faculty	**93**	**75**	**18 (*19*)**	**274**	**243**	**31 (*11*)**
Resident Doctors	65	35	30 (*46*)	150	118	32 (*21*)
Tutors/ Demonstrators	25	7	18 (*72*)	41	26	15 (*37*)
Non-Teaching Staff[20]	45	18	27 (*60*)	94	43	51 (*54*)
Grand Total	**228**	**135**	**93 (*41*)**	**559**	**430**	**129 (*23*)**
Attached Hospital						
Doctors[21]	158	125	33 (*21*)	503	414	89 (*18*)
Nursing Staff	321	222	99 (*31*)	951	689	262 (*28*)
Para-medical staff[22]	69	35	34 (*49*)	145	94	51 (*35*)

[20] Technician/Technical Assistant; Dissection Hall Attendant; Laboratory Attendant; Store Keeper; Stenographer; Sweeper *etc*.

[21] 'Doctors' include the faculty and Resident Doctors in clinical departments

[22] Pharmacists; Radiographers; Laboratory Technicians; Investigators, *etc*.

Post	Pandit Raghunath Murmu Medical College & Hospital			Maharaja Krishna Chandra Gajapati Medical College & Hospital		
	Sanctioned Strength	Available	Vacancy (*per cent*)	Sanctioned Strength	Available	Vacancy (*per cent*)
Non-Teaching Staff	29	4	25 (*86*)	11	7	4 (*36*)
Total	**577**	**386**	**191 (*33*)**	**1610**	**1204**	**406 (*25*)**

(Source: NMC norms and information furnished by the two MCHs)
(Red colour: More than 50 per cent vacancy; light red: Less than 50 per cent vacancy)

Thus, there were vacancies in all cadres of teaching and non-teaching staff, in both the test-checked MCHs, affecting both-medical education, as well as patient care in these hospitals.

Audit further observed that:

- In PRM MCH, posts of Professor had been lying vacant in two clinical departments (Psychiatry and Dentistry) and two non-clinical departments (Physiology and Pathology), for the last five years (2017-22). A post of Professor had been lying vacant in the Cardio Thoracic Surgery Super Specialist department of MKCG MCH, for the last five years.
- Two faculty members of PRM MCH and nine faculty members of MKCG MCH, had remained unauthorisedly absent, for periods ranging between one and nine years. Unauthorised absence of doctors in the MCHs, affected both Medical Education, as well as patient care services.
- Though dissection is a primary requirement in studying the subject of Anatomy, dissection Hall Attendants for handling cadavers, were not available in MKCG MCH, against the requirement of four attendants.
- Against two sanctioned posts, no Psychiatric Social Workers had been posted in the Psychiatry Departments of both the test-checked MCHs, affecting patient care, research activities and follow-up rehabilitation of psychiatric patients.
- The ENT Departments of the MCHs were running without any Technical Assistants and Speech Therapists.

Though the Dean and Principal of PRM MCH, had given an undertaking, after consultation with DMET, Odisha, to fill up the vacancies of faculties within 30 days, following the observations of the National Medical Council, regarding shortage of faculty seen during their inspections (October 2019/ November 2021), no effective steps had been taken to fill up these vacancies, as of May 2022.

2.2.2 Non-provision of human resources in Super Specialty Department

As per the MoU signed between the State Government and GoI, for sanction of PMSSY funds, the State Government was to create the required posts and deploy personnel in a time-bound manner, for smooth and efficient functioning of the Super Specialty departments in the MCHs. Audit, however, noticed that 11 Super Specialty Departments, in MKCG MCH, were running with acute shortages of faculty members.

Against the sanctioned strength of 48 staff, in the Super Specialty Departments of the MCH, only 30 were in position, with 18 vacancies in the cadres of Professor (3), Associate Professor (4), Assistant Professor (1) and Senior Resident (10). Audit observed that:

- Six Super Specialty Departments (Neurology, Paediatric Surgery, Cardio Thoracic Surgery, Neuro Surgery, Medical Gastroenterology and Surgical Gastroenterology) had no Professors.
- In three Super Specialty Departments (Neurology, Pediatric Surgery and Neurosurgery), posts of Professors had not been created.
- One Associate Professor (Cardiology), three Assistant Professors (Cardio Thoracic Surgery-1 and Neurosurgery-2) and one Senior Resident (Pediatric Surgery) had remained on unauthorised absence, for periods ranging from one month to 106 months.

Due to the non-availability of faculty, the Cardio Vascular and Thoracic Surgery Department was non-functional, with only minor operations being managed by the existing junior doctors of the Neuro Surgery Department.

The H&FW Department stated (February 2023) that the vacancy position would be filled in recently.

2.2.3 Shortage of human resources in Forensic Medicine and Toxicology Departments

Against the requirement of six tutors/ demonstrators[23] as per MSRR, only four posts had been sanctioned and were available, resulting in a shortfall of two tutors/ demonstrators, during FYs 2016-17 to 2021-22, in MKCG MCH. In PRM MCH, against the requirement of two tutors/ demonstrators, only one (contractual) was available.

Similarly, against the requirement of two technicians, there was no technician in PRM MCH, while one was posted in MKCG MCH.

The H&FW Department stated (February 2023) that steps were being taken for filling up the posts.

2.3 Manpower for laboratory services

Pathologist and Laboratory Technicians (LTs) are key personnel for in-house laboratories. They are responsible for taking samples, carrying out all prescribed pathological investigations and validating test reports. As per the IPHS, district hospitals should have one to four Pathologists and six to 18 LTs, depending upon their bed capacity.

Audit observed that, against the sanctioned strength of 2,048 LTs in the State, 1,320 LTs were in position (March 2022), with 36 *per cent* vacancies. Similarly, only 19 Pathologists were available in the DHHs of the State, against the sanctioned strength of 39. Thus, there was a vacancy of 51 *per cent* Pathologists across the DHHs.

The manpower position for diagnostic services, in seven of the test-checked DHHs, is shown in **Table 2.8.**

[23] Including two additional tutors/ demonstrators, since the post-mortem works carried out, exceeded 500 in number, annually

Table 2.8: Manpower position for diagnostic services, in the test-checked DHHs

DHH	Functional Beds	Pathologist		Microbiologist		Laboratory Technician	
		R	A	R	A	R	A
Bhadrak	336	3	1	1	1	12	4
Dhenkanal	300	3	1	1	1	12	7
Kandhamal	236	1	0	0	1	9	7
Nabarangpur	252	1	0	0	0	9	7
Nuapada	315	3	1	1	0	12	7
Puri	451	3	0	1	0	15	11
Sundargarh	330	3	1	1	1	12	8
Total		**17**	**4**	**5**	**4**	**81**	**51**

(Source: Data obtained from the test-checked DHHs)
(R: Requirement; A: Available) (Red: severe shortage; light red: shortage, Green: no shortage)

It would be seen, from the above, that:

- **DHHs**: Pathologists and Microbiologists were available in four of the seven test-checked DHHs only. The maximum shortage of LTs was in DHH, Bhadrak, where only four technicians had been posted, against the requirement of 12.
- **CHCs**: Against the requirement of 28 LTs, only 23 were available in the 14 test-checked CHCs. Due to shortage of LTs, pathological tests like blood urea, blood cholesterol, liver function test, kidney function test, lipid profile, *etc*., were not being done in CHC, Barapada.
- **PHCs**: LTs were not available in 11[24] out of the 14 test-checked PHCs. Pathological tests (except blood sugar and malaria) were not being conducted in PHC, Ertal and routine urine, stool, blood tests *etc.*, were not being conducted at PHC, Sabrang, due to the absence of laboratory technicians, despite the availability of equipment.
- **MCHs**: Shortage of manpower in the Pathology departments of the test-checked MCHs, as of 31 March 2022, is given in **Table 2.9**.

Table 2.9: Manpower position in the test-checked MCHs

Post	PRM MCH			MKCG MCH		
	Sanctioned	Available	Vacancy	Sanctioned	Available	Vacancy
Professor	1	0	1	1	1	0
Assistant Professor	3	3	0	18	17	1
Tutor	4	1	3	7	5	2
Laboratory Attendants	2	0	2	2	0	2
Laboratory technicians[25]	33	12	21	60	32	28

(Source: Data obtained from the test-checked MCHs)
(Red: Not available or more than 50 per cent vacancy; light red: Less than 50 per cent vacancy; Green: No vacancy)

[24] Andalijambahal, Darlimunda, Ertal, Indragarh, Joranda, Kodinga, Maidalpur, Ranjabrodi, Sabrang, Tarbod and Badanigaon

[25] These figures relate to the MCHs in entirety, as no specific sanctioned strength was available for the Pathology departments

The H&FW Department had, therefore, failed to augment the strength, as required in accordance with the IPHS/ NMC guidelines. It had not even filled the existing vacancies against the sanctioned strength, due to which, pathological investigations, which were required to provide evidence-based medical care to patients, were hindered across the healthcare facilities in the State.

2.4 Availability of human resources for Antenatal Care

As per the Mother and Neonatal Health (MNH) Toolkit of NHM, human resource requirements for a maternity wing, should be based on the number of deliveries per month. Audit noticed that the average number of deliveries per month, in the test-checked DHHs, ranges between 200 and 500 deliveries. The requirement as per MNH toolkit and the availability of human resources, in the test-checked DHHs, are given in **Table 2.10**.

Table 2.10: Availability of human resources in the Maternity Wings of DHHs

DHH	Average deliveries / month	Doctors and other staff available in DHHs					
		Medical Officer	O&G specialist	Pediatrician	Anesthetist	ANM	Staff Nurse
Requirement	**200-500**	**4**	**5**	**1**	**1**	**4**	**8**
		Available					
Bhadrak	459	0	3	1	1	1	8
Dhenkanal[26]	515	0	5	1	1	1	5
Kandhamal	263	0	3	1	1	2	0
Nabarangpur	221	0	2	2	1	3	4
Nuapada	395	0	3	2	1	0	10
Puri	495	0	6	3	1	7	4
Sundargarh	393	0	8	0	1	3	22

(Source: Records of the test-checked DHHs)
(Red colour shows shortage and green colour denotes no shortage)

Audit observed the following in this regard:

District Headquarters Hospitals

- The number of O&G specialists, available in the DHHs of Bhadrak, Kandhamal, Nabarangpur and Nuapada, was not adequate, in comparison to the requirements. Further, dedicated Pediatricians were not available in the DHHs of Bhadrak, Dhenkanal and Sundargarh, for maternity services, as they had to look after both the pediatric, as well as the maternity wards.
- In all seven DHHs, only one Anesthetist was available in each hospital, and was managing the entire anesthesia related works of each hospital, including the Maternity wing.
- Against the requirement of eight ANMs/ staff nurses in each DHH, only four to five staff nurses were available in three DHHs (Dhenkanal, Nabarangpur and Puri), whereas no dedicated staff nurses were available for maternity services at DHH, Kandhamal. Shortage/ absence of required staff nurses builds up burden on the existing staff,

[26] As the average deliveries per month was slightly more than 500, the norms for 500 deliveries per month was taken for the DHH

compromising the quality of maternity services, as they are the key personnel for providing healthcare to the mothers and babies.

The maternity wings at DHH, Nuapada and Sundargarh, had more nurses than the norms prescribed in the MNH toolkit.

Community Health Centres

- Only 164 O&G specialists had been positioned in 382 CHCs of the State, with a shortage of 57 *per cent* of the sanctioned strength.
- In the 14 test-checked CHCs, O&G specialists were available in five[27] CHCs, while pediatricians were available only in four[28] CHCs. Due to absence of O&G specialists and pediatricians in the CHCs, maternity/ child healthcare services, including newborn care in the hospitals, were restricted, compelling women patients to move to private or other facilities.

Shortage of key resources in the facilities indicated the lack of capability of the hospitals to manage pregnancy related complications and other maternal health emergencies, as well as to ensure satisfactory newborn care.

The H&FW Department stated (February 2023) that steps were being continuously taken to fill up the vacant posts of specialist doctors.

2.4.1 Human resources in SNCUs

IPHS Guidelines prescribe four Medical Officers, 21 staff nurses, four Nursing Supervisors and eight neonatal Aides/ Yashodas/ Mamtas, in a 12-bedded SNCU. Besides, laboratory technicians, data entry operator and Group D staff, are required to be available for the SNCU.

Audit, however, observed acute shortage of manpower in the SNCUs of the test-checked DHHs. Details of the manpower available in the SNCUs of the test-checked DHHs, as of March 2022, are given in **Table 2.11**.

Table 2.11: Staff available in the SNCUs of the test-checked DHHs, as of March 2022

Manpower	Require-ment	Availability in the test-checked DHHs						
		Bhadrak	Dhenkanal	Kandhamal	Nabarangpur	Nuapada	Puri	Sundargarh
MOs	4	0	2	1	0	1	4	5
Pediatricians	1	1	2	0	2	0	3	2
Staff Nurse	21	8	7	12	7	11	10	11
Nursing Supervisor	4	0	2	0	1	1	0	1
Neonatal aides	8	0	0	0	4	0	0	0
Lab technicians	1	0	0	0	0	0	0	0
DEO	1	1	1	1	1	0	1	1
Group D staff	2 per shift	1	4	5	4	7	5	4

(Source: Data obtained from the test-checked DHHs)
(Red colour: shortage of manpower; Green colour: No shortage)

[27] O&G specialists: Basudevpur, Lahunipara, Khariar Road, Nimapara and Papadahandi
[28] Paeditricians: Basudevpur, Kuarmunda, Papadahandi and Nimapara

As would be seen from **Table 2.11,** adequate manpower was not available in any of the test-checked DHHs.

- Dedicated MOs were not available in two DHHs (Bhadrak and Nabarangpur), whereas one MO was available in each of the DHHs at Kandhamal and Nuapada. The Pediatricians available in the DHHs, were looking after the SNCUs, as well as the Paediatric wards.
- The number of Nursing Supervisors and Staff Nurses was not adequate, in the SNCUs of the test-checked DHHs.
- Laboratory technicians were not available in any of the SNCUs. The laboratory/ pathological tests were being done in the integrated laboratory of the hospitals. Neonatal aides were available only in DHH, Nabarangpur.

Thus, the SNCUs of the test-checked DHHs had inadequate staff for providing assured neonatal services, as per the patient load.

The H&FW Department stated (February 2023) that due to shortage of Pediatric specialists for SNCUs, available MOs were being trained to provide SNCU services.

2.5 Manpower for the Odisha Blood Centres

As per the recommendation (April 2017/ January 2018) of the Expert Working Group[29], Ministry of Health and Family Welfare, GoI, the staffing pattern of blood centres based on the collection of blood units, is given in **Table 2.12.**

Table 2.12: Staffing pattern for blood banks

Staff required	Annual Blood Collection (in units)				
	Up to 5,000	Up to 10,000	Up to 20,000	More than 20,000	More than 50,000
MO-in-charge/ Medical Personnel	2	3	5	7	8
Counselor/Medical Social Worker	1	2	2	2	4
Registered Nurse	1	2	3	4	8
Blood Centre Technician	5	8	11	13	22
Laboratory Attendant/ Housekeeping Staff	1	3	4	4	8

(Source: Ministry of Health and Family Welfare, GoI)

Besides, additional staff[30] should be provisioned for outdoor blood donation camps.

Audit observed that the annual collection of blood units, in the blood centres (BCs) of six of the test-checked DHHs, was within 5,000-10,000 units, except in the case of DHH, Bhadrak, where more than 10,000 blood units were collected per annum. The BCs of the test-checked DHHs were, however, deficient in manpower, as discussed below:

[29] Constituted by the Ministry of H&FW, GoI under the chairmanship of the Special Director General of Health Services, to review and revise the norms for technical manpower in blood banks.

[30] Medical personnel:1; Counsellors: 2; Registered nurses: 2; Blood centre technicians: 3; Attendants:2

- Against the requirement of three to five MOs in each BC, only one MO each, was in position, in the BCs of six of the test-checked DHHs, except in case of DHH, Puri, which had two MOs.
- Only two BCs (at DHH, Bhadrak and Sundargarh) had one Counsellor/ Medical social worker, against the requirement of two, whereas the BCs of other DHHs had no counsellors.
- The BCs at Bhadrak and Nabarangpur had no registered nurses.
- There was shortage[31] of three to seven blood centre technicians in the BCs of the test-checked DHHs.

Shortage/ absence of the required manpower in the BCs, hinders the working of blood banks in the concerned hospitals, as well as organisation of blood donation camps.

The H&FW Department stated (February 2023) that instructions would be issued to the concerned authorities to give proposal to Government for posting of manpower in Blood Centres.

2.6 Manpower for Nutritional Assessment

As per Kayakalp guidelines[32], the quality and quantity of food are the key factors for patient recovery. IPHS/ NMC guidelines prescribe the availability of dieticians in DHHs and MCHs. Thus, high standards of food hygiene should be maintained throughout the delivery of healthcare services.

Audit noticed that dietary services were being provided, in the test-checked DHHs/ MCHs, through outsourced agencies. The State Government had, however, not sanctioned any posts of dieticians in the test-checked DHHs. No dieticians were available in the test-checked MCHs also. Due to absence of dieticians, nutritional assessment, diet counselling, formulation of caloric requirements for the patients and diet certification with regard to quality and adherence to the specified menu, were not being done properly. The designated staff of the DHHs/ MCHs had to manage quality assessment by testing the food.

Recommendation 2.1:

State Government may take suitable steps to address the gaps in human resources in the health sector, as also to rationalise the manpower in hospitals across the State, based on appropriate criteria, such as patient load or population.

A periodic review of the vacancies may be conducted in all hospitals, in order to ensure timely recruitment of doctors, nurses and paramedical staff.

[31] Bhadrak:7; Dhenkanal:3; Kandhamal:3; Nabarangpur:4; Nuapada:3; Puri:3; Sundargarh:4

[32] Guidelines issued (May 2015) by the Ministry of H&FW, GoI for promoting cleanliness, hygiene and infection control practices in public healthcare facilities

Chapter 3

Healthcare Services

CHAPTER 3

HEALTHCARE SERVICES

Health facilities, at the primary and secondary levels of the healthcare system, did not adequately conform to the Indian Public Health Standards and National Health Policy (NHP) norms. There were considerable gaps in the availability of Outdoor Patient Department and In-Patient Department services in the test-checked hospitals. CHCs were most deficient in providing specialised medical services, due to absence of specialists. There was a serious dearth of emergency and trauma care services, due to deficient infrastructure, manpower and equipment. ICU services were available, in only 17 out of the 32 DHHs of the State. Various deficiencies were observed in regard to the early identification and management of complications during pregnancy, childbirth and the post-partum period. The capability to provide adequate maternity services, was especially lacking in the CHCs, which had substantial shortages of human resources and investigation facilities. The full range of diagnostic services was not available in the test-checked hospitals, impacting the efficiency of healthcare offered. Support and auxiliary services, including diet, laundry, mortuary, *etc*., were also deficient in terms of the availability of infrastructure and equipment.

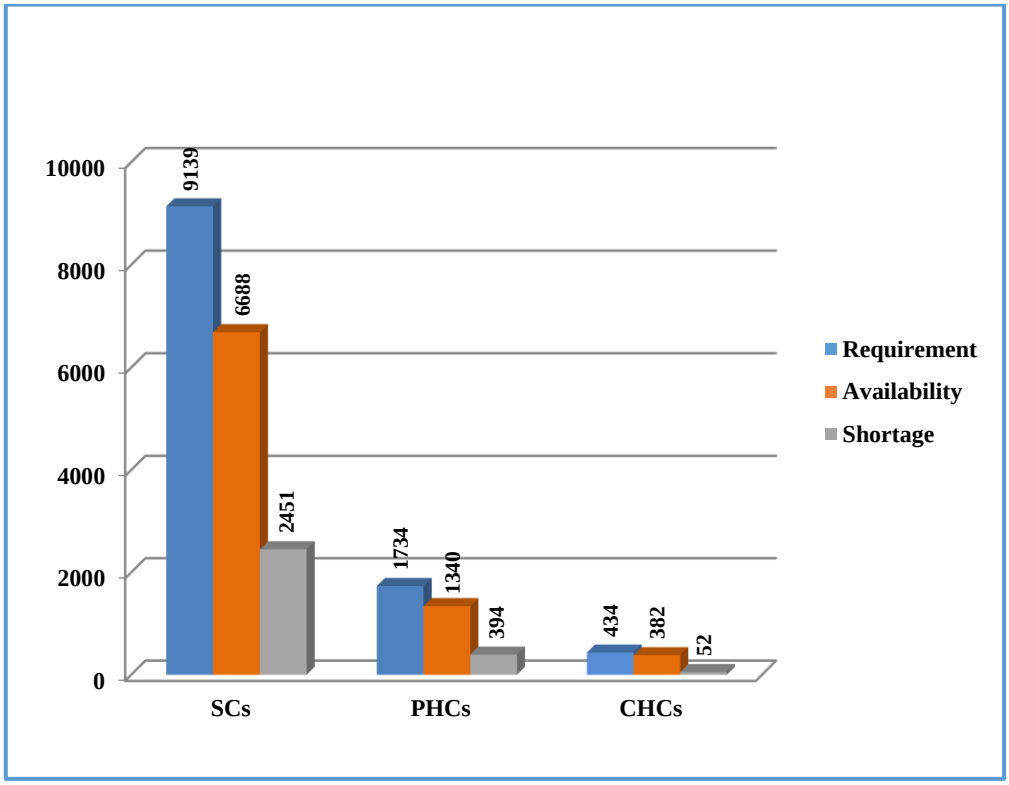
3.1 Availability of healthcare facilities

In Odisha, each of the 30 districts has a District Headquarter Hospital (DHH), as per the norms of the Indian Public Health Standards[33] (IPHS). In addition, two major hospitals (Capital Hospital and Rourkela Government Hospital) also have the status of a DHH. Accordingly, there were 32 DHHs in the State, as of March 2022.

As per IPHS, one CHC should cater to a population of 80,000 in tribal/ hilly/ desert areas and 1,20,000 in plain areas. One PHC should cater to a population of 30,000 and one Sub Centre (SC) to a population of 5,000. Audit observed that there was a significant shortfall against these norms, in the State, with 27 *per cent* shortage in SCs, 23 *per cent* in PHCs and 12 *per cent* in CHCs. The requirement, availability and shortage of health facilities, as of March 2022, are shown in **Chart 3.1**.

[33] IPHS: Sets of standards recommended for District Hospitals, CHCs & PHCs by Ministry of Health & Family Welfare, Government of India

Chart 3.1: Requirement, availability and shortage of healthcare facilities in Odisha



(Source: Data obtained from the Director of Health Services and National Health Mission, Odisha)

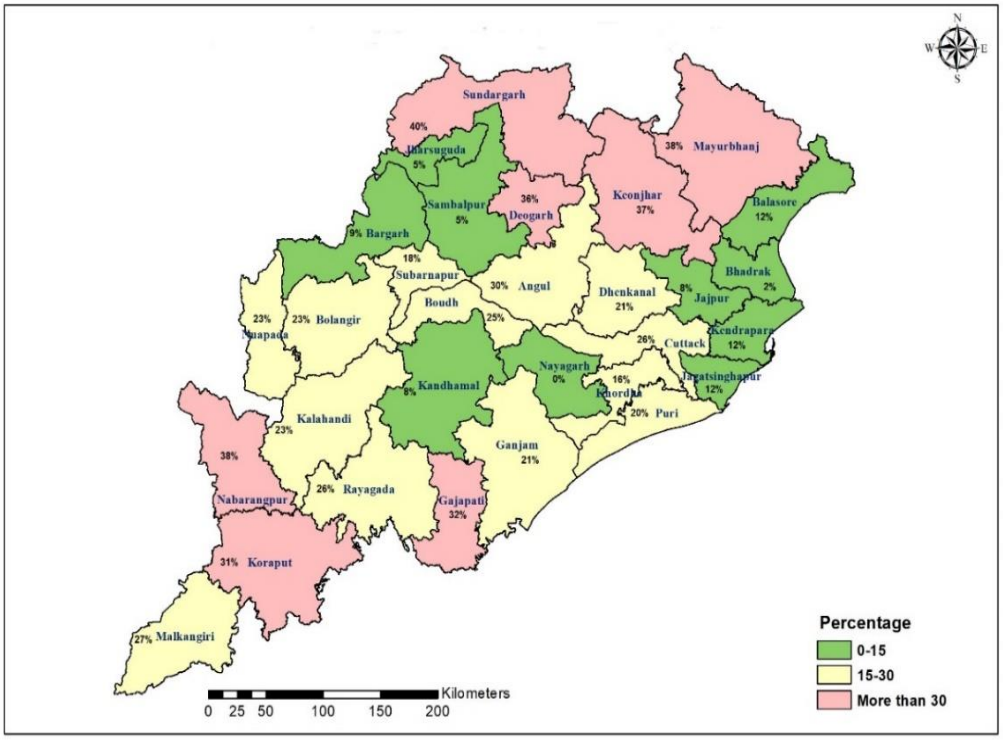
The shortage of CHCs, compared to the population norms[34], was more than 30 *per cent* in three districts (Bhadrak, Kendrapara and Nabarangpur), whereas the shortages of PHCs and SCs were more than 30 *per cent* in seven[35] and 16[36] districts, respectively. The district-wise requirement and shortage of CHCs, PHCs and SCs is given in ***Appendix 3.1***. The shortages of PHCs and SCs in terms of percentage, are shown in **Maps 3.1** and **3.2,** respectively.

[34] The norm of 5,000 population for SCs, 30,000 for PHCs and 1,20,000 for CHCs, has been considered to assess the requirement of healthcare facilities

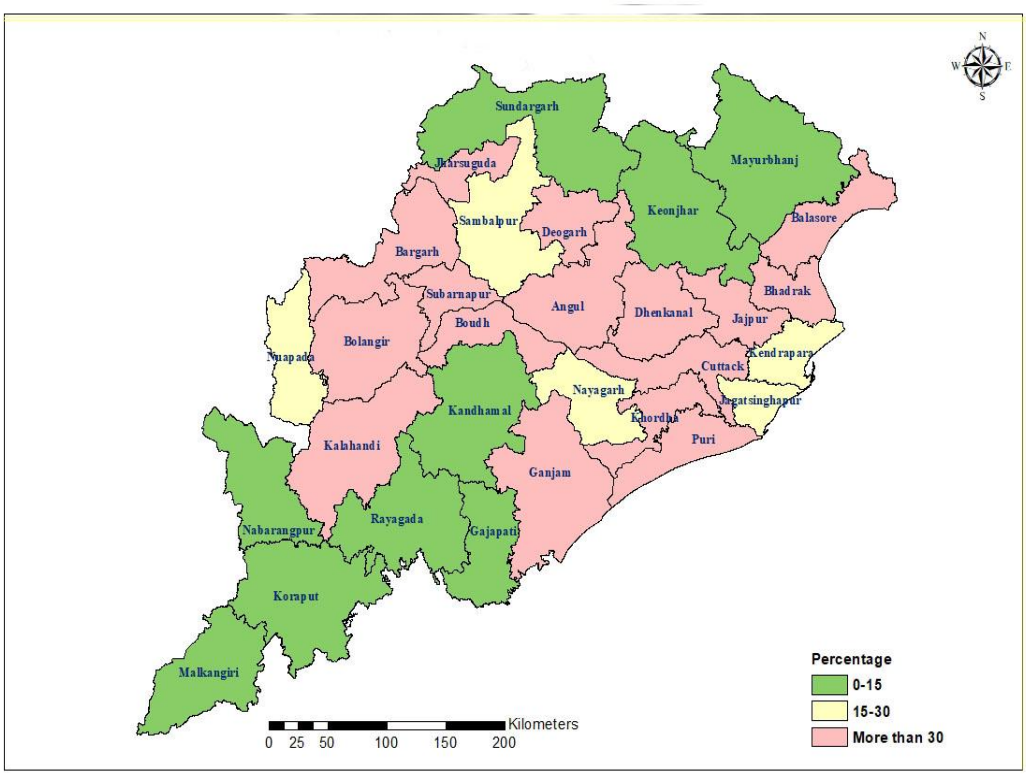
[35] Deogarh, Gajapati, Keonjhar, Koraput, Mayurbhanj, Nabarangpur and Sundargarh

[36] Angul, Bolangir, Balasore, Bargarh, Bhadrak, Boudh, Cuttack, Deogarh, Dhenkanal, Ganjam, Jajpur, Kalahandi, Khurda, Jharsuguda, Puri and Subarnapur

Map 3.1: Percentage of shortages of PHCs in the districts across the State



Map 3.2: Percentage of shortages of SCs in the districts across the State



Based on the requirement, the Chief District Medical and Public Health Officers (CDM&PHOs) of the districts, submit their proposals to the Director of Health

Services (DHS), Odisha, for creation/ up-gradation of healthcare facilities. The DHS, after examining the proposals through its Sub-committee[37], sends the same to the Government, for creation/ up-gradation of healthcare facilities in the State.

During the period from March 2018 to March 2021, DHS had submitted proposals for establishment/ up-gradation of 72 healthcare facilities[38] in 26 districts, to Government for approval. However, Government had not approved any of these proposals, as on 31 March 2022.

Government reconstituted (July 2022) a Screening Committee at the Directorate level and a High Powered Committee at the State level, for examination of the proposals and submission of recommendations, in regard to establishment of new PHCs, upgradation of existing PHCs to CHCs, CHCs to SDHs and DHHs, as well as enhancement of the bed strength of healthcare facilities, considering the IPHS norms, 2022, geographical conditions, availability of manpower, budget provisions, *etc*.

The H&FW Department stated (February 2023) that the gaps were analysed and steps had been taken to revamp the infrastructural development, as per the IPHS norms in a phased manner.

3.1.1 Healthcare Facilities under AYUSH

Government of Odisha provides healthcare services under AYUSH[39] systems of medicine to the people of the State. The healthcare services were provided through AYUSH hospitals and dispensaries. Government healthcare facilities available in the State, as of March 2022, are shown in **Table 3.1**.

Table 3.1: Healthcare facilities available in the State

Sl. No.	Name of the Institutions	Number of HCIs available
1	Government Ayurvedic Dispensaries	620
2	Government Unani Dispensaries	9
3	Government Homoeopathic Dispensaries	562
4	Homoeopathic Medical Colleges and Hospitals	4
5	Ayurvedic Medical Colleges and Hospitals	3
6	Government Ayurvedic Hospitals	2

(Source: Directorate of AYUSH, Odisha)

The district-wise availability of healthcare facilities under Ayurveda, Homeopathy and Unani, as of March 2022, is shown in ***Appendix 3.2***.

3.2 Out-patient Services

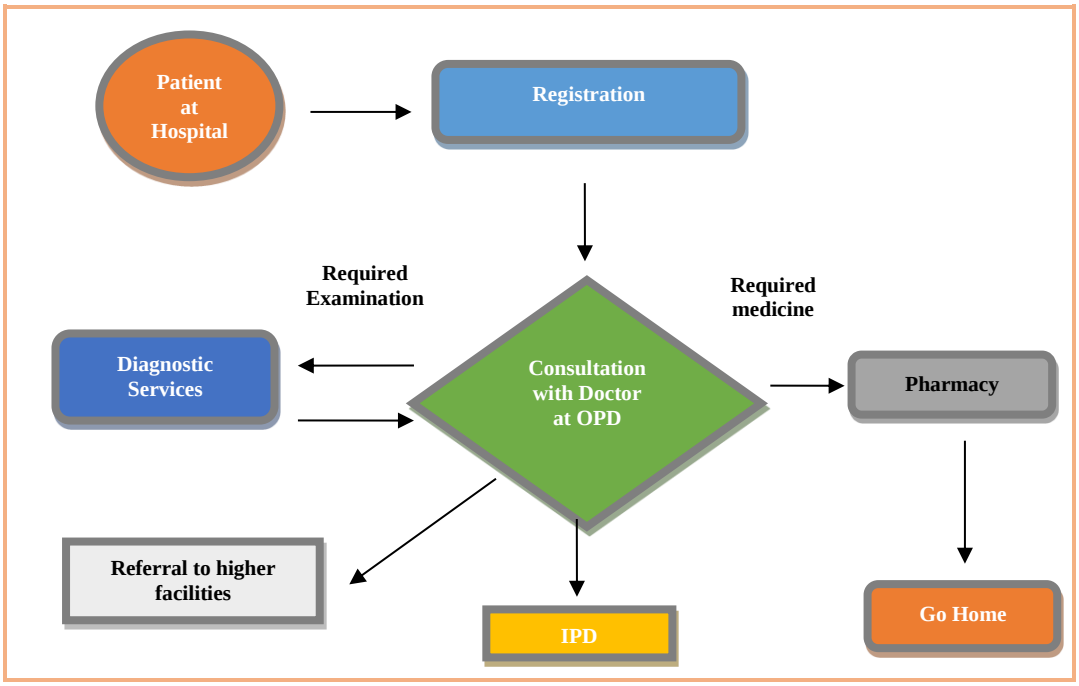
To avail of out-patient services in hospitals, patients first register at the Outdoor Patient Department (OPD). After registration, the concerned doctors examine the patients and either prescribe diagnostic tests for evidence based diagnosis, or drugs, during the consultation process. The flow of out-patient services is shown in **Figure 3.1**.

[37] Headed by the Additional Director of Health Services

[38] Opening of PHCs/UPHCs: 54; Upgradation of PHCs to CHCs: 12; Upgradation of CHCs / SDHs: 6

[39] Ayurveda, Yoga and Naturopathy, Unani, Siddha and Homeopathy

Figure 3.1: Flow of outpatient services



Audit findings, pertaining to the In-Patient Department (IPDs), diagnostic services and pharmacies, are discussed in ***Paragraphs 3.3, 3.7*** and ***4.1,*** respectively. This paragraph discusses the audit observations in regard to the delivery of OPD services in hospitals.

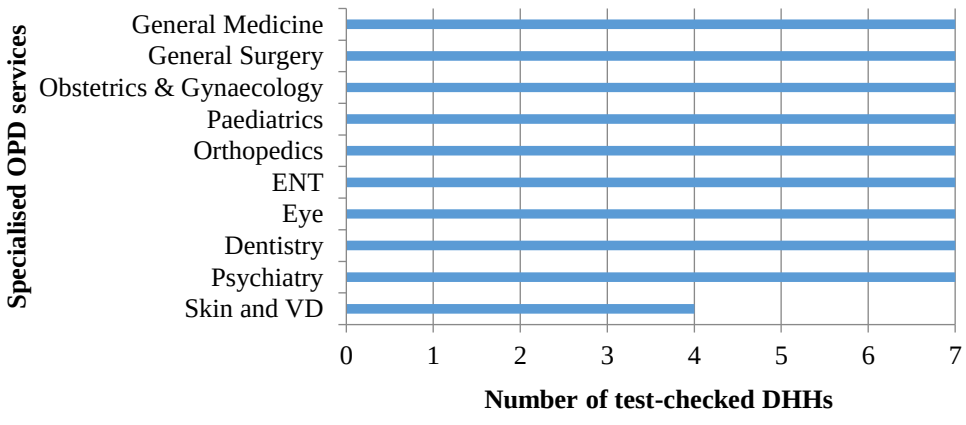
3.2.1 Availability of OPD services in hospitals

As per IPHS norm, the DHHs and CHCs are expected to provide essential specialised clinical services to the patients in OPDs.

3.2.1.1 District Headquarters Hospitals

Availability of specialised OPD services in all DHHs of the State, as prescribed under IPHS, is given in ***Appendix 3.3***. Audit, examined the availability of 10 specialised OPD services, in the seven test-checked DHHs and found that nine specialised OPD services were available in all the test-checked DHHs, as shown in **Chart 3.2**.

Chart 3.2: Availability of OPD Services in the test-checked DHHs



Audit, however, noticed the following deficiencies:

- OPD services for Skin and Venereal Diseases (VD) were not provided in the DHHs of Dhenkanal, Nabarangpur and Nuapada, due to non-availability of specialists.
- Dental OPD service was available at DHH, Bhadrak, but without dental X-ray facility. Two dental X-ray machines, costing ₹2.46 lakh, were available in store, but had been lying idle for 3-5 years, due to non-availability of technicians.
- ENT equipment/ instruments had not been supplied to the concerned doctor in DHH, Bhadrak, despite availability of the same in the sub-store of the hospital.

3.2.1.2 Community Health Centers

Audit examined the availability of five essential specialised OPD services, as prescribed under IPHS, in the 14 test-checked CHCs and noticed the status, as shown in **Table 3.2**.

Table 3.2: Availability of specialised OPD services in the test-checked CHCs

CHC	Availability of specialised OPD services				
	Medicine	Surgery	Obstetrics & Gynecology	Paediatric	Dental
Bangurigaon	No	No	No	No	Yes
Barapada	No	No	No	No	No
Basudevpur	No	Yes	Yes	Yes	Yes
Khajuriakata	No	No	No	No	Yes
Khariar road	No	No	No	No	No
Komna	No	No	No	No	Yes
Kosagumuda	No	No	No	No	Yes
Kuarmunda	No	No	No	Yes	Yes
Lahunipara	No	No	Yes	No	Yes
Nimapara	No	Yes	Yes	Yes	Yes
Papdahandi	No	No	Yes	No	Yes
Raikia	No	No	No	No	No
Sriramchandrapur	No	No	No	No	No
Tikabali	No	No	No	No	No

(Source: Data obtained from the test-checked CHCs and JPI)

Audit observed that none of the 14 test-checked CHCs, had all the prescribed specialised OPD services, due to non-availability of specialists.

Thus, the test-checked hospitals were not IPHS compliant, in terms of delivery of essential OPD services.

3.2.2 Patient load in OPD

Out-patient services in DHHs are catered through OPD clinics on daily basis. The number of out-patients attended to, by the test-checked DHHs, during FYs 2016-17 to 2021-22, is given in **Table 3.3**.

Table 3.3: OPD patients in the test-checked DHHs

DHHs	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22
Bhadrak	3,14,939	2,82,290	3,37,513	3,97,304	2,05,273	2,49,911
Dhenkanal	29,231	27,847	43,052	53,199	36,696	48,277

DHHs	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22
Kandhamal	NA	1,79,297	2,28,410	3,01,985	1,62,170	2,03,253
Nabarangpur	70,691	84,965	1,09,665	1,43,068	79,334	22,224
Nuapada	70,412	86,878	1,17,523	1,36,582	86,355	77,262
Puri	2,51,715	3,44,011	4,50,608	6,39,651	4,90,182	4,75,492
Sundargarh	2,49,358	3,13,920	2,67,992	3,12,516	2,92,995	3,19,125
Total	**9,86,346**	**13,19,208**	**15,54,763**	**19,84,305**	**13,53,005**	**13,95,544**

(Source: Data obtained from the test-checked DHHs)

Table 3.3 shows that the number of out-patients in the test-checked DHHs increased by 101 *per cent* in FY 2019-20 (19.84 lakh), compared to the patient load in FY 2016-17 (9.86 lakh). The patient load, however, decreased during FY 2020-21 and FY 2021-22, in comparison to the FY 2019-20, due to Covid-19 measures. It was noticed that the number of out-patients was more in the departments like, General Medicine, Pediatric, O&G and Ophthalmology, compared to other departments in the district hospitals, as detailed in ***Appendix 3.4***.

Similarly, the number of OPD patients had an increasing trend in the test-checked CHCs, during the period from FYs 2016-17 to 2019-20, which decreased during FYs 2020-21 to 2021-22, due to Covid-19 measures, as detailed in **Table 3.4**.

Table 3.4: OPD patients in the test-checked CHCs, during FYs 2016-17 to 2021-22

Sl. No.	CHCs	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22
1	Basudevpur	76,413	81,219	98,839	1,33,130	62,422	1,18,840
2	Barpada	34,093	31,395	24,984	22,112	24,523	39,532
3	Sriram Chandrapur	21,379	18,128	23,612	30,555	27,788	29,568
4	Khajuria Kata	20,031	19,512	21,159	27,302	19,146	20,928
5	Raikia	40,120	44,094	54,908	73,170	40,515	37,928
6	Tikabali	43,404	52,177	60,635	65,944	28,978	23,182
7	Kosagumuda	28,601	23,577	28,569	31,111	20,233	13,376
8	Papadahandi	22,911	19,068	27,376	33,347	20,264	28,701
9	Komna	36,308	31,747	37,932	49,009	34,653	34,563
10	Khariar Road	30,166	37,554	43,568	48,416	19,426	23,251
11	Bangurigaon	24,706	28,893	44,667	34,729	20,173	14,792
12	Nimapada	78,746	59,096	76,581	1,12,162	71,275	68,434
13	Kuarmunda	35,828	33,086	36,750	40,766	22,291	22,795
14	Lahunipara	38,043	31,783	37,894	42,740	35,194	42,513

(Source: Data furnished by H&FW Department)

3.2.2.1 OPD cases per doctor in DHHs

OPD cases per doctor is an indicator for measuring efficiency of OPD services in a hospital. The OPD patient load per doctor per annum, is shown in ***Appendix 3.5.*** Audit analysed the patient load per doctor for sampled weeks in the test-checked DHHs, which is given in **Table 3.5**.

Table 3.5: Average OPD cases[40] per doctor per day, in sampled weeks during FYs 2017-18 to 2021-22 in test-checked DHHs

DHH	Average OPD Cases per doctor per day				
	1-7 August 2017	1-7 November 2018	1-7 February 2020	1-7 May 2020	1-7 August 2021
Bhadrak	90	91	70	21	47
Dhenkanal	19	13	18	12	11
Kandhamal	52	72	98	39	49
Nabarangpur	18	15	13	9	11
Nuapada	21	23	22	19	16
Puri	103	127	160	54	92
Sundargarh	44	32	32	16	27

(Source: Data obtained from the test-checked district hospitals)

Audit observed that average OPD patient load per doctor in DHHs of Dhenkanal, Nuapada, Nabarangpur and Sundargarh during FYs 2017-18 to 2019-20[41] was less, as compared to the other test-checked DHHs.

3.2.2.2 OPD cases per doctor in CHCs

The average OPD cases per doctor per day during sampled weeks of FYs 2017-18 to 2021-22, in the test-checked CHCs, is given in **Table 3.6**.

Table 3.6: Average OPD patient load per doctor per day in sampled weeks in the test-checked CHCs

CHC	Patient load per doctor per day in the test-checked CHCs				
	1-7 August 2017	1-7 November 2018	1-7 February 2020	1-7 May 2020	1-7 August 2021
Banugurigaon	34	29	26	19	19
Barapada	96	89	63	42	40
Basudevpur	75	135	59	1	76
Khajuriakata	102	50	29	40	46
Khariar Road	26	30	28	22	25
Komana	46	57	49	47	60
Kosagumuda	19	15	20	16	13
Kuarmunda	65	29	22	14	21
Lahunipada	53	52	60	45	46
Nimapara	32	153	62	78	84
Papadahandi	28	18	13	11	11
Sriramchandrapur	39	48	41	46	21
Raikia	77	96	60	31	25
Tikabali	72	74	138	70	32

(Source: Data obtained from the test-checked CHCs)

It would be seen from the above table that the average OPD patient load during FYs 2017-18 to 2021-22 in nine[42] test-checked CHCs was much less than the average patient load in five[43] test-checked CHCs.

[40] Considering six days a week

[41] OPD patient load for 2020-21 and 2021-22 is not commented as the OPD patient load got affected by Covid-19 measures.

[42] Bangurigaon, Khajurikata, Khariar Road, Komana, Kosagumuda, Kuarmunda, Lahunipada, Sriramchandrapur and Papadahandi

[43] Barapada, Basudevpur, Nimapara, Raikia, Tikabali

3.2.3 Patients' waiting time and consultation time

Audit observed that data relating to patients' waiting time and consultation time, was not maintained in the test-checked hospitals for studying and taking measures for reducing the waiting time for registration, consultation, *etc*., as required under IPHS.

Audit conducted (April-August 2022) patient surveys of 175 OPD patients in the seven test-checked DHHs, and 50 patients in the two test-checked MCHs. The responses of the patients, were as under:

OPD patients in queue for doctor's consultation at DHH, Bhadrak (19 May 2022)

- In DHHs, 12 *per cent* of the patients stated that they had to wait for 20 minutes or more in the registration counter. In the two test-checked MCHs, 39 (78 *per cent*), out of 50 patients, had to wait for more than 20 minutes, for registration to avail OPD service*s*. The longer waiting time for registration was due to inadequate numbers of registration counters, as discussed in ***Paragraph 3.10.1***.
- In the seven test-checked DHHs, 24 *per cent* patients stated that they had to wait for 20 minutes or more, to consult the concerned doctors. In the two test-checked MCHs, 44 patients (88 *per cent*) stated that they had waited for 20 minutes or more to consult a doctor.

3.2.4 Patient satisfaction survey

The NHM Assessor's Guidebook requires hospitals to conduct patient satisfaction surveys (PSS) of outdoor patients, on a monthly basis.

Audit noticed that PSSs had been conducted in all the test-checked DHHs. However, the feedback obtained had not been analysed and taken into consideration, while preparing action plans relating to the areas identified for improvement. For instance, as per the feedback received in DHH, Bhadrak, though improvement in services was required for cleanliness of wards, hospital surroundings, bio-medical waste management, *etc*., yet no action plan was prepared for corrective measures in this regard.

Also, patients' feedback formats/questionnaires had not been completely filled in all cases and had not been signed by the hospital authorities at DHH, Bhadrak. Some forms had been left blank, after obtaining the signatures of the patients, in advance.

Out of the 14 test-checked CHCs, PSSs were not conducted in nine[44] of the test-checked CHCs, during FYs 2017-18 to 2021-22. At CHC, Basudevpur, PSS had been discontinued since November 2021, due to shortage of staff.

[44] Barapada; Khajurikata; Komna; Kuarmunda; Lahunipara; Papadahandi; Raikia; Sriramchandrapur; Tikabali

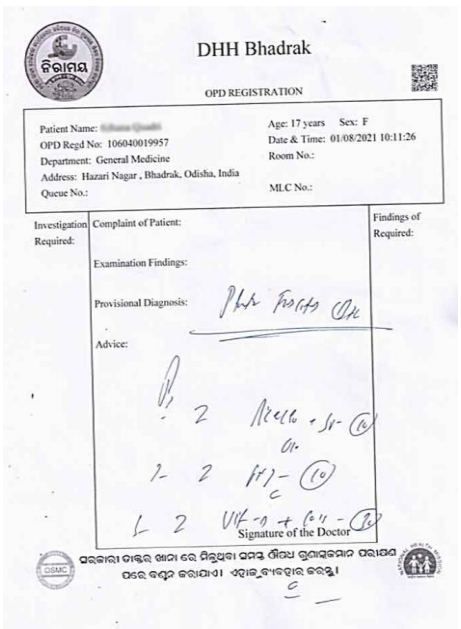
In view of the above and the results of the survey conducted by Audit, there was no assurance that the objective of conducting PSS had been achieved.

3.2.5 Completeness of prescription slip

Prescription Audit Guidelines, issued (June 2016) by the H&FW Department, mandate doctors to write medication orders legibly and adequately, since inaccuracy in writing, illegible handwriting or incomplete writing of a prescription, can lead to misinterpretation, leading to errors in dispensing and administration of medicine. The prescriptions should have the names of the drugs in capital letters, complaints of the patients, diagnosis/investigation, *etc*., with full signatures of the concerned doctors.

Audit test-checked 340 prescriptions (2018-22) in five DHHs and two MCHs and noticed that:

- The complaints of the patients were not recorded in 66 (47 *per cent*) prescriptions in DHHs, while provisional diagnosis was not mentioned in 29 *per cent* cases in MCHs.
- The prescriptions were not written in BOLD letters, in almost all cases.
- The full signatures of the doctors, with their names/stamps, were not available, in almost all the prescriptions.


DHH Bhadrak

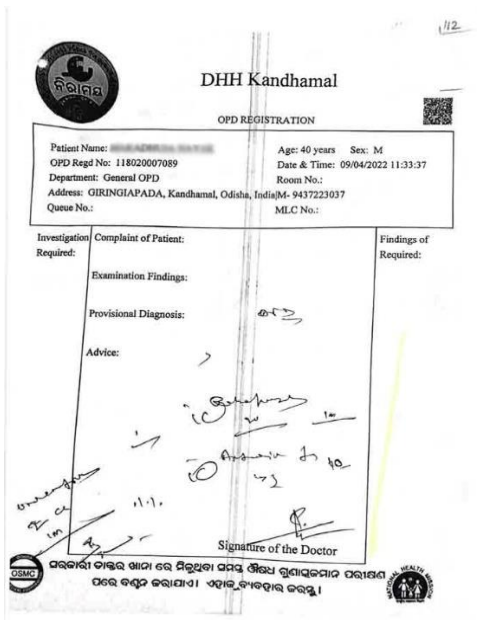
OPD REGISTRATION

Patient Name:
OPD Regd No: 106040019957
Department: General Medicine
Address: Hazari Nagar , Bhadrak, Odisha, India
Queue No.:
Age: 17 years Sex: F
Date & Time: 01/08/2021 10:11:26
Room No.:
MLC No.:

Investigation Required:
Complaint of Patient:
Examination Findings:
Provisional Diagnosis:
Advice:
Findings of Required:

Signature of the Doctor

Prescription at DHH, Bhadrak, in illegible hand writing and patient's complaints not recorded


DHH Kandhamal

OPD REGISTRATION

Patient Name:
OPD Regd No: 118020007089
Department: General OPD
Address: GIRINGIAPADA, Kandhamal, Odisha, India|M- 9437223037
Queue No.:
Age: 40 years Sex: M
Date & Time: 09/04/2022 11:33:37
Room No.:
MLC No.:

Investigation Required:
Complaint of Patient:
Examination Findings:
Provisional Diagnosis:
Advice:
Findings of Required:

Signature of the Doctor

Prescription at DHH, Kandhamal, in illegible hand writing.

Thus, writing of prescriptions in hospitals was not compliant with the prescribed guidelines and, due to lack of completeness of prescriptions, there was material risk of dispensing incorrect medicines to patients.

The H&FW Department stated (February 2023) that steps were being taken to induct specialist doctors in near future, and instructions had been issued to the CDM&PHOs to follow the guidelines, as per mandate.

3.3 In-patient Services

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

This paragraph discusses the availability of IPD services, covering the results of audit examination across two MCHs, seven DHHs and 14 CHCs.

3.3.1 Availability of In-patient services

As per the IPHS and NHM Assessor's Guidebook, essential IPD services should be provided to patients in DHHs and CHCs.

3.3.1.1 District Headquarter Hospitals (DHHs)

Out of the 16 essential IPD services to be provisioned in DHHs, only seven services were found to be available in all the seven test-checked DHHs. Availability of the remaining nine IPD services was found to be deficient in one to five of the test-checked DHHs, as depicted in **Table 3.7**.

Table 3.7: Availability of IPD services in the test-checked DHHs

Inpatient services	Availability of services in test-checked DHHs (Yes/No)						
	Bhadrak	Dhenkanal	Kandha-mal	Nabarangpur	Nuapa-da	Puri	Sundargarh
Medicine	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Isolation ward	Yes	Yes	Yes	Yes	No	Yes	Yes
Surgery	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Burn ward	No	No	Yes	No	Yes	Yes	Yes
Ophthalmology	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Orthopedics	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Paediatric	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Dental	No	No	Yes	No	Yes	Yes	No
ENT	No	No	Yes	No	Yes	Yes	Yes
Psychiatry	No	No	No	No	Yes	Yes	Yes
Physiotherapy	No	Yes	No	No	Yes	No	Yes
Dialysis service	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Accident & trauma care ward	Yes	Yes	No	No	No	No	Yes
Indoor TB patients	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Geriatric ward	No	No	No	No	Yes	No	Yes
Skin and VD	No	No	No	No	No	Yes	Yes

(Source: Data provided by the test-checked DHHs and Joint Physical Inspection)

Audit observed that:

- Essential IPD services, such as Burns Ward, Accident and Trauma Care, ENT, Skin and VD, *etc*., were not available in three to five DHHs, due to non-availability of infrastructure and human resources.
- Burn patients were being treated in the General Wards (Medicine and Surgery) in three DHHs[45], since there was no provision for a separate Burns Ward, resulting in a significantly high risk of cross-infection, for such vulnerable patients.

[45] Bhadrak, Dhenkanal and Nabarangpur

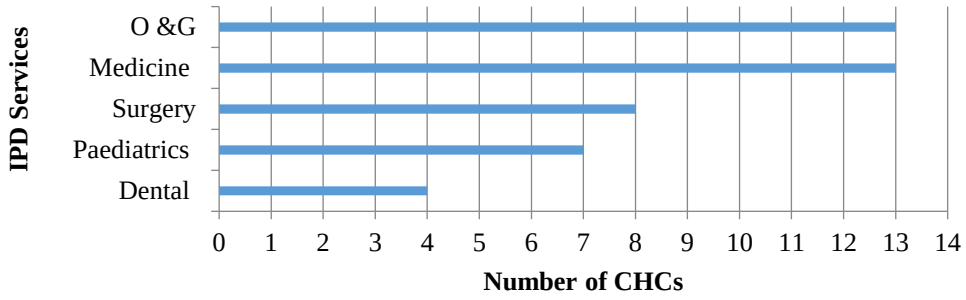
- Out of the test-checked DHHs, the DHHs at Bhadrak, Dhenkanal and Nabarangpur, were most deficient, in terms of having essential IPD services.
    - The DHHs at Bhadrak and Dhenkanal lacked IPD services for ENT, Dental, Skin and VD.
    - DHH, Nabarangpur, lacked Accident and Trauma care, Skin and VD, ENT and Dental services.

Availability of major IPD services in all the DHHs, as of March 2022, is given in ***Appendix 3.6***.

3.3.1.2 Community Health Centres (CHCs)

The CHC-wise availability of IPD services is given in ***Appendix 3.7***. Out of the five essential IPD services, to be provisioned, as per IPHS, none were found to be available in all the 14 test-checked CHCs. Availability of the five essential IPD services was found to be deficient in one to 10 test-checked DHHs, as depicted in **Chart 3.3**.

Chart 3.3: Availability of IPD Services in 14 sampled CHCs



(Source: Data furnished by the test-checked CHCs)

Audit observed that:

- Paediatric IPD services were not available in seven CHCs; Surgery IPD services were not available in six CHCs; and 10 CHCs did not have Dental IPD services.

CHC, Barapada did not have any of the essential IPD services, due to absence of specialist doctors.

- Out of all the test-checked CHCs, the CHCs at Khajuriakata, Kuarmunda, Raikia and Sriramchandrapur, were most deficient, in terms of having essential IPD services.
    - The CHCs of Khajuriakata and Raikia, lacked Surgery, Paediatric and Dental services.
    - CHC, Kuarmunda, lacked Surgery and Dental services.
    - CHC, Sriramchandrapur, lacked Paediatric and Dental services.

Thus, IPD services, including specialised health services provided in the DHHs and CHCs, were not in consonance with the norms stipulated in the NHM

Assessor's Guidebook and IPHS. Patients, therefore, had no option, but to approach private or other distant health care facilities, to avail these services.

The H&FW Department assured (February 2023) that steps would be taken to fix the problems, as per IPHS norms.

3.3.2 Bed Occupancy Rate

The Bed Occupancy Rate (BOR)[46] is an indicator of the productivity of the hospital services and is a measure of verifying whether the available infrastructure and processes are adequate for the delivery of healthcare services. As per IPHS, the BOR of the hospitals should be 80 *per cent*. The NITI Aayog Report (2021) for district hospitals, also states that BOR of 80-85 *per cent* is considered ideal, at which a facility is considered to operate most efficiently.

Audit evaluated the BOR of the test-checked DHHs/ MCHs, for the sampled months, and found the following status:

Table 3.8: Bed occupancy rate of the test-checked DHHs/ MCHs

DHH/ MCH	Bed Occupancy Rate (Functional Beds)					Average BOR
	2017-18	2018-19	2019-20	2020-21	2021-22	
Bhadrak	143 (263)	107 (263)	93 (336)	97 (336)	112 (336)	110
Dhenkanal	137 (176)	150 (176)	147 (176)	143 (176)	91 (300)	134
Kandhamal	86 (186)	95 (186)	99 (236)	88 (236)	91 (236)	92
Nabarangpur	70 (166)	58 (252)	61 (252)	77 (252)	70 (252)	67
Nuapada	78 (170)	98 (170)	72 (315)	52 (315)	67 (315)	73
Puri	71 (451)	78 (451)	75 (451)	71 (451)	78 (451)	74
Sundargarh	87 (300)	80 (300)	76 (300)	67 (300)	84 (330)	79
MCH, Baripada	201 (300)	253 (300)	265 (300)	128 (380)	116 (417)	193
MCH, Berhampur	98 (1431)	104 (1431)	125 (1431)	87 (1431)	102 (1601)	103

(Source: Records of the test-checked hospitals)
(Red colour represents high bed occupancy and green denotes low BOR)

During FYs 2017-18 to 2021-22, the average BOR in the three test-checked DHHs (Bhadrak, Dhenkanal and Kandhamal) was higher than the norm of 80-85 *per cent*, indicating that the patient load in these hospitals was high, compared to the existing bed infrastructure.

The average BOR of 110 for DHH, Bhadrak, correlated with the fact of insufficient number of beds in that hospital. The average BOR of 134 for DHH Dhenkanal, was due to the significant lowering in the BOR, from 143 in FY 2020-21 to 91 in FY 2021-22, which, in turn, was due to the increase in the functional bed strength in that hospital, from 176 to 300.

The BORs of both the MCHs were more than the norm of 75 *per cent*, as prescribed in the MSRR. It was maximum in PRM MCH, Baripada (193).

[46] BOR = Total patient bed days in a month*100/ (Total No. of functional beds *days in the month)

Hospitals with high BOR indicate that the patient load is high, in comparison to the existing infrastructure, which can ultimately lead to patients being placed in clinically inappropriate wards/places, and carries a significant risk of hospital-acquired cross infections. It also creates avoidable pressure on healthcare personnel, to free up occupied beds, for other patients who may be perceived to be in higher need, posing risks to good quality care for recuperating patients.

The H&FW Department stated (February 2023) that steps had been taken for augmentation of hospital beds and revamping the public health systems in Odisha.

3.3.3 Availability of patient amenities in IPDs

As per IPHS norms, basic amenities, to be provided in the IPD wards, in DHHs, for the nursing staff and patients, include the following:

- Wards should include a nursing station, doctors' duty room, isolation room, treatment room and nursing store, along with toilets.
- Every bed should have an IV stand, bed side locker, stool for attendants, screens, *etc*.

Audit observed that, although these amenities had been provided in the seven test-checked DHHs, the following severe deficiencies existed:

- At DHH, Bhadrak, separate wards for male and female patients, as required under IPHS, were not available in Surgery IPDs, resulting in lack of privacy for patients.

Male and female patients accommodated in the surgery ward at DHH, Bhadrak (5 May 2022)

- At DHH, Sundargarh, only two toilets were available in the Obstetrics and Gynaecology (O&G) Ward, which was functioning with 44 beds, against the requirement of one closet/ latrine for six IPD beds, as per IPHS.
- Adequate numbers of bed side lockers, saline stands, window screens and bed-side screens, which were necessary for the privacy of the patients, had not been provided, in any of the test-checked DHHs.

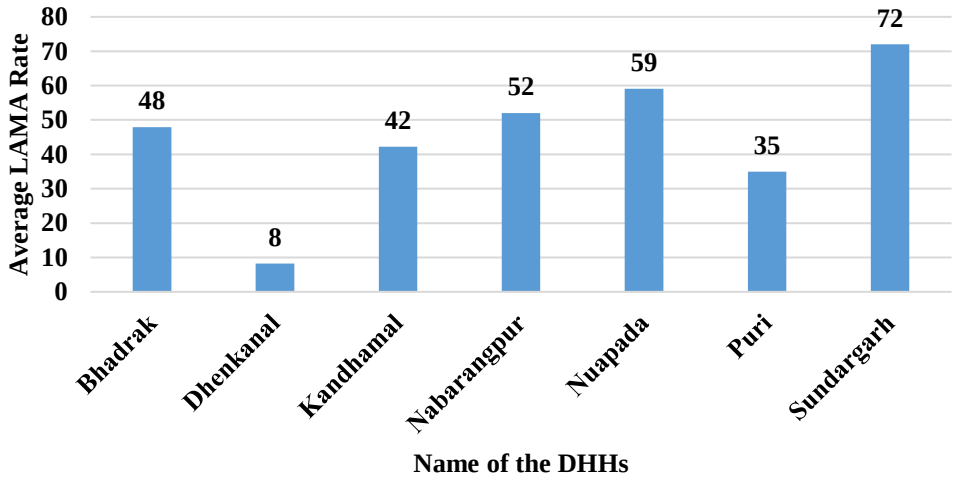
Thus, patient amenities, in the seven test-checked DHHs, were not sufficient, as per IPHS norms.

The H&FW Department stated (February 2023) that steps were being taken for improvement, as per IPHS norms.

3.3.4 LAMA and Absconding Rate

One of the metrics by which the service quality of a hospital may be measured, is the 'Leave against Medical Advice (LAMA) Rate'[47] and 'Absconding Rate'. 'LAMA' is the term used for a patient who leaves the hospital against the advice of the doctor and 'Absconding Rate' refers to the rate at which the patients leave the hospital, without informing the hospital authorities. The average LAMA rate per 1,000 admissions, in the test-checked DHHs, during the period. During FYs 2017-18 to 2021-22, is given in **Chart 3.4**.

Chart 3.4. Average LAMA Rate in the test-checked DHHs



(Source: Data obtained from the test-checked DHHs)

The average LAMA rate, in two of the seven test-checked DHHs (Nuapada and Sundargarh), was higher than the other five DHHs. The high LAMA incidence in these hospitals indicated that IPD service quality was not adequate, in terms of retaining the trust of the patients, regarding the levels of healthcare being provided therein.

None of the seven DHHs had maintained records for absconding patients, due to which, the reasons for their having left these hospitals, without informing the hospital authorities, could not be analysed.

Audit, however, observed that, against 9,14,402 patients, admitted during FYs 2017-18 to 2021-22, in four[48] of the test-checked DHHs, 8,32,087 patients had been discharged, or had been referred out, or had left the hospital against medical advice, or had expired. However, the DHHs had not maintained any details about the remaining 82,315 (9 *per cent*) patients, indicating that they had left the hospital without informing hospital staff, *i.e.* they had absconded.

[47] Total LAMA cases * 1000/ Total admissions in the month
[48] Bhadrak; Dhenkanal; Kandhamal; Sundargarh

The high LAMA incidence in these hospitals indicated that IPD service quality may not have been adequate in terms of retaining the trust of the patients, regarding the levels of healthcare being provided therein. The high absconding rate indicated the deficiencies in controls to monitor patients who had been admitted but then left without informing the doctors.

The H&FW Department stated (February 2023) that OeHMIS[49] work was under progress to digitise the detailed information of patients.

Recommendation 3.1:

Hospitals may maintain records for absconding cases and analyse the reasons of absconding, and take appropriate action for addressing the shortcomings for delivering quality healthcare service to patients.

3.4 Availability of line/ support services

In regard to IPHS and other guidelines, line services *viz*., OPD services, IPD services, ICU services, OT services, maternity services, *etc*., and support services *viz*., imaging/ pathology services, blood bank services, diet management, ambulance services, *etc*. were to be provided in district hospitals. While deficiencies noticed in delivery of OPD and IPD services have been discussed in preceding paragraphs, availability of other services in the DHHs of the State, is given in ***Appendix 3.8***. Audit observations on delivery of quality healthcare services in public health facilities are discussed in succeeding paragraphs.

3.4.1 Emergency and Trauma care services

The goal of emergency services is to provide treatment to those in need of urgent medical care, with the purpose of satisfactorily treating the ailment, or referring the patient to a more suitably equipped medical facility. In particular, the first hour, called the "Golden hour", is critical for patients requiring emergency services.

3.4.1.1 Emergency/ casualty service

As per IPHS, 24x7 operational emergency services with a dedicated emergency room, is required to be available, with adequate manpower. The emergency room should have a mobile X-ray/laboratory, side labs/plaster room and minor OT facilities. In addition, separate emergency beds may be provided. Audit noticed, in this regard, that there was a serious dearth of emergency services in the DHHs and MCHs.

District Headquarter Hospital

In all the test-checked DHHs, although 24x7 emergency services (Casualty/ stabilisation unit) were available, they were not equipped with mobile X-ray/ laboratory services, OT facilities and emergency beds and did not have separate manpower. No details, regarding the patients admitted in the emergency department, referral cases, *etc*., were available with the DHHs.

[49] Odisha e-Hospital Management Information System

Medical College Hospitals

As required under Minimum Standard Requirements Regulations (MSRR), though the two test-checked MCHs had ICUs, there were no Neonatal ICUs and ICU for Tuberculosis and Respiratory diseases, in the Casualty department.

- PRM MCH, Baripada, had no dedicated Casualty Medical Officers (MOs), although MSRR envisages four MOs in the department. The MOs of the DHH, Baripada, were deployed in the Central Casualty department. In MKCG MCH, two casualty MOs were available, against the sanctioned strength of four.
- There were shortages of 17 and 12 essential items of equipment, in the Casualty departments of PRM MCH and MKCG MCH, respectively, as detailed in ***Appendix 3.9***. Equipment like Sonography machine, emergency X-ray (fixed and mobile), Defibrillators to restore normal heart beat, Tourniquet to stop life-threatening external bleeding, *etc*., were not available in these two MCHs.

The H&FW Department stated (February 2023) that steps would be taken to provide equipment to MKCG MCH, and the casualty MOs in the PRM MCH were being managed by the Assistant Surgeons of the hospitals, as the MCH had no approval for dedicated MOs.

3.4.1.2 Accident and Trauma care services

Trauma Care Centres (TCCs)[50] were to be established, to provide intensive medical services at the places nearest to the victims, during highway accidents, to utilise the golden hours of treatment. As per orders (November 2017) of the Hon'ble Supreme Court, at least one TCC should be established in each district, with necessary facilities.

As per the data made available to Audit, by the Director of Medical Education and Training (DMET), Odisha, TCCs were available in all the DHHs. In the test-checked DHHs, Audit, however, noticed that:

- TCCs were not available in four (Kandhamal, Nabarangpur, Nuapada and Puri) of the seven test-checked DHHs. Resultantly, the trauma patients requiring intensive medical services had to be referred/ transported to tertiary care/trauma centres, located at distant places. Thus, treating the critical patients requiring emergency services, within the golden hour, was not possible.
- TCCs available in three of the test-checked DHHs (Bhadrak, Dhenkanal and Sundargarh) had severe deficiencies in their functioning, as discussed below:

[50] As per the Operational Guidelines issued by the Government of India for developing trauma care facilities, (i) **Level I TCC** facilities provide the highest level of definitive and comprehensive care for patients with complex injuries. These should be available in tertiary care centers, to which patients requiring highly specialised medical care, are referred. (ii) **Level II TCC** facilities provide definitive care for severe trauma patients and are required to be available in the existing MCHs or hospitals with bed strengths of 300 to 500. (iii) **Level III TCC** facilities provide initial evaluation and stabilisation (surgically, if appropriate) to the trauma patients. District hospitals, with a bed capacity of 100 to 200 beds, are to be selected for level III care

- **TCC, Bhadrak:** The ICU for the TCC was not functional, due to the absence of Anaesthetists. The patients admitted in the TCC had availed treatment of minor nature. Major cases were being referred to the SCB MCH, Cuttack, which is about 100 kms away from Bhadrak, thus risking the lives of the victims. During 2021-22, about 25 *per cent* of the patients admitted in the TCC were referred to higher facilities. Equipment such as ventilators, ECG machine, ultrasound machines, *etc*., valued ₹60.86 lakh, were lying idle, due to improper functioning of the TCC.

Beds and Ventilators lying idle due to non-functioning of ICU at TCC, Bhadrak (5 April 2022)

- **TCC, Sundargarh:** No dedicated TCC was available in the DHH. During JPI conducted (July 2022) by Audit with hospital staff, one five bedded Emergency ICU was found to have been functioning at the DHH, from 10 November 2021 onwards. There was no dedicated manpower for the TCC.

Idle ICU ventilators at DHH, Dhenkanal (29 April 2022)

- **TCC, Dhenkanal**: No separate TCC was functioning in the DHH. Only one Trauma Stabilisation Unit was available, with three HDU beds. There was no ICU facility. Five ventilators, received (13 February 2021) from OSMCL, were lying idle in the storeroom of the hospital. Dedicated human resources, for functioning of the TCC, were also not provisioned.

Thus, TCCs were either not available, or they had not been equipped with the required manpower and infrastructure. Even the data/information available with the DMET, regarding availability of TCCs in all the DHHs, was also not correct, indicating inadequate supervision/ monitoring. Non-availability of TCCs, coupled with inefficient accident and emergency services, put the life of accident victims at stake, as 29,720 people[51] in the State had lost their lives in road accidents, during 2016-2021. The death rate (46) *per* 100 accidents, in the State, in 2021, was also higher than the national average of 39.

[51] As per data provided by the State Transport Authority, Odisha

The H&FW Department stated (February 2023) that TCCs had been identified in 55 places across the State, covering all districts, and only stabilisation units were functional in the DHHs. It further added that the Government was taking steps to post specialists in these units on priority basis. The fact, however, remained that TCCs had not been established in many of the districts, despite orders of the Hon'ble Supreme Court, for saving the life of the victims.

3.4.2 Trauma care services in the test-checked MCHs

- **PRM MCH, Baripada**: The H&FW Department had declared (October 2018) a level-II TCC at PRM MCH. The required infrastructure and manpower had, however, not been provided (May 2022) for functioning of the level-II TCC at PRM MCH. The trauma patients were being treated in the existing Casualty/ Orthopaedic/ Surgery departments of the hospital. It was further noticed that 20 ICU ventilators and 24 monitors, valued at ₹3.04 crore, were lying idle, due to non-availability of infrastructure and manpower.
- **MKCG MCH, Berhampur:** The H&FW Department notified (October 2018) the TCC at the MCH as a Level-I TCC. The TCC, however, lacked infrastructure, manpower, equipment, *etc*. compared to the norms prescribed under the Operational Guidelines for Trauma Care facilities, issued by the Government of India.
    - Against the requirement of 30 beds (ICU:10 and General:20) and four operation theatres (OT), for a Level-I TCC, only 12 general beds and one OT existed. No ICU facility was available.
    - Against the requirement of 91 items of critical equipment, for a Level-I TCC, only 39 (43 *per cent*) were available. Rehabilitation equipment (Interferential Therapy machine, Cervical and Lumbar Traction and Physiotherapy equipment) were unavailable, while there was 64 *per cent* shortage of anaesthesia equipment in the TCC.
    - As per the norms applicable for a Level-I TCC, 237 staff, including specialists, doctors, nurses and other paramedical staff, were required for the TCC. Against this, only 20 (Staff Nurse: 18 and Laboratory Technicians: 2) had been posted. No specialist or doctor had been posted in the TCC.

Thus, the TCCs, in the test-checked MCHs, were not adequately equipped, for providing urgent and critical medical service, to trauma patients. It was noticed that the patients treated in the TCC at MKCG MCH, Berhampur, had been referred from the Casualty and other departments of the MCH. Thus, the objective of treating the trauma patient/accident victims within the golden hour, was largely defeated.

The H&FW Department stated (February 2023) that the TCCs had been functioning, being integrated with the existing faculty. The fact, however, remained that the TCCs in the MCHs lacked required infrastructure and manpower for treating the trauma patients.

Recommendation 3.2:

State Government may draw up an action plan to prioritise the provisioning of most essential healthcare services such as emergency, trauma care services, etc. It may adopt and implement IPHS norms fully, in provisioning OPD, IPD and Emergency services, ensuring availability of essential equipment and human resources.

3.4.3 Intensive Care Units

IPHS guidelines provide that each DHH should have an Intensive Care Unit (ICU), to attend to critically ill patients, like major medical and surgical cases, cases of head injuries, severe haemorrhages, *etc*. Patients in ICU require highly skilled lifesaving medical aid and nursing care.

Audit noticed that, at the State level, 17 (53 *per cent*), out of the 32 DHHs, did not have ICUs. In the seven test-checked DHHs, ICUs were not available in four DHHs (Bhadrak, Dhenkanal, Kandhamal and Sundargarh). Due to non-availability of ICU facilities in the DHHs, the critically ill patients of the districts, had to be referred to far away tertiary care facilities.

The ICUs available in the remaining three test-checked DHHs (Nuapada, Nabarangpur and Puri) were found to be deficient in manpower and equipment, as shown in **Table 3.9**.

Table 3.9: Availability of beds and equipment in ICUs

DHH	Number of beds available	Staff nurse		Major Equipment not available
		Requirement [52]	Availability	
Nabarangpur	16	48	3	Deep vein Thrombosis prevention device and Ultrasound machine
Nuapada	6	18	5	Deep vein Thrombosis prevention device and Ultrasound machine
Puri	6	18	8	Deep vein Thrombosis prevention device

(Source: Data furnished by the DHHs)

Audit observed that the ICU at DHH, Nuapada, had been non-functional since April 2020, despite availability of infrastructure.

Audit also noticed the following instances of shortage of key equipment in ICUs, in the test-checked DHHs:

- Shortage of one Ventilator at DHH, Puri.
- Non-functional Arterial Blood Gas (ABG) Analyser at DHH, Nabarangpur.

Non-functional ICU at DHH, Nuapada (24 June 2022)

[52] As per IPHS, one nurse per bed per shift, *e.g.*, 18 nurses are required for 6 beds in three shifts

- Shortage of two high end monitors at DHH, Nabarangpur.

ICU beds were not available in any of the hospitals of the Kandhamal and Dhenkanal Districts, including private hospitals. In Bhadrak, only one ICU bed (one private hospital) was available in the entire District.

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

The H&FW Department stated (February 2023) that a detailed roadmap had been prepared to meet the IPHS norms.

3.4.3.1 ICU service in MCHs

Audit noticed that, while the 25-bedded ICU in PRM MCH and 63-bedded ICU in MKCG MCH, were functional, they were running with an acute shortage of staff nurses. The shortage of staff nurses was 64 *per cent* in PRM MCH, whereas, it was 21 *per cent* in MKCG MCH.

Audit further observed that the additional ICUs, created during November 2018 to August 2021, were not functional, in both the test-checked MCHs.

- Infrastructure for one 30-bedded ICU had been created (August 2021) in the PRM MCH, Baripada, at an expenditure of ₹2.49 crore, with the provision of an oxygen supply pipeline, to combat the second wave of the Covid-19 pandemic. The Superintendent of the MCH had requested (June 2021) the Managing Director, OSMCL, for supply of 25 items of essential life-saving equipment, for the newly constructed ICU. Due to non-supply of required equipment by the OSMCL, the newly created ICU unit had not been made functional (as of August 2022), rendering the expenditure of ₹2.49 crore, futile.
- The Super-specialty Block (G+5) at MKCG MCH, had been constructed (November 2018), at a cost of ₹65.95 crore, under the Pradhan Mantri Swasthya Surakshaya Yojana (PMSSY) - Phase III, to function as a Centre of Excellence, in different areas like Oncology, Nephrology, Neurology, Burns, Plastic Surgery and Cardiology, *etc*. The 54-bedded ICU was a part of the Super-specialty Block. During JPI (July 2022), it was found that the 54-bedded ICU had not been made functional since November 2018 and equipment/ instruments like motorised beds, multipara monitors, ventilators, *etc*., were lying idle, in the ICU since the date of receipt (December 2018 - October 2020). Non-functioning of the ICU was attributed to the shortages of staff.

Idling of motorised ICU Beds, ventilators, *etc*., due to non-functioning of 54 bedded ICU at MKCG MCH, Berhampur (July 2022)

This was indicative of inadequate/ineffective action, by the concerned MCHs, towards functionalising the created infrastructure.

The H&FW Department stated (February 2023) that steps were being taken to provide manpower for ICU services in MKCG MCH.

Recommendation 3.3:

State Government may ensure availability of round-the-clock accident and trauma care services, along with functional ICU facilities, for critically ill patients, requiring highly skilled lifesaving medical aid.

3.5 Maternity service

Maternal health refers to the health of women during pregnancy, childbirth and the postnatal period. Maternal Mortality Ratio (MMR), Neo-natal Mortality Rate (NMR) and Infant Mortality Rate (IMR) are important indicators for the quality of maternity services available. Although significant improvement had been made in these areas during past years, the State had not yet achieved its own target set for 2020, in the '*Odisha State Strategy for reduction of Maternal and Infant Mortality Rate'*, and its position remained below the national average, on these health indicators, as shown in **Table 3.10**.

Table 3.10: Health indicators of the State vis-à-vis national average

Indicators	Goals set in the Odisha State Strategy for 2020	State average	National average
Maternal Mortality Ratio	117	136	103
Infant Mortality Rate	30	36.3	35.2
Neo-natal Mortality Rate	23	27	24.9

(Source: Sample Registration System 2019, National Family Health Survey Reports and State strategy guidelines)

Audit analysed the Health Management Information System data for the test-checked districts and noticed that:

- The goal for reducing the MMR to 117, by 2020, had not been achieved in three of the seven test-checked districts (Kandhamal: 119.58, Nuapada: 174.23 and Puri: 121.05), at the end of FY 2021-22. The other four test-checked districts had, however, achieved the goal, as the MMR of these districts remained between 30.29 and 103.87 during FY 2021-22.

- In Nuapada district, the NMR stood at 32.42 *per* 1000 live births during FY 2021-22, against the target of 23 set for 2020.
- In all the seven test-checked DHHs, the still birth rate[53] (Range: 10.13 to 61.11) had remained above the State average (8). The SBR in three of the seven test-checked DHHs (Bhadrak, Dhenkanal and Kandhamal) had increased in FY 2021-22, compared to the rate in FY 2017-18. High still birth rate indicates a material risk of inadequately managed antenatal care and deliveries, in the concerned hospitals.

Maternity services and the related health indicators are impacted by the quality of major facility-based maternity services, such as Antenatal care, Intra-partum care or delivery care and Postnatal care. It was noticed that maternity services were available in all the DHHs of the State. Availability of maternal and child care services along with the status of availability of hospital beds for maternity services is shown in ***Appendix 3.10*****.** Scrutiny of records in the test-checked hospitals, however, disclosed serious deficiencies in resource management and clinical efficiency, as discussed in the succeeding paragraphs.

3.5.1 Antenatal Care

Antenatal Care (ANC) is the systemic supervision of women during pregnancy, to monitor the progress of foetal growth and to ascertain the well-being of the mother and the foetus. ANC Guidelines stipulate that a pregnant woman (PW) is to receive at least four[54] ANC check-ups. PW are also to be provided with Calcium tablets and IFA[55] supplementation, which helps in preventing complications due to anaemia, during the ANC period.

Audit observed that:

- Only 29.84 lakh (82 *per cent*), out of 36.17 lakh PW, registered during FYs 2017-18 to 2021-22, had received four or more ANC check-ups in the State. Thus, 18 *per cent* PWs had not received minimum ANC care and had remained outside the scope of identification of high-risk pregnancy complications and subsequent referral to appropriate facilities.
- Among the test-checked districts, the ANC check-up rate was 77 *per cent* in the Sundargarh district, while it was 81 *per cent* in the Kandhamal district.
- There was shortfall in administration of IFA and Calcium tablets in the test-checked districts. Out of 8.21 lakh PW, registered in the test-checked districts during FYs 2017-18 to 2021-22, 1.14 lakh (14 *per cent*) had not received all 180 IFA tablets, whereas 3.61 lakh (44 *per cent*) PWs had not been given all 360 calcium tablets.

Thus, ANC intervention, for management of pregnancy complications in the State, was not adequate, as compared to the State Government's norms.

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[53] Ratio of number of still births (baby dies after 28 weeks of pregnancy, but before or during birth) per 1,000 of the total births in a year

[54] 1st visit: Within 12 weeks; 2nd visit: between 14 and 26 weeks; 3rd visit: between 28 and 34 weeks; 4th visit: between 36 weeks and term

[55] 180 Iron and Folic Acid tablets and 360 calcium tablets, to be provided to pregnant woman, as mentioned in the Health Management Information System/ NHM training manual

The H&FW Department stated (February 2023) that the State was taking all steps to increase the coverage of four or more ANC by strengthening Village Health Sanitation Nutrition Day and Urban Health Sanitation Nutrition Day, which would improve the scope of identification of high risk pregnancies and ensuring appropriate referral.

3.5.1.1 Intra-partum/ delivery care

Intra-partum Care (IPC) includes care of pregnant woman during the intra-partum period[56]. Proper care during labour is expected to save not only mothers and their newborn babies, but also to prevent still births, neonatal deaths and other complications. The quality of IPC is largely affected by the availability of essential resources and the clinical efficiency of the medical and paramedical staff. Specific audit observations on IPC are discussed in the succeeding paragraphs.

3.5.2 Clinical efficiency

3.5.2.1 Monitoring the progress of labour, foetal and maternal conditions

The overall quality of care provided by health facilities, during labour, is monitored through the maintenance of partographs, as envisaged in the MNH Toolkit, 2013. A partograph is a graphic representation of the progress of labour, which enables the birth attendant to identify and manage the complications of labour, or to take a decision to refer the patient to a higher medical facility, if required, for further management.

District Headquarter Hospitals

- Partographs had not been plotted for all delivery cases in the hospitals. Maintenance of partographs, in the test-checked DHHs, during the sampled weeks/ months, ranged between 13 *per cent* and 92 *per cent*, during FYs 2017-18 to 2021-22, on an average.
- Partograph maintenance was below 50 *per cent* of the total deliveries in three test-checked DHHs (Bhadrak, Dhenkanal and Sundargarh). The performance of DHH, Dhenkanal, was dismal, with 13 *per cent* maintenance.
- Partograph maintenance of other four DHHs ranged between 62 *per cent* (Nuapada) and 92 *per cent* (Kandhamal).

Community Health Centres

- In 13 of the 14 test-checked CHCs, partographs were maintained for 75 *per cent* of the deliveries made during the sampled months, during the FY 2019-22.
- No partographs were maintained in CHC, Barapada, due to the non-availability of maternity services in the hospital.

Medical College Hospitals

- The average partograph maintenance was 68.79 *per cent* in PRM MCH, while it was 37.71 *per cent* in MKCG MCH.

[56] Time period spanning childbirth, from the onset of labour

- No data on partographs had been maintained, in PRM MCH, during FY 2017-18.

Non-preparation of partographs for all deliveries in the facilities, compromised the ability of the hospitals to measure and seek improvement in the quality of services in their labour rooms, to reduce the chances of adverse pregnancy outcomes.

The H&FW Department stated (February 2023) that the nursing officers and doctors had been provided specific training, such as skill attendance of birth, Dakshata, *etc.*, for refreshing the knowledge and skill related to intra partum care. The fact, however, remains that maintenance of partographs was poor in the hospitals, despite trainings imparted to the clinical staff.

3.5.2.2 Management of pre-term delivery

As per NHM Guidelines, pre-term babies[57] have numerous challenges, including difficulty in feeding, maintaining body temperature and increased susceptibility to infections. These complications can be largely prevented by administering Corticosteroids (Betamethasone Phosphate/ Dexamethasone) injections to the woman, as soon as she is diagnosed with preterm labour.

Audit noticed that data relating to pre-term delivery had not been uniformly maintained/ available for the sampled months. Audit analysed the data for the sampled months of three years (FYs 2018-19 to 2021-22) and observed the following:

District Headquarter Hospitals

- Only 258 (33.42 *per cent*) out of 772 women, recorded for preterm deliveries, in the six test-checked DHHs, had been administered Corticosteroid injections, for safe delivery.
- Records relating to the administration of this injection, were not available in DHH, Dhenkanal.

Community Health Centres

- Pre-term deliveries had not been recorded in two of the test-checked CHCs (Barapada and Basudevpur).
- Corticosteroid injections had been administered to women in only three of the test-checked CHCs (Tikabali, Kosagumuda and Papadahandi).
- Corticosteroid injections had not been administered to mothers in nine of the test-checked CHCs, though preterm deliveries were recorded.

Thus, a newborn baby, delivered through pre-term labour, remained at risk of serious post-natal complications, apart from neonatal deaths, due to non-administration of Corticosteroid to the mother.

The H&FW Department stated (February 2023) that administration of corticosteroid medicine had been improved during 2022-23. It further added that regular monitoring, supply of drugs and enhancing knowledge and skill of the providers were being done by the district and State level monitors, for improving the position.

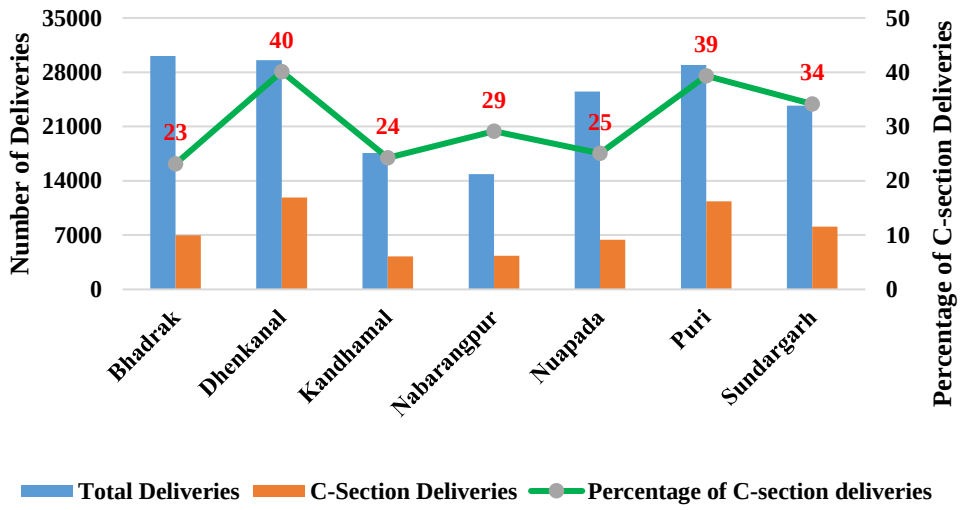
[57] Babies born before the completion of 34 weeks of pregnancy

3.5.2.3 Caesarean deliveries (C-Sections)

The MNH Toolkit designated all DHHs/ Sub-Divisional Hospitals/ First Referral Units (FRUs), *i.e.* CHCs, as centres for providing surgical (C-Section) services, with the provision of specialised human resources (gynecologist/ obstetrician and anesthetist) and equipped operation theatres, to provide Emergency Obstetric Care (EmOC) to pregnant women. The *Janani Shishu Suraksha Karyakram* (JSSK)[58] entitles all pregnant women to free institutional delivery, including C-section deliveries, with a provision for free drugs, consumables, diagnostics, diet, blood, *etc.*

Audit observed that C-section deliveries (53,268), in the test-checked DHHs, accounted for 31 *per cent* of the total deliveries (1,70,229) conducted during FYs 2017-18 to 2021-22. The overall percentage of C-section deliveries compared to total deliveries conducted in the test-checked DHHs during the period 2017-22, ranged between 23 *per cent* and 40 *per cent* as depicted in **Chart 3.5**.

Chart 3.5: Percentage of C-Section deliveries compared to total deliveries in the test-checked DHHs



(Source: Data obtained from the test-checked DHHs and Health Management Information System)

It was noticed that:

- C-section deliveries conducted in the DHH, Bhadrak was minimum compared to other test-checked DHHs.
- In the 14 test-checked CHCs, C-sections were conducted only in three[59] hospitals. Absence of manpower and blood storage units contributed to non-conducting of C-sections in CHCs.

Thus, intermittent/non-availability of C-section services in FRUs/CHCs, coupled with insufficient availability of resources, put the pregnant women residing in rural areas, at risk of pregnancy complications, impelling them to approach DHHs/ private hospitals for C-sections, when required. Therefore,

[58] Expenses related to all deliveries in a public institution would be borne by the Government and no user charges would be levied including free transport facilities

[59] Basudevpur, Nimapara, Papadahandi

DHHs became over-burdened, in the absence of adequate resources for catering to their usual footfall, along with the additional patient load coming from the CHCs.

The H&FW Department stated (February 2023) that out of the 14 test checked CHCs, seven were First Referral Units, being eligible for conducting C-section services. Out of these seven CHCs, four were providing C-section service and other three lacked manpower for the service, and Government was posting the manpower, regularly.

3.5.3 Post-natal care

The first 48 hours after delivery are the most critical, in the entire post-partum period, for survival of both the mother and her newborn. Most of the major complications of the post-partum period, such as Post Partum Hemorrhage (PPH) and Eclampsia, which can lead to maternal death, occur during this period[60]. Hence, the mother requires close monitoring during the first 48 hours of delivery. It is, therefore, important that the mother stays in the health facility for a minimum of 48 hours.

Audit, however, observed that, in a large number of cases, the mothers and babies had been discharged from hospitals within 48 hours of delivery. In the test-checked DHHs, out of 2,04,722 deliveries, during 2016-22, 73,743 (36 *per cent*) mothers had been discharged within 48 hours of delivery.

The discharge rate within 48 hours, was maximum in the DHHs of Nabarangpur (78 *per cent*), Dhenkanal (59 *per cent*) and Bhadrak (51 *per cent*), compared to other DHHs.

In the test-checked MCHs, the percentage of discharge of mother and baby, within 48 hours of delivery, ranged from 61 to 66 *per cent*, in PRM MCH, during FYs 2018-19 to 2021-22, while it ranged from 39 to 52 *per cent* in MKCG MCH, during the period 2016-22.

Thus, mothers and newborns were not retained in the hospitals, for the prescribed minimum period of 48 hours after delivery, for management of post-natal complicacies, to reduce adverse delivery outcomes.

The H&FW Department stated (February 2023) that for ensuring 48 hours stay after delivery, the MCHs were being used, and regular review and monitoring of the indicator was being done at the State and district level also.

3.5.3.1 Special Newborn Care

As per IPHS guidelines, each district hospital should have a Special New-born Care Unit (SNCU). The SNCU is primarily intended to reduce cases of fatality among sick children, born within the hospital or outside, (including home deliveries), within the first 28 days of life. Each SNCU should have at least 12 beds, to cater to the sickest children in the hospital. Therefore, an SNCU plays a vital role in post natal care. The number of sick newborn children, admitted in the SNCUs of the test-checked district hospitals, during 2016-22, is given in **Table 3.11**.

[60] Guidelines for Antenatal Care and Skilled Attendance at Birth (NHM)

Table 3.11: Number of neonates admitted, discharged and referred to SNCUs

DHH	No. of Neonates admitted	Neonates discharged	Neonates referred (*per cent*)	Death cases of Neonates in SNCUs	LAMA Cases
Bhadrak	12,750	9,535	2,438 (*19*)	541	230
Dhenkanal	2,988	2,214	6,00 (*20*)	68	89
Kandhamal	6,723	6,102	NA	621	NA
Nabarangpur	3,841	2,976	466 (*12*)	337	59
Nuapada	7,425	6,637	NA	788	NA
Puri	8,542	7,043	1,042(*12*)	335	122
Sundargarh	5,828	4,180	1,267 (*22*)	296	88
Total	**48,097**	**38,687**	**5,813 (*12*)**	**2,986 (6.20)**	**588**

(Source: Records of the test-checked DHHs and HMIS)

Audit noted that:

- 12 *per cent* of the neonates, admitted in five test-checked DHHs, were referred to higher facilities.
- Neonatal death cases in the SNCUs accounted for 6.20 *per cent* of the total admission cases.
- Records relating to the referral of neonates were not maintained at DHHs of Kandhamal and Nuapada. No details were provided by the DHH, Nabarangpur, in this regard, for the period 2016-19.

Further, the SNCUs of the test-checked DHHs were not well-equipped with the required infrastructure, manpower, equipment, *etc*., as discussed in the ***Paragraphs 5.1.4.1, 5.1.5.1*** and ***5.1.7.3***.

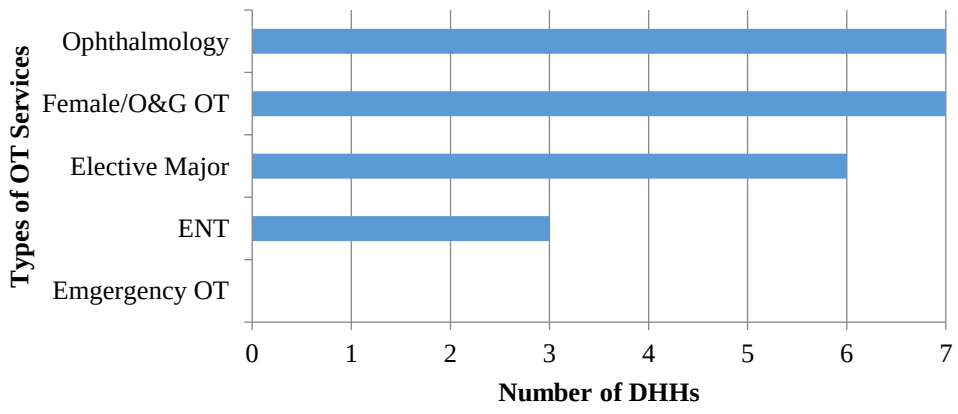
3.6 Operation Theatre Services

3.6.1 Operation Theatre Services in the test-checked DHHs/ CHCs

An Operation Theatre (OT) is an essential service in District Hospitals. IPHS guidelines prescribe OTs for elective major surgery, emergency services/ female ward and ophthalmology/ ENT (ear, nose and throat), for district hospitals having a bed strength of 101 to 500.

Availability of OT services, in the test-checked DHHs, as of March 2022, is given in **Chart 3.6**.

Chart 3.6: Availability of OT services in the seven test-checked DHHs



(Source: Data furnished by the test-checked DHHs and JPI)

Audit observed deficiencies in the availability of OTs, in the test-checked DHHs and CHCs, as discussed in the succeeding paragraphs.

District Headquarters Hospitals

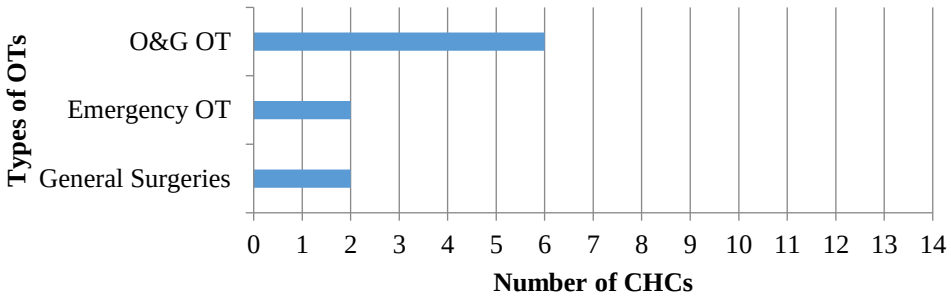
The full range of OT services was not available in any of the test-checked DHHs. The major shortcomings in this regard are mentioned below:

- OTs for emergency services were not available in any of the DHHs. Emergency surgeries were being conducted in other OTs within the hospitals. Thus, surgeries for urgent/ emergency situations were subject to the availability of OTs. DHH, Dhenkanal, had no separate OTs for O&G and elective major[61]. All surgeries, including C-sections, were being conducted in one OT available in the hospital, contributing to the likelihood of delayed surgeries or denial of surgeries in urgent situations.
- DHH, Nabarangpur, had facilities only for the O&G and Ophthalmology OTs.
- OTs for ENT services were not available in the DHHs of Bhadrak, Dhenkanal and Puri. Thus, patients requiring ENT surgeries, in these hospitals, were either being denied the service, or were being referred to other hospitals.

Community Health Centres

The NHM Assessor's guidebook, for quality assurance in CHCs, states that CHCs should have General Surgery, Gynecology and Emergency OTs. The availability of OT services, in the 14 test-checked CHCs, is given in **Chart 3.7**.

Chart 3.7: Availability of OT services in the14 tests-checked CHCs



(Source: Data furnished by the test-checked CHCs)

- Seven[62] of the 14 test-checked CHCs had no OT services. Patients requiring any type of surgery, were either being denied the service or were being referred to other hospitals.
- All the OT services were, however, available only in CHC, Nimapara.

Non-availability of the required OTs would have resulted in denial, to patients, from receiving surgical operations, as part of the treatment process; thereby

[61] Elective surgeries: surgery that is scheduled in advance

[62] Bangurigaon, Barapada, Khajuriakata, Kuarmunda, Lahunipara, Rakia and Sriramchandrapur

driving them to private clinics, or leading to their being referred to higher Government hospitals.

The H&FW Department stated (February 2023) that steps had been taken to follow the IPHS norms.

3.6.1.1 OT services in Medical College Hospitals

MSRR prescribes one OT each, for O&G, General Surgery, Ophthalmology, ENT, Orthopedics and Septic cases.

Audit noticed that, PRM MCH had eight OTs, while MKCG MCH was running with 11 OTs. OTs for septic cases were, however, not available in any of the test-checked MCHs.

The H&FW Department stated (February 2023) that required number of OTs would be made functional after completion of the new building.

3.6.1.2 Surgeries per surgeon

As per NHM Assessor's Guidebook (2013), surgeries performed per surgeon is an indicator to measure efficiency of the hospitals. The average surgeries per surgeon per annum, in the test-checked DHHs during FYs 2016-17 to 2021-22, are shown in ***Appendix 3.11***.

Analysis of data relating to surgeries conducted during FYs 2016-17 to 2021-22 indicated substantial variation in the number of surgeries per surgeon in test-checked DHHs. The details of average surgeries per surgeon per annum conducted during 2021-22, are given in **Table 3.12**.

Table 3.12: Average surgeries per surgeon during 2021-22

DHH	General Surgery	Orthopaedics	Eye
Bhadrak	328	579	62
Dhenkanal	1,223	9	199
Kandhamal	113	62	244
Nabarangpur	893	347	50
Nuapada	75	103	100
Puri	8,398	431	729
Sundargarh	226	7	352

(Source: Data obtained from the test-checked DHHs)

As evident from the above table, the DHHs of Kandhamal and Nuapada had considerably less number of general surgeries performed per surgeon as compared to other test-checked DHHs. Similarly, performance of three DHHs (Dhenkanal, Kandhamal and Sundargarh) in regard to Orthopedic surgeries and average eye surgeries, conducted by two DHHs (Bhadrak and Nabarangpur) was substantially poor in comparison to the other DHHs.

3.6.1.3 Documentation related to OTs

The NHM Assessor's Guidebook prescribes that a surgical safety checklist, pre-surgery evaluation records and post-operative evaluation records, for OTs, should be prepared for each case. The availability of required records, in the seven test-checked DHHs, during FYs 2016-17 to 2021-22, is given in **Table 3.13**.

Table 3.13: Documentation of OT Procedure in the test-checked DHHs

DHH	Surgical safety checklist	Pre-surgery evaluation records	Post-operative evaluation records
Bhadrak	Not maintained	Not maintained	Not maintained
Dhenkanal	Not maintained	Not maintained	Not maintained
Kandhamal	Partially maintained	Not maintained	Not maintained
Nabarangpur	Maintained	Maintained	Maintained
Nuapada	Maintained from 2020-21	Maintained	Maintained
Puri	Maintained	Maintained	Maintained
Sundargarh	Maintained	Maintained	Maintained

(Source: Data furnished by the test-checked DHHs)

The availability of required records, in the seven test-checked CHCs, where OT facility was available during FYs 2016-17 to 2021-22, is given in **Table 3.14.**

Table 3.14: Documentation of OT Procedure in the test-checked CHCs, which had OT facility

CHC	Surgical safety checklist	Pre-surgery evaluation records	Post-operative evaluation records
Basudevpur	Maintained	Maintained	Not maintained
Tikabali	Not maintained	Not maintained	Not maintained
Khariar Road	Not maintained	Not maintained	Not maintained
Komna	Not maintained	Not maintained	Not maintained
Kosagumuda	Maintained	Maintained	Maintained
Papadahandi	Not maintained	Maintained	Maintained
Nimapara	Maintained	Maintained	Maintained

(Source: Data furnished by the test-checked CHCs)

In the absence of a surgical safety checklist, pre-surgery evaluation records and post-operative evaluation records for OTs, it could not be ascertained whether the safety procedures in OTs had been duly adhered to, in the test-checked CHCs.

The H&FW Department stated (February 2023) that steps were being taken to follow IPHS norms.

3.7 Diagnostic Services

Diagnostics are an integral part of the health care system. Efficient and effective diagnostic services, both radiological and pathological, are amongst the most essential health care facilities, for delivering quality treatment, based on accurate diagnosis.

Audit observed that many of the significant radiological and pathological tests were not being performed in the test-checked hospitals, due to lack of required equipment and skilled manpower. Significant audit findings in this regard, are discussed in the succeeding paragraphs.

3.7.1 Radiology Services

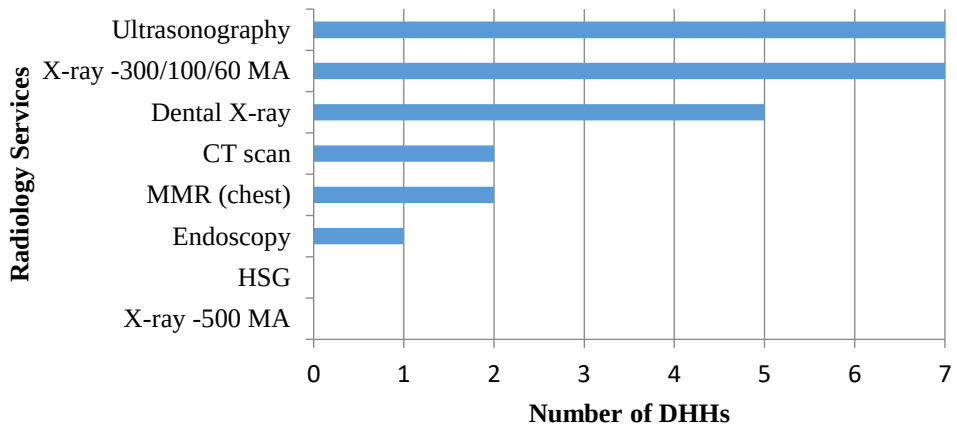
Adequate availability of functional radiology equipment, skilled human resources and consumables, are key requirements, for delivery of quality radiology services.

3.7.1.1 Availability of Radiology Services

The Indian Public Health Standards (IPHS) 2012 prescribe eight types of radiology services for the district hospitals and three types of service for CHCs.

The availability of radiology services, in the test-checked DHHs, is shown in **Chart 3.8**.

Chart 3.8: Availability of Radiology services in the test-checked DHHs

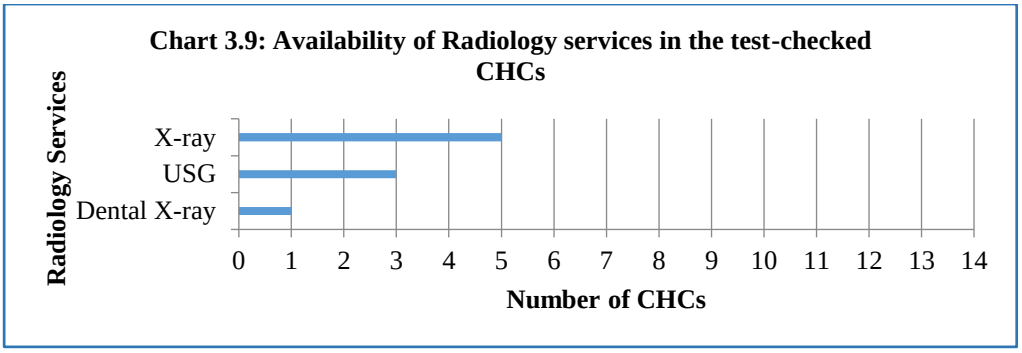


(Source: Data collected from the test-checked DHHs and JPI)

All the eight prescribed Radiology services were not available in any of the test-checked DHHs. Out of the seven test-checked DHHs, the DHHs which were most deficient, in terms of having radiology services, were Bhadrak, Kandhamal and Nuapada.

- Only X-ray and Ultrasonography services, were available in all the seven test-checked DHHs.
- Out of the eight radiology services, only X-ray 300/100 and USG were available in DHH, Nuapada, whereas DHHs, Bhadrak and Kandhamal, had the facility of only X-ray 300/100/60, Dental X-ray and USG.

It was also noticed that the CHCs were deficient in providing radiology services to patients. Out of the three required radiology services in the CHCs, the availability of radiology services, in the test-checked CHCs, is given in **Chart 3.9**.



(Source: Data obtained from the test-checked CHCs)

Audit observed that:

- All the three Radiology services were available only in CHC, Basudevpur, which was the only IPHS compliant CHC, in this regard, among the 14 test-checked CHCs.
- In nine of the test-checked CHCs, the prescribed Radiology services were not available at all, whereas these services were being provided partially in the other four CHCs.
- It was noticed that Radiology services were not being provided in CHC, Kosagumuda, due to non-availability of equipment, although one radiographer had been posted in the hospital.

Radiology services in the hospitals were not fully available, mainly due to non-availability of the required radiology equipment and/or skilled human resources. Absence/ short availability of the full range of radiology services, impacted the levels of care offered in these hospitals. Consequently, patients requiring radiology services had to visit private/other hospitals, for availing the required services.

3.7.1.2 AERB license for radiology machines

As per the Atomic Energy (Radiation Protection) Rules 2004, for establishing an X-ray and CT scan unit, a license from the Atomic Energy Regulatory Board (AERB) is necessary. Contrary to the provisions of the said Rules, AERB licenses, for 11 items of radiology equipment, were not available in seven of the test-checked hospitals, as detailed in **Table 3.15.**

Table 3.15: Radiology equipment, functioning without AERB license

Sl. No.	Hospital	Equipment for which AERB Licenses were not available
1	DHH, Bhadrak	100MA X-ray machine and Dental X-ray machine
2	DHH, Dhenkanal	Dental X-ray Machine
3	DHH, Sundargarh	60 MA X-ray (2 No) and Dental X-ray Machine
4	DHH, Kandhamal	X-ray 300, Dental X-ray
5	CHC, Tikabali	X-ray
6	CHC, Lahunipara	X-ray
7	CHC, Nimapara	X-ray

(Source: Records of the test-checked hospitals)

In the absence of the requisite AERB certificate, the test-checked hospitals not only violated the prescribed regulatory requirements but also compromised the safety of patients and staff, in the Radiology departments of these hospitals.

3.7.1.3 Safety measures and availability of other ancillary facilities

Audit noticed that devices like protective glasses, protective flaps, protective gloves, thyroid shield, protective goggles, gonad shield, *etc.*, as required by AERB, for radiology/ imaging services, were not available in DHH, Bhadrak. Similarly, TLD badges[63] and Pocket dosimeters[64] were not available in the Lahunipara and Kuarmunda CHCs. Non-provision of these protective instruments compromised the safety of the technicians operating the radiology devices.

The H&FW Department stated (February 2023) that steps were being taken to follow the IPHS norms, in regard to availability of radiology services, AERB license for radiology machines, *etc.*

3.7.2 Pathology Services

Pathology services are the backbone of any hospital, for extending evidence based healthcare to the public. As in the case of radiology services, availability of essential equipment, reagents and human resources, are the main drivers for the delivery of quality pathology services, through in-house laboratories. The related audit observations are discussed in the succeeding paragraphs.

3.7.2.1 Availability of Pathology Services

IPHS prescribes 29 to 70 types of pathological investigations, under five categories, *viz.* Clinical pathology (18 to 29 tests), Pathology (01 to 08 tests), Microbiology (2 to 7 tests), Serology (3 to 07 tests) and Biochemistry (5 to 19 tests), to be carried out in the district-level hospitals and CHCs. Similarly, 11 types of essential laboratory/ diagnostic services are required to be available in the PHCs.

Scrutiny of records showed that the full range of desired pathological investigations was not available in any of the test-checked hospitals. The position of availability of investigation facilities, in the test-checked DHHs/ CHCs, is given in **Table 3.16.**

Table 3.16: Availability of pathological investigations in the test-checked DHHs/ CHCs

Hospital	Investigations available in the test-checked hospitals					
	Clinical pathology (29)	Pathology (8)	Microbiology (7)	Serology (7)	Biochemistry (19)	Total (70) (*Per cent*)
Bhadrak	24	2	5	6	11	48 (*69*)
Dhenkanal	11	1	6	4	7	29 (*41*)
Kandhamal	23	1	5	4	10	43 (*61*)
Nabarangpur	27	8	7	6	15	63 (*90*)
Nuapada	19	5	2	3	10	39(*56*)
Puri	28	1	6	5	12	52(*74*)
Sundargarh	21	0	7	4	10	42 (*60*)

[63] For recording the occupational radiation exposure received by the radiation workers
[64] For evaluation of radiation doses received by the personnel working with radiation sources

Hospital	Investigations available in the test-checked hospitals					
	Clinical pathology (29)	Pathology (8)	Microbiology (7)	Serology (7)	Biochemistry (19)	Total (70) (*Per cent*)
CHCs (Total investigations)	**18**	**1**	**2**	**3**	**5**	**29**
Range of availability in 14 CHCs	5-17	0-1	0-2	0-3	0-5	9-22 (*31-76*)

(Source: Records of the test-checked hospitals)

**** The figures in red colour indicate the total number of investigations required to be conducted in DHHs and CHCs***

Thus, none of the test-checked DHHs was found to have the entire range of the 70 essential diagnostic testing services. On an average, the test-checked DHHs had 41 to 90 *per cent* of the prescribed diagnostic services.

Important investigations, like 'Cytology', to examine the behaviour of cells under microscope; 'bone marrow aspiration', to check the levels of white blood cells/ red blood cells (WBC/RBC)/platelets; Brucellosis, to detect the Brucellosis bacteria *etc*., were not being carried out in most of the test-checked DHHs.

Community Health Centres

The test-checked CHCs had the provisions for only 31 to 76 *per cent* of the prescribed diagnostic testing services. The CHCs at Bangurigaon, Barapada and Sriramchandrapur, were most deficient in the availability of pathological investigation services, ranging between 31 and 45 *per cent* only.

- Out of the 18 pathological investigations, prescribed under IPHS, 17 services were available in CHC, Basudevpur. The other 13 test-checked CHCs had only 5 to 12 pathological services.
- Sputum cytology was not available in 10 out of the 14 test-checked CHCs, with only the CHCs of Rakia, Tikabali, Kosagumuda and Papadahandi, offering the same.
- Microbiology services were not available in the CHCs of Tikabali and Khariar Road.
- Biochemistry was not available in the CHCs of Basudevpur and Bangurigaon.

Primary Health Centres

The test-checked PHCs had been conducting two to seven tests, against 11 essential pathological tests.

- Routine urine, stool and blood tests services, were not available in eight[65] out of the 14 test-checked PHCs.
- Sputum testing for mycobacterium (as per guidelines of RNTCP[66]) was not available in the test-checked PHCs, except for Khuntagaon, Kodinga and Rasol.

[65] Darlimunda; Ertal; Joranda; Khuntagaon; Kodinga; Maidalpur; Sabarang and Tarbod

[66] Revised National Tuberculosis Control Programme to provide diagnosis and treatment, free of cost, to all TB patients

- Blood smear examination for Malaria was available in only two (Fakir Sahi, Ranjabradi) out of the 14 test-checked PHCs.
- Rapid tests for pregnancy were not available in five[67] of the test-checked PHCs.

Medical College Hospitals

- Out of the 72 prescribed pathological tests[68], 14 services were not available in PRM MCH and 12 services were not available in MKCG MCH.
- Immuno-haematology test, to detect antigen in blood and Thalassemia, to check inherited blood disorders, *etc*., were not being done in PRM MCH. Further, Bacteria culture and sensitivity, Leptospirosis, Brucellosis, *etc*., were not being conducted in MKCG MCH, due to non-availability of the required equipment.
- Thyroid test, to check the working of the thyroid gland, was not available in PRM MCH, while Blood gas analysis, Chloride and Iodometry Titration, were not being conducted in MKCG MCH, due to non-availability of equipment and reagents.

Non-availability of essential equipment and short deployment of skilled human resources, in the test-checked hospitals, were amongst the reasons for the absence of the desired investigation facilities. Availability of manpower and equipment for laboratory services, are discussed in ***Paragraph 2.3***, under Chapter 2, and ***Paragraph 4.2.2.2***, under Chapter 4, respectively.

Lack of appropriate diagnostic testing services may adversely affect the treatment outcomes in hospitals. Absence of diagnostic investigations delays treatment procedures and restricts the treatment capacity of medical practitioners.

The H&FW Department stated (February 2023) that steps were being taken to follow IPHS norms.

Recommendation 3.4:
Essential radiology and pathology services, as per IPHS, may be ensured in hospitals, in view of increasing reliance on diagnostics, for treatment of patients.

3.8 Blood Bank Services

Blood Banks/ storage centres are essential for the functioning of any hospital. For ensuring the quality, safety and efficacy of blood and blood products, well equipped blood centres, with adequate infrastructure and trained manpower, are essential requirement.

There were 85 Blood Centres (BCs) in the State, which included 56 BCs in Government health institutions (DHHs/ MCHs), 22 BCs in the private sector and 7 BCs in the public sector, as of March 2022. Audit observed the following deficiencies in the functioning of blood centres, in the test-checked hospitals.

[67] Darlimunda; Ertal; Indragada; Khuntagaon and Tarbod.
[68] As per IPHS, for district hospitals

3.8.1 Blood centres without valid licenses

As per the Drugs and Cosmetics Rules, 1945, the blood centres functioning in the State should have valid licenses from the Drug Controller of India/ Odisha.

It was noticed that, BCs at the six[69] of the nine test-checked DHHs/MCHs, did not have valid licenses from the Drugs Controller. The validity of the licenses issued to these BCs had expired during October 2015 and December 2021 and had not been renewed. These BCs were running without valid licenses from the competent authority, in contravention of the provisions of the Drug and Cosmetics Rules. The BCs at other three test checked hospitals (DHHs of Bhadrak and Sundargarh; MCH, Berhampur) had valid license from the Drug Controller.

The H&FW Department stated (February 2023) that it would inquire into the matter and take appropriate action.

3.8.2 Non-establishment of Blood Component Separation Unit

As per the Guidelines for setting up Blood Storage Centres, 2007, issued by National Aids Control Organisation (NACO), Blood Component Separation Units (BCSUs) are to be established, for separating whole blood into its constituents, such as red blood cells, platelets, plasma, *etc*., for maximum utility of one whole blood unit, as each blood component is used for a different indication.

Audit noticed that BCSUs were not available in any of the test-checked DHHs and MCH, Baripada. Audit observed the following shortcomings in the establishment of BCSUs at MCH, Baripada and DHH, Bhadrak.

- **BCSU at MCH, Baripada**: OSMCL had supplied (August 2016-February 2018) 12 items of equipment, costing ₹43.36 lakh, to the Odisha Blood Centre, at MCH, Baripada, for establishment of the BCSU. One trained lab technician was available to run the BCSU. However, the Drug Controller did not issue the license for functioning of the BCSU, due to shortage of space and absence of a pathologist in the BC. Resultantly, out of the 12 items of equipment supplied by OSMCL, only four were being used, while eight others, costing ₹ 38.83 lakh, remained idle.
- **Non-establishment of BCSU at DHH, Bhadrak**: The Managing Committee (MC) of the Blood Bank of DHH, Bhadrak, decided (September 2017) to form a sub-committee, to assess the requirement of a BCSU at DHH, Bhadrak. This was also emphasized in the next MC meeting (February 2018), and one room was earmarked for the BCSU in the blood bank. It was also suggested that the Director of SBTC, Odisha, be approached, for this purpose. Despite this, no action was taken for establishment of the BCSU, even though the annual collection of blood units in the BC was more than 10,000 units.

Due to lack of planning and initiative of the concerned authorities, BCSUs could not be established, and the benefits of using blood components, instead of whole blood could not availed of.

[69] Dhenkanal; Kandhamal; Nabarangpur; Nuapada; Puri; MCH, Baripada

The H&FW Department stated (February 2023) that the concerned authorities would be instructed to take necessary steps for establishment of BCSUs.

3.9 Support Services

While clinical services are to be provided by the concerned healthcare facilities, some of the support services, such as dietary, laundry, mortuary services, *etc*., are also essential. Some of the support services, available in the test-checked hospitals, are discussed in succeeding paragraphs.

3.9.1 Dietary Services

As per Kayakalp guidelines[70], the quality and quantity of food are the key factors for patient recovery. Thus, high standards of food hygiene should be maintained throughout the delivery of healthcare services. The need for adequate food hygiene facilities, is of paramount importance in the kitchen services of healthcare facilities.

Audit observed that:

- Diet Vigilance Committees (DVC) had not been formed in three of the test-checked DHHs (Dhenkanal, Nabarangpur and Nuapada), for supervising the process of diet preparation and distribution, as required under the Guidelines issued by the NHM, Odisha for diet management in public health institutions. In two DHHs (Kandhamal and Puri), though DVCs were formed, no meetings were held. In DHH, Bhadrak, DVC meetings were being held intermittently.
- Though a DVC was formed (August 2021) in PRM MCH, no meetings were held, while regular meetings were being conducted in MKCG MCH.
- Daily stock registers were not maintained, in regard to kitchen supplies, at DHH, Kandhamal and DHH, Sundargarh, for ensuring supply of diet to all eligible patients.

The H&FW Department stated (February 2023) that steps were being taken to follow IPHS norms.

3.9.2 Laundry Services

As per Kayakalp guidelines, issued by the Ministry of Health and Family Welfare, GoI, the provision of clean linen is a fundamental requirement for patient care. An incorrect procedure, for handling or processing of linen, can pose an infection risk to both staff and patients. The patients' linen, including bed sheets and patient gowns, need to be changed on a daily basis.

Audit observed that the laundry services, in the test-checked hospitals, were not in consonance with the Kayakalp guidelines, as discussed in the subsequent paragraphs.

[70] Guidelines issued (May 2015) by the Ministry of H&FW, GoI for promoting cleanliness, hygiene and infection control practices in public healthcare facilities

3.9.2.1 Availability of linen in the test-checked hospitals

IPHS prescribes 24 types of linen[71] that are required for patient care services, for hospitals with 101 beds and above.

In seven of the test-checked DHHs and two MCHs, Audit observed shortage of different types of linen, such as bedspreads, doctor's overcoats, paediatric mattresses, hospital worker OT coats, mortuary sheets, *etc*. There were shortages of linen, ranging between 3 and 23 items, in the test-checked DHHs. Against the requirement of 24 types of linen, PRM MCH, had only four types, while MKCG MCH had eight types.

Audit noticed the following deficiencies in the availability of linen, in four of the test-checked DHHs (Dhenkanal, Kandhamal, Nuapada and Puri):

- DHH, Nuapada, had only one type of linen, *i.e.* bed sheets. No other types of linen were available.
- DHH, Dhenkanal, had two types of linen (bed sheets and blankets).
- Fifteen out of 24 types of linen were not available in DHH, Kandhamal, while 17 types of linen including blankets, pillows, pillow covers, *etc*., were not available in DHH, Puri.

Thus, none of the DHHs/ MCHs was IPHS compliant, in terms of provisioning of linen for patients and staff, in the hospitals.

3.9.2.2 Infrastructure for laundry services

Audit noticed inadequacies in the availability of infrastructure for laundry services as required under Kayakalp guidelines, as discussed below:

- The laundry service at DHH, Bhadrak, had been outsourced. One of the buildings used for storing washed linen, was in a dilapidated condition (damp), with an unhygienic environment.
- There was no proper provision for drying washed linen, in two of the test-checked DHHs (Bhadrak and Sundargarh). Linen items were being dried on the damp wall of the roof top of the building at DHH, Bhadrak, in unhygienic conditions. In DHH, Sundargarh, linen was being dried inside a room, as well as outside, in an open area, adjacent to the general waste dumping site. Thus, drying of the linen, was not kept off the ground and away from dust exposure, as envisaged in the Kayakalp guidelines.

[71] 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

	
Linen being dried on the rooftop of the laundry building, at DHH, Bhadrak (3 June 2022)	**Linen being dried in an open ground, at DHH, Sundargarh (14 July 2022)**

- As per the Kayakalpa guidelines, linens should be kept in racks. At the DHHs of Bhadrak, Nabarangpur and Puri, washed linen was being kept on the floor, due to an inadequate number of racks for storage of linen.

Thus, the laundry services, available in the DHHs, were not as per the prescribed norms in regard to providing hygienic and clean linen to patients and staff, thereby exposing them to the risk of infection.

The H&FW Department stated (February 2023) that steps were being taken to follow IPHS norms.

3.9.3 Ambulance Services

As per IPHS, a district hospital is required to have three to four running ambulances, with well-equipped Basic Life Support (BLS), depending on the bed capacity of the hospitals for providing medical assistance during transportation of patients. It is also desirable to have an Advanced Life Support (ALS) ambulance. Further, a dedicated parking space is to be provided separately for ambulances, near the emergency ward. The serviceability and availability of equipment, as well as drugs, in the ambulances, are required to be checked on a daily basis.

Audit observed shortage of ambulances, in three of the seven test-checked DHHs (Bhadrak, Dhenkanal and Nuapada) and in PRM MCH (Baripada), as against the IPHS norms. Details of ambulances, available in the test-checked DHHs, are given in **Table 3.17.**

Table 3.17: Details of ambulances available in the test-checked DHHs

DHHs	Number of beds	Number of ambulances	
		Required (Essential + desirable)	Available
Bhadrak	336	4+1	2
Dhenkanal	300	3+1	2+1

DHHs	Number of beds	Number of ambulances	
		Required (Essential + desirable)	Available
Kandhamal	236	3+1	3
Nabarangpur	252	3+1	3
Nuapada	315	4+1	1
Puri	451	4+1	5+2
Sundargarh	330	4+1	7+2

(Source: Data provided by the DHHs and JPI) (Red colour: Shortage; Green: No shortage)

It would be seen from the above that:

- DHH, Puri, had seven ambulances, against the requirement of five.
- All the ambulances available in the DHHs were of BLS type, except those at DHH, Bhadrak, which were not equipped with BLS/ ALS, as envisaged in IPHS.
- In MCHs, the ambulances were of ALS type, except for two ambulances at MCH, Berhampur, which had no equipment.
- Demarcated areas, for parking of ambulances, were available in six of the seven test-checked DHHs. At DHH, Bhadrak, there was no such demarcated area, due to an acute shortage of space. In the two test-checked MCHs, demarcated areas for parking were also not available.
- In PRM MCH, two Ambulances with ALS (costing ₹51.87 lakh), along with equipment and instruments, were received during April 2021, for providing emergency transportation to patients, but were not put to use and were lying idle, due to non-posting of an Emergency Medical Technician.

Two idle Ambulances at PRM MCH, Baripada (13 May 2022)

For providing ambulance services, drivers and technicians need to be available in the ambulances. It was noticed that, though drivers were available in all the test-checked DHHs, technicians were available only in two DHHs (Dhenkanal and Sundargarh) and one MCH (MKCG MCH, Berhampur). Thus, the available vehicles were not provided with an adequate number of technicians, although this was required under IPHS. Ambulance staff (drivers) were found to be untrained in Basic Life Support services, in four of the test-checked DHHs (Bhadrak, Kandhamal, Nabarangpur and Nuapada).

Ambulances were available only in eight, out of the 14 test-checked CHCs. Further, two of these ambulances had no BLS equipment.

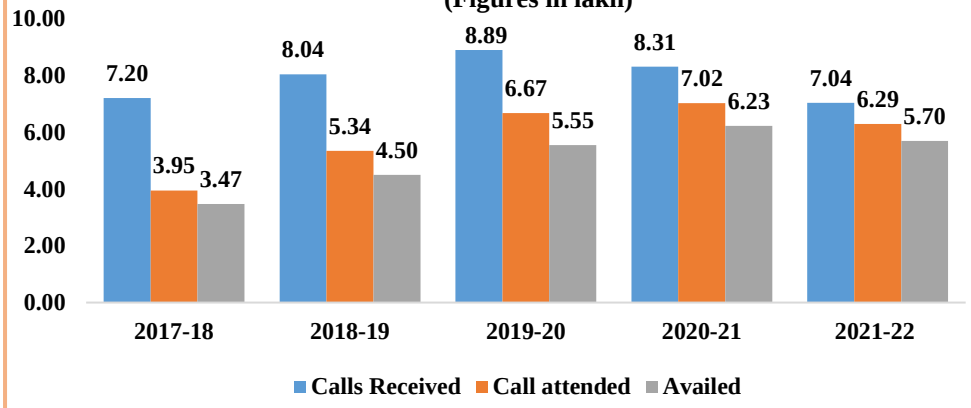
The people in the State mostly depend on the 108 ambulance service, under the Emergency Medical Ambulance Service (EMAS)[72], a joint initiative of Government of India and the State.

3.9.3.1 Emergency Medical Ambulance Service (108-Ambulance service)

Emergency Medical Ambulance Service (EMAS) is provided to the people of the State, free of cost, through one private agency[73] engaged by the H&FW Department. A fleet of 624 ambulances (108-Ambulance service) were operational under EMAS, for providing transportation service to the patients. The district-wise availability of ambulances, as of March 2022, is given in ***Appendix 3.12***. Under EMAS, 25.44 lakh patients had availed ambulance services, during 2017-22 (up to December 2021), in the State.

As per the Standard Operating Procedure (SOP), the call centres/control room and overall emergency response services, should function uninterruptedly for ensuring that no calls are left unattended. On an analysis of the data provided by the NHM, Odisha, Audit observed that only 29.26 lakh (74 *per cent*) out of 39.48 lakh calls, received during FYs 2017-18 to 2021-22 (up to December 2021), for emergency ambulance services, were attended, leaving 10.22 lakh (26 *per cent*) calls, unattended. Out of these attended calls, only 25.44 lakh (87 *per cent*) patients had availed the ambulance services. The status of calls received during the period from FYs 2017-18 to 2021-22 (up to December 2021) and patients transported by 108-Ambulances, are given in **Chart 3.10.**

Chart 3.10: Number of calls received, attended and services availed (Figures in lakh)



(Source: Data obtained from the NHM, Odisha)

Thus, 14.04 lakh (36 *per cent*) of the patients compared to the calls received (39.48 lakh) for ambulance service, had not availed the transport facility under EMAS during FYs 2017-18 to 2021-22.

Further, as per the conditions of the Request for Proposal/ SOP, the service provider was to maintain an average response time of 30 minutes to reach the patient/ site. It was, however, noticed that out of 19.97 lakh cases attended during FY 2019-22 (up to December 2021), the average response time was more

[72] Under EMAS, a fleet of ambulances are operational to provide emergency transport service to the people, free of cost

[73] Ziqitza Health Care Ltd. Mumbai

than 30 minutes in 6.21 lakh cases, hampering timely and appropriate medical attention, in case of medical emergency.

3.9.3.2 Other deficiencies

Audit noticed that:

- The serviceability and availability of equipment in ambulances was not being checked on a daily basis, in three of the test-checked DHHs (Bhadrak, Kandhamal and Puri).
- The ambulances at DHH, Bhadrak, had no valid fitness certificates, as well as insurance and pollution certificates. In the absence of these mandatory documents, the vehicles should not have been on the road. Log books of the ambulances were not made available to Audit, due to which Audit could not ascertain the actual movement and purpose of vehicles for transportation of patients.

Thus, the ambulance service for transportation of patients, in the test-checked hospitals, was deficient on many fronts and the people were mostly dependent on 108/ 112 - Ambulance services.

The H&FW Department stated EMAS-108 ambulances were available across the districts to transport patients from site of emergency to the nearest Government hospitals. The fact, however, remains that the public hospitals should have their own ambulances to meet the emergency situation, in case of non-availability of EMAS ambulances.

3.9.4 Mortuary Services

As per IPHS, there should be a mortuary, in a separate building in the hospital premises, for keeping dead bodies and conducting autopsies, and there should be a mortuary van in the DHHs. In a mortuary, there should be a post-mortem room, having a stainless steel autopsy table, with sink and running water for washing specimens. There should also be proper illumination and air-conditioning. Further, there should be a separate room for body storage, with at least two deep freezers, for preserving the body. In addition, there should be a waiting area for relatives and a space for religious rites.

Audit noticed that mortuary services were available in all the test-checked DHHs. The mortuary services in the DHHs were, however, deficient in infrastructure and equipment, as discussed below:

- Deep freezers, for storage of dead bodies, were not available in two (Bhadrak and Puri), out of the seven test-checked DHHs. The deep freezer at DHH, Nabarangpur, was defunct and the dead bodies were being kept on the floor. On the other hand, two deep freezers, supplied to CHC, Nimapara, were lying uninstalled, due to non-availability of necessary space and infrastructure.
- A stainless steel autopsy table was available only at DHH, Nabarangpur. In the other test-checked hospitals, granite or concrete structures were being used for autopsy purposes.

	
Deep freezers for storing dead bodies, lying uninstalled, at CHC, Nimapara (27 June 2022)	**Concrete slabs in the post mortem room, at DHH, Bhadrak (20 May 2022)**

- Equipment such as spot lights, weighing machines, *etc.*, were not available in three (Bhadrak, Dhenkanal and Sundargarh), out of the seven test-checked DHHs.
- The post mortem rooms had ACs in only two of the test-checked DHHs (Puri and Nabarangpur).

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

The H&FW Department stated (February 2023) that steps were being taken for providing infrastructure in the DHHs for mortuary services as per IPHS norm.

3.9.4.1 Autopsy and mortuary management in Medical College Hospitals

As per NMC guidelines, there is to be an Autopsy room, with ante-rooms, waiting hall and office, along with facilities for cold storage, storage of cadavers and washing, with an accommodation capacity of 20-25 students. The location of the mortuary and autopsy block is required to be either in the hospital, or adjacent to the hospital, in a separate structure, under the Department of Forensic Medicine.

Audit noticed that, although both the test-checked MCHs had mortuary units, there existed certain deficiencies, as discussed below.

3.9.4.2 Availability of infrastructure

The infrastructure, available for mortuary/autopsy services, in both the test-checked MCHs, was insufficient.

- Against the requirement of 400-500 square meters (sqm.) area, the mortuary building in PRM MCH had 56 sqm. area, while the mortuary building in MKCG MCH had 70 sqm.
- In MKCG MCH, the mortuary building had only one room and a corridor with an asbestos roof.

- In PRM MCH, only one post-mortem room was functional. The other two rooms, intended to be the doctor's room and the body storage room, were in a damaged condition and were non-functional.
- The required facilities for storage of cadavers, ante-rooms, accommodation capacity of 20-25 students, waiting hall and office, were not available in both the test-checked MCHs.
- A cold-storage facility, for storage of cadavers, was available in MKCG MCH, but such a facility was not available in PRM MCH. Three deep freezers, costing ₹11.67 lakh, supplied to PRM MCH in March 2021, were lying uninstalled, due to lack of electricity supply in the newly constructed building as of April 2022.

Mortuary building of PRM MCH, Baripada (12 May 2022)

- In both the test-checked MCHs, stainless steel autopsy tables were not available and granite or concrete structures were, instead being used for conducting autopsies. As a result, a clean and disinfected environment was not maintained in the mortuary.
- The post-mortem rooms had no air conditioning facilities, for conducting autopsies and clinical teaching aids, for medical students, were missing in both the test-checked MCHs. No demonstration galleries for students, were available in both test-checked MCHs.
- No mortuary vans were available, for transportation of dead bodies, in both the test-checked MCHs. Bodies were being brought to the mortuary, by the concerned police officials and were being taken over by the police/ relatives of the deceased, on their own arrangements.

The H&FW Department stated (February 2023) that proposal for new mortuary building was in process.

3.9.4.3 Adequacy of equipment

Against the requirement of 19 types of equipment for conducting medico-legal autopsies, PRM MCH had only five types of equipment, while MKCG MCH had six types of equipment.

- The equipment missing in the mortuary units of the two MCHs, included:
  - PRM MCH: Weighing machine for dead bodies, organs and foetus; Brain knife; X-ray view box; Stretcher for shifting dead bodies; and Portable X-ray machine, *etc*.

- MKCG MCH: Weighing machine for dead bodies; instrument trolley; Stryker type autopsy saw, with accessories; Autopsy tables; Brain knife, *etc*.

- As per MSRR, the Forensic Medicine and Toxicology (FMT) Department in an MCH should have 12 types of equipment for conducting examinations in cases of sexual assault. Audit noticed that none of the prescribed 12 items of equipment were available in the FMT Departments of the two test-checked MCHs. This indicated severe deficiencies in the scope and nature of examinations carried out in cases of sexual assault, as well as the lack of a suitable clinical learning environment for the medical students.

The H&FW Department stated (February 2023) that indents for the equipment had been given to the OSMCL for supply to the MCHs.

3.10 Auxiliary Services

3.10.1 Patient's Registration

The registration facility for OPD is the first point of contact with the hospital, for a patient and is an important component of the hospital experience for patients and their attendants. The 'waiting time', at the Reception/ Registration counter of a hospital, plays a vital role in developing trust in the quality of medical treatment or diagnosis.

The NHM Assessor Guidebook (Volume 1) estimates the average time required for registration, to be three to five minutes per patient, which roughly works out to about 12-20 patients/ hour, per counter.

Audit examined the number of OPD patients registered during FY 2021-22, in each test-checked DHH/ MCH, along with the availability of registration counter(s) and observed that registration counters, in four of the test-checked DHHs, did not conform to the prescribed norms, as shown in **Table 3.18.**

Table 3.18: Requirement and availability of registration counters

DHH / MCH	Patients registered (2021-22)	Registration counters[74] required	Registration counters available	Shortfall
DHH, Bhadrak	2,86,629	7	4	3
DHH, Dhenkanal	2,86,916	7	3	4
DHH, Kandhamal	2,03,253	5	2	3
DHH, Nabarangpur	1,07,054	2	2	0
DHH, Nuapada	77,262	2	2	0
DHH, Puri	4,78,107	11	4	7
DHH, Sundargarh	2,19,125	5	5	0
PRM, MCH	3,77,342	9	5	4
MKCG, MCH	9,40,328	21	10	11

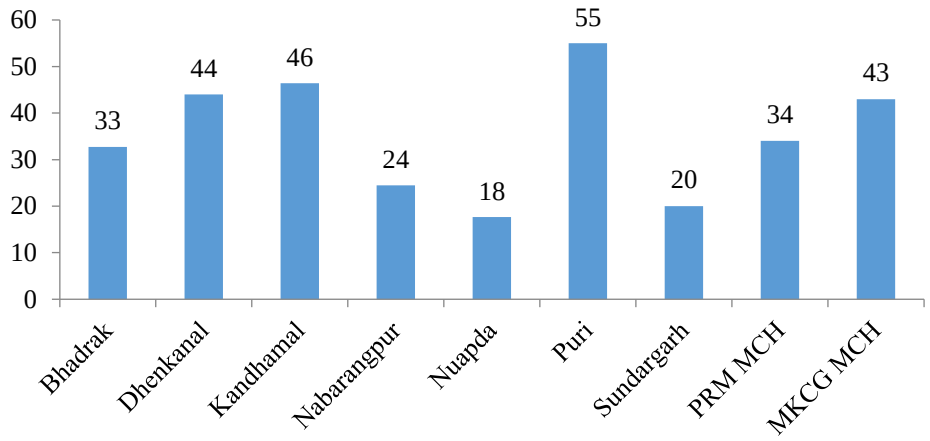
(Source: Data furnished by the test-checked DHHs and MCHs)
(Red colour: Shortage of counters; Green: No shortage)

[74] Number of OPD patients ÷ (6 hours ×365 OPD days ×20)

Among the test-checked district hospitals, DHH, Puri, had registered the highest number of patients, during FY 2021-22, followed by DHH, Dhenkanal and DHH, Bhadrak. Among the two test-checked MCHs, MKCG MCH, Berhampur, had a shortage of 11 counters.

The average patient load per counter per hour, for the test-checked DHHs/ MCHs, is shown in **Chart 3.11**.

Chart 3.11: Average patient load per counter per hour



(Source: Data obtained from test-checked DHHs and MCHs)

Thus, the patient load in registration counters was maximum at DHH, Puri, with 55 patients per hour per counter, followed by DHH, Kandhamal, with 46 patients per hour per counter. Similarly, the two MCHs also had high patient loads, compared to the norms prescribed under the NHM guidelines, which was due to the shortage of registration counters.

Patients waiting for registration in front of the counter at DHH, Bhadrak, on 19 May 2022

During patients' survey, about 64 *per cent* patients, visiting the test-checked hospitals, stated that they had to wait for more than five minutes for registration. Thus, only 36 *per cent* patients could be registered within the prescribed timeline of five minutes.

The H&FW Department stated (February 2023) that action was being taken for provision of additional registration counter, and online registration facility had been introduced for early disposal of OPD registration.

3.10.2 Grievance Redressal

For effective redressal of grievances of patients, IPHS stipulates that every grievance should be duly acknowledged. Suggestion/complaint boxes are to be provided at the enquiry counters and at other conspicuous places in the hospital. The name, designation and telephone number of the nodal officer concerned, should be duly displayed at the Reception.

Audit observed that no grievance redressal cells/ complaint cells had been set up in three DHHs (Kandhamal, Nabarangpur and Nuapada), out of the seven test-checked DHHs.

Audit noticed that suggestion/complaint boxes were available in all the test-checked DHHs, except for DHH, Bhadrak. The name, designation and telephone number, of the concerned nodal officer, had not been displayed in DHH, Bhadrak. No records regarding the number of complaints received, resolved *etc*., were made available to Audit. The DHH had, however, attended to 26 complaints, received online through the centralised grievance portal (*e-Abhijog*[75]), during FYs 2018-19 to 2021-22. Thus, the grievance redressal mechanism in DHH, Bhadrak, was not adequate for addressing the complaints/ grievances of the patients and the public.

Though 24 complaints, like non-availability of wheel chairs, staff misbehavior, *etc*., had been registered in DHH, Kandhamal, during FYs 2017-18 to 2021-22, action taken thereupon was not available on record.

Medical College Hospitals

- **MCH, Berhampur**: Suggestion/complaint boxes were placed in MKCG MCH, but no action had been taken in regard to 496 complaints, received during 2016-22.
- **MCH, Baripada**: Suggestion/Complaint boxes had not been placed, to enable patients to provide feedback, in PRM MCH.

The H&FW Department stated (February 2023) that complaint/ suggestion boxes had been placed in front of the Superintendent of the PRM MCH, for valuable feedbacks.

3.10.3 Patient Safety

The National Building Code of India 2016, Part 4, 'Fire and Life Safety', requires that fire extinguishers be installed in every hospital, so that the safety of the patients/ attendants/visitors and the hospital staff is ensured, in case of any fire in the hospital premises. Further, the NHM Assessor's Guidebook, envisages that, in each hospital, a Disaster Management Committee (DMC) be constituted and Standard Operating Procedures (SOPs) be available, in case of disaster situations. A Disaster Management Plan was to be developed in each hospital, for ensuring preparedness and training of the hospital staff and periodic mock drills were also required to be conducted.

It was observed that no DMCs had been constituted in the DHHs of Dhenkanal and Nabarangpur. Further, no SOP had been developed at DHH, Nabarangpur. Mock drills for fire safety were not being documented and no record of attendance was being maintained at DHH, Kandhamal. Fire Safety Audit Reports were not made available to Audit, by any of the test-checked DHHs.

3.10.3.1 Medical College Hospitals

On scrutiny of records and JPI, Audit noticed that no plans for prevention of fire existed in the two test-checked MCHs. Further, adequate quantities of fire-

[75] Odisha State Grievance Redressal Portal to facilitate online grievance redressal mechanism

fighting equipment, to meet any untoward contingency, were not in place, in the two test-checked MCHs. It was further seen that:

- PRM MCH did not obtain 'No Objection Certificates (NOCs)', for any of its hospital buildings, from the Fire Department, while MKCG MCH had obtained NOCs for 13 (out of 44) buildings only.
- In PRM MCH, out of 14 buildings, being used for hospital services, five had one to 90[76] fire extinguishers, while the other buildings did not have any fire extinguishers or smoke detectors.
- During Joint Physical Inspection (June 2022) of four buildings (Regional Diagnostic Centre, Blood Bank, O&G and Casualty) of MKCG MCH, Audit noticed that the fire safety provisioning was not adequate. The life period of gas, in the fire extinguisher equipment, in the Regional Diagnostic Centre and Blood bank buildings, was found to have expired a long time back (March 2018/ October 2021). Fire extinguishers were also not found on the first floor of the Regional Diagnostic Centre and Blood bank buildings. Similarly, there were no fire extinguishers in four floors of the O&G building and two floors of the Casualty building.

Thus, the facilities available for fire safety were deficient at both MCHs, creating an avoidable risk for the safety of patients and students.

The H&FW Department stated (February 2023) that the availability of required number of fire extinguishers had been ensured in the buildings, and complete fire safety system would be installed in the new buildings.

3.11 Managing Committee meetings and Hospital Transfusion Committees

As per instructions of the State Government, the Managing Committees[77] of blood banks were required to meet at least twice in each year, to review the progress and performance of the blood banks/centres and submit their reports, in this regard to the State Blood Transfusion Committee (SBTC), for review. Similarly, Hospital Transfusion Committees[78], for blood banks, were required to meet, at least once in every month and the proceedings of such meetings were to be submitted to the SBTC.

Audit noticed that:

- MC meetings were not held in three BCs (Dhenkanal, Nuapada and PRM MCH). In the remaining six[79] BCs, only two to six meetings were held, against the requirement of 12 meetings, during the period 2016-22.
- HTCs were not formed in the blood centres of four DHHs (Bhadrak, Dhenkanal, Kandhamal and Nuapada). In four of the test-checked

[76] MCH:90; SNCU/ Orthopaedic: 04; RDC: 01; 80-bedded ward:15 and blood bank: 01
[77] To formulate policies for smooth management of blood banks as per Drugs and Cosmetic Acts and Rules
[78] For regular exchange of technical knowledge on rational use of blood and review cases of adverse reaction during transfusion and quality control of blood transfusion service
[79] Except for MCH, Baripada

hospitals (DHHs of Nabarangpur, Puri, Sundargarh and MKCG MCH), one to eight meetings were conducted, during the period 2016-22.

Due to absence of committees and non-holding of regular meetings, proper functioning of blood centres was not ensured.

The H&FW Department stated (February 2023) that concerned authorities would be instructed to form Mangaing Committee and Hospital Transfusion Committee at BCs.

Chapter 4

Availability of Drugs, Medicines, Equipment and Other Consumables

CHAPTER 4

Availability of Drugs, Medicines, Equipment and Other Consumables

Government was not entirely successful in providing an unbroken supply of essential drugs to patients in public health facilities, in terms of its own prescribed essential/critical drug list. Monitoring/supervision of the supply chain of drugs and medical consumables was inadequate, leading to exhaustion of stocks of essential medicines, as well as expiry of drugs. Norms and parameters, prescribed for storage of medicines, were not followed, for ensuring efficacy of the medicines procured.

Medical equipment/ devices are essential for providing quality healthcare services in public health facilities. Hospitals were not fully equipped with essential equipment, in terms of IPHS/NMC norms. Equipment and medical devices were lying idle/ non-functional, in hospitals, due to non-provisioning of the required infrastructure and manpower. Non-availability and idling of equipment impacted the delivery of health services in hospitals, as well as medical education in the MCHs. There were instances of violation of extant rules and provisions, in the procurement of Equipment, Instruments and Furniture by the MCHs.

Most of the emergency equipment, such as ventilators, Oxygen Concentrators, *etc.*, procured for managing emergent situations, was lying idle, due to non-provisioning of infrastructure and manpower.

The accessibility, availability and affordability, of safe, good quality drugs, are essential for a good public health system. Government of Odisha launched (2015), the 'Free Medicine Distribution Scheme' in the State, for providing essential medicines [80], for different kind of diseases, free of cost, to patients coming to public health facilities. The procurement and distribution of drugs, medicines, surgical items, medical equipment, *etc*., for the health facilities in the State, is entrusted to the OSMCL. OSMCL is responsible for the timely procurement of medicines, surgical and EIF (Equipment, Instrument and Furniture), as well as management of central drug warehouses, for ensuring the smooth flow of drugs and EIF to health institutions, through a centralised online inventory management system. OSMCL developed (April 2017), the *e-Niramaya* software application, to automate the supply chain management, *i.e.* procurement, distribution and quality control, of drugs and medical consumables.

[80] Essential medicines are those that satisfy the needs of the majority of the population. They should be available at all times, in adequate quantities and in proper doses; they should be rational (*i.e.*, appropriate prescribing, dispensing and patient use), and of proven therapeutic value and safety

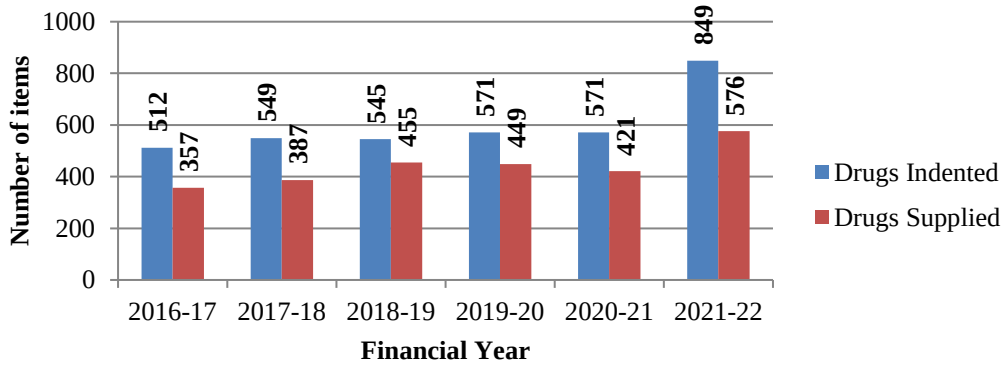
Audit had examined the procurement and distribution of drugs, medical consumables and equipment, by OSMCL, for the period from FYs 2016-17 to 2018-19, and the relevant audit observations thereon were contained in C&AG's Audit Report (G&SSA) for the year ended March 2019 (***Paragraph 2.1***). In the present Performance Audit, the availability and utilisation of drugs, medical consumables and equipment, in public health facilities, have been examined. The related audit observations are discussed in the succeeding paragraphs.

4.1 Indent and supply of essential drugs and medical consumables

As per the 'Guidelines on Procurement Planning and Management of Drugs and Medical Consumables' (2015) issued by the Government of Odisha, the health facilities, at the block/ district/ medical college level, should forecast the annual requirement of various medicines, based on the Essential Drug List (EDL) and Standard Treatment Guidelines and submit it to OSMCL. Each health institution is required to prepare an annual indent, considering the consumption pattern, natural calamities, ongoing health programmes, *etc*. OSMCL is, therefore, required to compile all the annual indents, received from the health institutions, and forward to the State Drug Management Unit for analysis. After analysis, the SDMU, would prepare the draft Annual Procurement Plan (APP) for drugs and medical consumables, for the ensuing financial year, and place the APP before the State Drug Management Committee, for approval. After approval of the APP by the SDMC, OSMCL is required to procure the drugs and medical consumables and supply them to the health institutions, for distribution to patients.

Audit observed that the indented quantity of drugs and medical consumables had not been supplied by the OSMCL, to the health facilities, during FYs 2016-17 to 2021-22, as shown in **Chart 4.1**.

Chart: 4.1 Number of drugs and medical consumables indented and supplied



(Source: Data supplied by OSMCL)

It was observed that there was short supply of essential drugs and medical consumables to the health facilities. Against the indent of 512 to 849 kinds of medicines and consumables, 357 to 576 items were procured and supplied for distribution to patients, during the period from FYs 2016-17 to 2021-22, which was about 68 to 83 *per cent* of the requirement. OSMCL attributed the short supply of essential drugs to health facilities, to single bids/ non-responsive bids and partial execution of purchase orders.

Further, out of 2,219.28 crore units of essential drugs and consumables, indented during FYs 2016-17 to 2021-22, OSMCL could supply only 1,044.64 crore units, which was only 47 *per cent* of the requirement. Thus, there was short supply of 53 *per cent* of the indented quantity, which ultimately led to exhaustion of stocks of these medicines, in hospitals.

Details of the essential drugs and medical consumables, supplied to the test-checked hospitals, during the period from FYs 2019-20 to 2021-22, are given in **Table 4.1**.

Table 4.1: Supply of essential drugs/ medical consumables, during FYs 2019-20 to 2021-22

DHH	Drugs and medical consumables approved		Drugs and medical consumables supplied		Short supply	
	Number of items	Quantity (in crore)	Number of items	Quantity (in crore)	Number of items	Quantity (in crore)
Bhadrak	1,433	56.95	944	23.56	489	33.39
Dhenkanal	1,329	32.90	982	20.2	347	12.7
Kandhamal	1,441	28.71	944	13.08	497	15.63
Nabarangpur	2,473	28.84	1,553	21.11	920	7.73
Nuapada	1,410	16.87	919	8.83	491	8.04
Puri	1,275	NF*	1,150	NF*	125	NF*
Sundargarh	1,165	48.12	1,002	22.53	163	25.59
MCH, Baripada	1,318[81]	7.61	768	2.75	550	4.86
MCH, Berhampur	2,708	20.17	2,380	17.10	328	3.07
Total	**14,552**	**240.17**	**10,642**	**129.16**	**3,910**	**111.01**

(Source: Records of the test-checked hospitals and e-Niramaya database)
****NF: Data not furnished to Audit.***

Thus, against the approved quantity of 240.17 crore units of 13,277[82] essential drugs and medical consumables, only 129.16 crore (54 *per cent*) units were supplied to the test-checked districts. It was further observed that the supply of drugs to the health facilities was not rational, as instances of short and excess supplies were noticed, against the requirement/ indented quantity. This contributed to exhaustion of stocks of essential medicines, and expiry of drugs at the hospital level, as discussed in the subsequent paragraphs.

The H&FW Department stated (February 2023) that steps were being taken to enquire into the matter and check the discrepancies.

4.1.1 Irrational supply of essential drugs and medical consumables

Essential drugs and medical consumables should be supplied to the health facilities as per the approved indents. On analysis of the data made available to Audit and scrutiny of the *e-Niramaya* database for the period[83] 2019-22, Audit found that there was short and excess supply of essential medicines, compared

[81] This relates to two financial years, *i.e.* 2020-21 and 2021-22, as data for previous years was not provided to Audit.
[82] Excluding Puri district (14,552 *minus* 1,275)
[83] Data on the e-Niramaya database was not made available to Audit for the period from 2016-17 to 2018-19.

to the approved/ indented quantities, as detailed in ***Appendix 4.1.*** Audit further observed the following:

- Shortages of 30 to 73 *per cent* of the approved quantities/ units, of 205 to 564 kinds of essential drugs, were noticed in the test-checked DHHs, during FYs 2019-20 to 2021-22. In PRM MCH, the shortage was 38 to 45 *per cent*, while it was 7 to 14 *per cent* in MKCG MCH. Such short supplies led to exhaustion of stocks of essential drugs in the district.
- 18 to 123 kinds of drugs were supplied in excess of the approved quantities. The excess supply ranged between 40 and 297 *per cent*, during FYs 2019-20 to 2021-22, and led to overstocking at the district drug warehouses (DWHs), resulting in shortage of space for storage, compounded with expiry of essential medicines, as discussed in ***Paragraph 4.1.6***.
- There was no supply of 82 to 504 kinds of medicines and medical consumables, during FYs 2019-20 to 2021-22. Short supply and nil supply of drugs led to local procurement by the DHH, involving higher expenditures, as compared to the price approved by the OSMCL, as pointed out in ***Paragraph 2.1.7*** of the C&AG's Audit Report (G&SSA) for the year ended March 2019.
- Data for FYs 2016-17 to 2018-19, was not made available to Audit for scrutiny, on the ground that it was not available in the *e-Niramaya* database.

Thus, supply of drugs and medical consumables was not in line with the approved indents/ requirement, indicating deficient monitoring by OSMCL and hospital authorities.

The H&FW Department stated (February 2023) that the matter would be enquired and discrepancies would be checked.

4.1.2 Stock-out of essential and critical drugs

Based on the EDL, the minimum stocks, to be maintained at various levels of healthcare facilities, have been prescribed (as given in **Table 4.2**) by Government, to avoid stock-out or over-stocking of any drugs and medical consumables.

Table 4.2: Minimum stock of drugs, required to be available in hospitals

Healthcare facility	Number of Essential drugs to be available		Minimum stocks to be maintained
	2016-17 to 2019-20	2020-21 to 2021-22	
DHHs	263	542	One month's stock
CHCs	172	542	Two months' stock
PHCs	87	295	Three months' stock

(Source: Data furnished by OSMCL)

Audit analysed the data provided by the test-checked healthcare facilities and found that essential drugs were not available in the test-checked hospitals, during the sampled months. This was due to non/ short supply of indented drugs, by OSMCL. Further, the drugs procured locally were inadequate to replenish

the shortages. The stock-out position of essential drugs, in the DHHs/ MCHs, in the sampled months, is given in **Table 4.3**.

Table 4.3: Non-availability of essential drugs in the test-checked hospitals

DHH/MCH	Percentage of stock-out medicines in the sampled months					
	May-16	Aug-17	Nov-18	Feb-20	May-20	Aug-21
Bhadrak	27	24	27	26	62	68
Dhenkanal	48	27	31	24	57	59
Kandhamal	14	20	10	5	16	15
Nabarangpur	2	2	2	3	1	1
Nuapada	58	38	24	18	62	59
Puri	0	22	5	6	4	2
Sundargarh	14	11	16	12	53	49
MCH, Baripada	NA	5	6	3	6	5
MCH, Berhampur	19	19	14	25	12	11

(Source: Records of the test-checked hospitals and district Drug Ware Houses)
(Red colour: More than 50 per cent stock out; light red: less than 50 per cent stock out)

Thus, stock out of essential drugs, was more in four of the test-checked DHHs[84], during May 2020 and August 2021, as compared to other the test-checked hospitals. Essential drugs like Chlorpheniramine Maleate tablet (anti-allergic drug), Clopidogrel tablet (anti-anginal drug), Dexamethasone tablet (anti-allergic drug), Betamethasone, Sodium Phosphate injection (anti allergic), *etc*., were not available in the test-checked hospitals, during the sampled months.

In the 14 of the test-checked CHCs, 16 to 72 *per cent* of essential drugs were not available in 13 CHCs, on an average, during the sampled months of 2016-22. In Kosagumuda CHC, only two *per cent* of essential drugs were reported to be not available.

4.1.3 Non-availability of critical drugs

Government of Odisha had listed out (November 2018) 106 critical drugs, which were to be made available at all health facilities in the State, at all times. Audit found that, during 2018-22, 3 to 59 critical drugs were not available in the test-checked hospitals, for distribution to patients, for 3 to 410 days, as detailed in **Table 4.4**.

Table 4.4: Stock-out of critical drugs in the test-checked hospitals (period in days)

DHH/MCH	2017-18		2018-19		2019-20		2020-21		2021-22	
	No. of drugs	Stock out period	No. of drugs	Stock out period	No. of drugs	Stock out period	No. of drugs	Stock out period	No. of drugs	Stock out period
Bhadrak	NA	NA	15	31-410	15	23-163	8	28-212	20	14-243
Dhenkanal	47	30-365	14	30-365	8	60-270	4	90-365	17	30-365
Kandhamal	11	30-365	14	30-365	12	30-300	11	30-150	8	30-244
Nabarangpur	0		0	0	0		0		0	0
Nuapada	12	60-210	10	30-120	9	30-210	5	30-365	3	30-120
Puri	0		0		0		0		6	30-365

[84] DHHs: Bhadrak; Dhenkanal; Nuapada and Sundargarh

DHH/MCH	2017-18		2018-19		2019-20		2020-21		2021-22	
	No. of drugs	Stock out period	No. of drugs	Stock out period	No. of drugs	Stock out period	No. of drugs	Stock out period	No. of drugs	Stock out period
Sundargarh	14	92-365	13	91-365	18	91-365	13	90-365	12	121-365
MCH, Baripada	14	15-273	26	28-365	39	13-345	5	31-365	11	28-365
MCH, Berhampur	43	9-320	59	6-317	34	8-339	24	4-189	28	3-365

(Source: Stock Ledgers of the test-checked DHHs and MCHs)

Audit noticed non-availability of critical drugs like Cefadroxil (250 mg) tablet, Drotaverine (40 mg) tablet, Glimepiride (2 mg) tablet, Nifedipine SR (20 mg) tablet, *etc*., for more than six months, in the test-checked hospitals.

In eight[85] of the test-checked CHCs, 11 to 35 critical drugs were out of stock, for periods ranging from 8 to 366 days, on an average, during FYs 2019-20 to 2021-22. In six other test-checked CHCs, two to nine critical drugs, on an average, were not available, during FYs 2019-20 to 2021-22.

Due to non-availability of essential/critical drugs in the hospitals, the patients would have either not been prescribed these medicines, or would have had to purchase the same from local markets, incurring out of pocket expenditure. This defeats the objective of the 'Free drug distribution scheme', which aimed to provide all essential medicines, to patients, free of cost.

The H&FW Department stated (February 2023) that the matter would be inquired into and discrepancies would be checked.

4.1.4 Drug dispensing

The Guidelines on Procurement Planning and Management of Drugs, 2015, issued by the Government of Odisha, provide that drugs should be distributed through drug dispensing counters (DDCs). The DDCs are required to dispense medicines only against prescriptions, after capturing data relating to the prescriptions and the drugs dispensed there against, in the system, for reference. Data captured at the DDCs is to be analysed centrally, to monitor consumption patterns and prescription practices. The DDCs are to be managed by the computer knowing pharmacists. There should be one DDC for 200 patients in DHHs, as per the IPHS 2012.

On scrutiny of records and joint physical inspection conducted (May-July 2022) by Audit along with the hospital staff, it was noticed that one to six DDCs were functioning in the test-checked DHHs, as detailed in **Table 4.5**.

[85] Barapada; Basudevpur; Khajurikata; Kuarmunda; Lahunipada; Sriramchandrapur; Komana; Khariar Road

Table 4.5: Availability of DDCs in the test-checked DHHs

DHH/MCH	Average OPD patients per day[86]	Requirement	Number of DDCs
Bhadrak	930	5	4
Dhenkanal	860	4	2
Kandhamal	589	3	2
Nabarangpur	234	1	1
Nuapada	263	1	2
Puri	1,338	6	6
Sundargarh	637	3	6
MCH, Baripada	1,213	6	3
MCH, Berhampur	2,246	11	6

(Source: Data obtained from the test-checked DHHs and JPI)
(Red colour: Shortage of DDCs; Green colour: No shortage)

It would be seen from the above that there was a shortage of DDCs in five of the test-checked DHHs and MCHs, compared to the prescribed norms. Further, the DDCs of DHH, Sundargarh and Bhadrak, lacked infrastructure for smooth dispensing of drugs to patients, as discussed below:

- Out of the six DDCs at DHH, Sundargarh, two were functioning in the Mother and Child Healthcare building and four in the main building of the hospital. Only two computers/ systems, with scanners, had been provided to cater to the needs of all these six DDCs. The entire data capturing and scanning work was being carried out by these two systems, despite six counters being physically earmarked. Thus, creation of six DDCs, without provisioning the necessary infrastructure, proved to be futile.
- Due to non-availability/ improper functioning of computerised systems, including scanners, at DHH, Bhadrak, data capturing and prescription scanning, was being done only intermittently. Resultantly, monitoring of consumption patterns and prescription practices, was not carried out and prescription audit was hampered.
- Drugs in the DDCs of DHH, Bhadrak, were not being stored in containers/ tray/ crash carts and were not labelled. Non-labelling and unscientific storage resulted in more time being taken for dispensing of drugs. Unscientific storage and improper functioning of DDCs, contributed to a long waiting for patients who were waiting to collect drugs, as 800-900 patients were receiving drugs daily, on an average, in the DHH.
- Two out of the three DDCs in PRM MCH, did not upload prescriptions in the Niramaya database and prescription scanning had been discontinued in all the three DDCs, since July 2020.

Out of 71.33 lakh OPD patients, registered in both the MCHs, during FYs 2016-17 to 2021-22, only 25.13 lakh (35 *per cent*) patients had been distributed medicines, as per the data provided by the MCHs. The remaining 65 *per cent*

[86] The average patients per day, computed by taking into consideration the OPD patients of the hospitals, during 2016-22

OPD patients had not been distributed free medicines in these two MCHs. This indicated the material risk that these patients could not avail free medicines either due to stock out of required drugs or due to the long waiting time at the low number of DDCs.

OPD patients waiting at the DDC of DHH, Bhadrak, for collecting drugs (4 June 2022)

OPD patients waiting at DDC of DHH, Dhenkanal, for collecting drugs (9 May 2022)

Thus, the drug dispensing system in the test-checked hospitals was not adequate and effective, leading to high waiting times for patients to receive their prescribed medicines.

The H&FW Department stated (February 2023) that instructions were issued for maintaining adequate and effective drug dispensing system in DHHs and MCHs.

Recommendation 4.1

OSMCL may put in place a real-time Inventory Management System, with deployment of Point-of-Sale Terminals, at all DDCs, to clearly establish the actual availability of stocks of medicines, at all the hospitals and PHCs, on a real-time basis, for use by both the officials of the Corporation, as well as the healthcare facilities. Besides, the system should also enable a two-way communication and/ or workflow system, to assess and communicate the requirements, in the event of medicines getting exhausted earlier than the estimated time, due to heavy demand, or in case of medicines being over-stocked, due to slow movement/ demand, etc.

4.1.5 Storage of drugs and medical consumables

As per the 'Policy on Free Distribution of Medicines at Government Hospitals' issued (2013) by the Government of Odisha, "adequate infrastructure shall be created by the Department at different levels for central warehousing including cold-chain facility for safe storage of drugs and other medical consumables". The NHM Assessor's Guidebook prescribes certain parameters for the storage of drugs in stores, to maintain the efficacy of the procured drugs, before they are issued to patients.

Audit observed that storage of drugs, at drug warehouses and drug stores, was not in consonance with the prescribed norms and parameters. The deficiencies/ shortcomings, in the storage facilities within the District Warehouses (DWHs) and sub-stores are given in **Table 4.6**.

Table 4.6: Deficiencies in the storage of drugs

Parameters	Audit observations	Expected impact
Labeled shelves/ racks	Labeling was done at all the test-checked DWHs, except Bhadrak, where it was partial and the sub-store of PRM, MCH. The space available for storage of drugs was insufficient at DHHs, Bhadrak, Kandhamal, Nabarangpur, Nuapada and Puri.	Shortage of space and racks would lead to unscientific storage of drugs *i.e.*, piling of drug packets (boxes) one above the other, leading to high turnover time in the distribution of drugs and the possibility of damage to the stored drugs.
Designated area for controlled, dangerous and restricted medicines	No designated area was available at DHH/ DWH, Bhadrak.	Unauthorised access to the dangerous drugs
Separate shelf/rack for storage of expiry/ NSQ drugs	Drugs were stored at different places at DWH, Bhadrak, due to want of space. No earmarked space was available at two MCHs.	Mixing of expired drugs with other useable drugs
Drugs stored on the floor and adjacent to walls	Drugs were found to be stored on the floor and adjacent to the walls at the DWHs and sub-stores, in all the test-checked DHHs and MCHs.	Loss of efficacy and shelf life of drugs as the required temperature was not maintained.
Air conditioned pharmacy	Air conditioning of pharmacies was not in place at DHHs, Dhenkanal, Kandhamal, Nabarangapur, Puri and MCH, Baripada. ACs, though available at Bhadrak, were not functioning.	
Availability of cold-chain storage/ system	Available in DWHs of all the test-checked districts.	
Maintenance of temperature chart of deep freezers	Records not available in any of the test-checked DWHs/ DHHs.	
24-hour temperature recording of cold storage area	Not maintained in any of the DWHs/ DHHs	

(Source: Records of the test-checked hospitals and JPI)

Audit observed that:

- Drugs and medical consumables were stored unscientifically in all the test-checked DHHs. The storage facility for drugs and medical consumables, at DHH/ DWH, Bhadrak, was highly inadequate, due to receipt of huge quantities of programme drugs[87], coupled with non-disposal of NSQ/ expiry drugs.
- Temperature charts, for deep freezers, were not maintained at all DHHs, even though cold chain systems were available in all the test-checked DHHs. Due to the absence of trained personnel at DWH, Bhadrak, one

[87] Drugs related to disease control programmes which are under implementation in the State

outsourced person (watchman), deployed at the DWH, was looking after the cold chain operations.

- The DWH building at Bhadrak was a two-storied building, without any firefighting system. Only two fire extinguishers were available for fire safety. In the other test-checked DHHs/ DWHs, only fire extinguishers were available, but no firefighting system had been installed.
- One old building, at a distance of 500 meters from the DHH, Bhadrak, was being used as a store room. Drugs and medical consumables were found to have been stored on the floor, staircase, *etc*. There was no security arrangement, despite the fact that the building was located at a distant place, leading it vulnerable to the risk of theft and loss of government property.
- No dedicated sub-store was available in PRM MCH. The sub-store had been functioning in an exit path of the MCH building, without any shelves/ racks, for storing drugs and consumables.

Drugs store near the toilet, at DHH, Nuapada (7 July 2022)

Unscientific storage of drugs, at DWH, Bhadrak (10 May 2022)

Thus, there were several deficiencies in the system of drug storage in the test-checked hospitals and the prescribed parameters for the storage of drugs, as stipulated in the NHM Assessor's Guidebook, were not followed, to maintain the efficacy of the procured drugs, before they were issued to patients.

The H&FW Department stated (February 2023) that instructions were issued to the concerned authorities for scientific storage of drugs and to take appropriate steps for making available the drug storage equipment.

4.1.6 Expiry of medicines due to deficient stock management

OSMCL is responsible for management of the surplus and deficit stock of drugs and medical consumables, in the health facilities. The distribution and stock position of drugs can be monitored centrally, through the *e-Niramaya* application system, for ensuring uninterrupted supply of medicines at the health institutions. Analysis of data/ information, supplied by OSMCL, showed that 4,338 kinds of drugs (6.07 crore units), costing ₹11.68 crore, had expired during FYs 2016-17 to 2021-22. Audit also noticed that 2.90 crore units of essential drugs, costing ₹4.47 crore, had expired in the test-checked DHHs/ MCHs,

during April 2017 to March 2022. These expired drugs were lying in the district drug warehouses and sub-stores of the test-checked hospitals, as detailed in **Table 4.7**.

Table 4.7: Details of expired drugs

DHH/MCH	Number of drugs/ consumables	Quantity (units)	Value (₹ in lakh)
Bhadrak	160	79,85,535	99.03
Dhenkanal	167	28,91,253	27.39
Kandhamal	160	1,88,162	NA
Nabarangpur	140	5,49,281	9.39
Nuapada	298	47,47,764	50.42
Puri	218	12,18,946	15.60
Sundargarh	245	86,49,068	139.26
MCH, Baripada	76	20,45,661	69.82
MCH, Berhampur	114	6,90,329	36.34
Total	**1,578**	**2,89,65,999**	**447.25**

(Source: Data furnished by the seven test-checked districts & two test-checked MCHs)

Expiry of the huge quantity of drugs indicated that the indenting, distribution, consumption and stock position of drugs, was not being monitored effectively, through the e-*Niramaya* application. It was noticed that essential drugs had expired due to excess supply, unrealistic indenting, non-usage of drugs after procurement, *etc*. A few such instances are discussed below:

- In the DWHs at DHH, Bhadrak and Sundargarh, 33.53 lakh Metformin (500 mg) tablets (cost: ₹ 7.94 lakh) had expired during FYs 2020-21 to 2021-22, due to unrealistic indenting, excess supply and less consumption, as discussed below:

Table 4.8: Details of indenting, supply and utilisation of Metformin tablets

DWH/ DHH	Opening stock	Quantity of Metformin (500 mg) tablets (in lakh)				
		Indented	Supplied	Utilised	Closing stock	Expired
Sundargarh 2020-21	1.87	17.00	39.88	9.04	32.71	9.93
Bhadrak 2020-21	1.88	12.47	40.73	6.05	36.56	0.23
Bhadrak 2021-22	36.56	13.71	2.41	12.09	26.88	23.37
Total		**43.18**	**83.02**	**27.18**		**33.53**

(Source: Data provided by DHH Bhadrak and DHH Sundargarh)

During FY 2020-21, against the quantity of 29.47 lakh tablets, indented by the two DHHs (Sundargarh and Bhadrak), 80.61 lakh tablets were supplied to the DWHs, but only 15.09 lakh tablets were utilised. Thus, OSMCL had supplied 2.74 times of the indented quantity. During FY 2021-22, despite availability of 36.56 lakh tablets, DHH, Bhadrak, indented 13.71 lakh units. Thus, there was excess supply of drugs, coupled with illogical indenting by the districts.

- Indents for Cefadroxil 500 mg tablets, in two of the test-checked DHHs (Bhadrak and Sundargarh), were not rational, keeping in view the consumption of previous years. The DHHs had placed indents without considering the consumption pattern of previous years, as detailed in **Table 4.9**.

Table 4.9: Consumption pattern and indents of Cefadroxil 500 mg tablets (in lakh)

DHH	Opening stock	Consumed quantity (in lakh)			Indent	Consump-tion	Expired quantity
		2018-19	2019-20	2020-21			
Sundargarh (2020-21)	2.91	8.11	10.05		20.00	5.07	1.33
Bhadrak (2021-22)	13.93		11.04	11.12	19.23	2.17	13.10

(Source: Records of DWH and e-Nirmaya database)

During FY 2020-21, DHH, Sundargarh, indented for 20 lakh tablets, even though the consumption of this medicine was 8-10 lakh, during the previous two years. Similarly, DHH, Bhadrak, indented for 19.23 lakh tablets, during FY 2021-22, despite 10-11 lakh tablets having been utilised during the last two years. This indicated that the indenting was not based on the previous year's consumption, or on actual requirements. Resultantly, these districts could utilise only 7.24 lakh tablets, leaving huge closing stocks, including the expired quantity of 14.43 lakh tablets, costing ₹36.07 lakh, despite the fact that OSMCL had supplied only 4.46 lakh and 4.45 lakh tablets, to Sundargarh and Bhadrak, respectively, against their indents.

- DHH, Sundargarh, indented for 10,100 units of Isosorbide dinitrate (5 mg) tablets, during FY 2020-21, even though 1,000 to 2,200 tablets had been consumed during the previous two years (2018-19 and 2019-20). Against this indent, OSMCL supplied 27,200 tablets, which was 2.7 times the indented quantity. Resultantly, 20,400 units of this medicine (cost: ₹3,672) expired, as only 3,700 tablets could be utilised. Thus, irrational indenting, excess supply and less consumption, led to expiry of a substantial quantity of this critical medicine (anti-anginal), which is used to reduce chest pain.
- PRM MCH received 11 types (11,99,620 units) of drugs and consumables, by relocation from the central drug store, Bhubaneswar, during FYs 2020-21 to 2021-22. Out of these, 1,06,735 units were utilised and 10,92,885 units, costing ₹45.19 lakh, expired. These drugs had not been indented by the PRM MCH, as they were not required for its store.

Thus, there was absence/ inadequate monitoring of the supply chain of essential drugs, by the district/ State authorities, which led to expiry of huge quantities of essential/ critical medicines, at the cost of the State exchequer.

The H&FW Department stated (February 2023) that the matter would be enquired and discrepancies would be checked.

4.1.6.1 Non-disposal of expired and Not of Standard Quality drugs

As per the Drug Management Policy (2003)[88] of the Government of Odisha, the heads of health institutions[89] were required to verify the stocks pertaining to

[88] The policy of the Government of Odisha to make available good quality drugs and medical consumables as per requirement in Government health institutions.

[89] Chief District Medical Officers/ Chief Medical Officers/ Superintendents of Medical Colleges

expired/ Not of Standard Quality (NSQ) drugs and take steps for the destruction of these drugs.

Audit observed that the damaged, expired and NSQ drugs, were lying in district warehouses and MCHs, of the test-checked districts, as the concerned authorities had not disposed of these NSQ and expired drugs. Stocks of such NSQ/ expired drugs, not only caused congestion in the DWHs/ MCHs, but were also susceptible to risk of being diverted and misused later.

NSQ and expired drugs, stored in the parking area of the staff quarter, at the DWH of PRM MCH (27 April 2022)

Expired drugs kept in the same rack, with other medicines, at DHH, Bhadrak (10 May 2022)

Although the issue of non-disposal of expired/ NSQ drugs, had been reported in the Audit Report (***Paragraph 2.1.6***) for the year ended March 2019, it had not been addressed so far.

The H&FW Department stated (February 2023) that instructions would be issued to the concerned authorities to dispose of the expired drugs, after following the guidelines and maintain the quality standards of drugs.

4.2 Equipment, Instrument and Furniture

Medical equipment/ devices assists healthcare personnel in monitoring patient health more accurately and help doctors perform various functions. To deliver assured healthcare services, necessary equipments, instruments, and furniture (EIF), should be available in health facilities in adequate quantities. Audit, however, observed various deficiencies / shortcomings, in the availability and utilisation of EIF in health facilities, as discussed in subsequent paragraphs.

4.2.1 Indent and supply of EIF

As per the Guidelines on 'Rational procurement planning and management of equipment, instrument and furniture', issued (December 2014) by the H&FW Department, the State Drug Management Unit is to compile the indents received from various health institutions and place them before the State Level Equipment Management Committee (SEMC), for finalisation of APP. The SEMC is to finalise the quantities to be procured against the quantities indented, based on the level of institutions and budgetary resources. After finalisation of the APP, OSMCL is to commence procurement of EIF and supply the same to the health institutions.

Audit observed that the SEMC had approved procurement of 5.21 lakh EIF, during FYs 2016-17 to 2021-22, against which OSMCL could procure 3.11 lakh (60 *per cent*) EIF only, as detailed in **Table 4.10.**

Table 4.10: Details of EIF indented and supplied during FYs 2016-17 to 2021-22

Financial Year	EIF indented/ approved	EIF for which POs placed	EIF procured and supplied	EIF installed and functional	EIF not procured/ supplied
2016-17	32,423	21,631	20,158	20,158	1,473
2017-18	41,759	3,283	3,196	3,196	87
2018-19	65,000	35,320	25,159	25,159	10,161
2019-20	1,14,650	86,864	75,648	75,648	11,216
2020-21	1,32,435	1,00,387	92,177	92,177	8,210
2021-22	1,34,461	1,30,679	94,218	94,218	36,461
Total	**5,20,728**	**3,78,164**	**3,10,556**	**3,10,556**	**67,608**

(Source: Data provided by the OSMCL)

As may be seen from the above, only 60 *per cent* of the EIF approved by the SEMC were procured during FYs 2016-17 to 2021-22. OSMCL had placed purchase orders for supply of 3,78,164 equipment during 2016-22, against which the suppliers had supplied 3,10,556 (82 *per cent*) equipment only. Reasons for short supply were not available with the OSMCL. In response to the audit query, OSMCL stated (October 2022) that reasons for non-supply would be enquired from the suppliers, on receipt of which, penal action, as per the terms and conditions of the POs, would be initiated.

Further, OSMCL made payments to the suppliers based on the Consignee Receipt and Acceptance Certificates, received from the hospitals/ end users. Before making payments, the actual installation and commissioning of the procured equipment, was not assured. This was apparent from the fact that many of the supplied equipment were found uninstalled and even in a packed condition, though OSMCL had reported these as having been installed and functional.

This indicated failure/ lack of internal control, in the procurement process of EIF, for securing value for government money, as the terms and conditions of the POs were neither complied with, nor was the actual functionality of equipment ensured by the OSMCL, before release of payments.

The H&FW Department stated (February 2023) that instructions were being issued to the OSMCL for release of payment to the suppliers after receipt of confirmation on installation and proper functioning of the equipment.

4.2.2 Availability of equipment in the test-checked DHHs

IPHS has prescribed norms of equipment, for hospitals (DHHs/ CHCs/ PHCs) under different categories, based on the number of beds, keeping in view the assured services recommended for various grades of the health facilities.

Audit observed that there was shortage of various types of equipment, for performing surgical and medical interventions, in the seven sampled DHHs, in comparison with the IPHS norms. Details of the category/ service-wise availability of equipment, are given in **Table 4.11**.

Table 4.11: Availability of equipment in the test-checked DHHs

Category-wise equipment	Percentage of availability of equipment in the test-checked DHHs						
	Bhadrak (336)	Dhenkanal (300)	Kandhamal (236)	Nabarangpur (252)	Nuapada (315)	Puri (451)	Sundargarh (330)
OT	54	50	83	54	54	65	73
Endoscopy	0	0	0	29	0	29	29
Immunisation	73	80	73	60	73	60	80
Cardiopulmonary	80	57	50	29	53	100	80
ENT	0	11	11	44	28	39	39
Labour, Neo Natal & SNCU	63	52	70	41	78	52	74
Imagining Equipment	71	83	67	83	43	29	57
X-ray Accessories	75	63	88	88	50	75	63
Eye	84	71	71	79	80	76	96
Dental	91	53	38	82	44	56	26
Laboratory	37	32	30	30	38	37	33
Surgical	11	23	21	47	9	23	26
Anesthesia	59	36	50	68	55	59	36
Post Mortem	13	75	75	50	13	38	63

(Source: Data obtained from the test-checked DHHs)
(Yellow colour: Non-availability; Light red: Less than 50 per cent availability; Green: 50 per cent or more availability. Figures in brackets show no. of beds available in the DHHs)

It would be seen from the above that the sampled DHHs were not fully equipped with essential equipment, in terms of IPHS norms, with the shortfall of various kinds of equipment ranging from 47 *per cent* in DHH, Nabarangpur, to 57 *per cent* in DHH, Dhenkanal.

The status of some of the commonly used equipment, available in various departments of the DHHs, is discussed below.

4.2.2.1 Availability of equipment in OTs of DHHs

Audit noticed that only 12 to 20 types of equipment were available in OTs of the test-checked DHHs, against the norm of 24 to 26 types of equipment, based on their bed strengths, as per IPHS. Non-availability of some essential equipment, in the OTs of the test-checked DHHs, is shown in **Table 4.12**.

Table 4.12: Availability of essential equipment in the OTs of the test-checked DHHs

Sl. No.	Equipment	Utility of the equipment	DHHs, where equipment was not available
1	OT Table (Paediatric)	Paediatric patients lie on an OT table, during a surgical operation	Dhenkanal, Nabarangpur, Nuapada, Puri and Sundargarh
2.	OT table (Orthopedic)	An operating table, sometimes called operating room table, required for orthopedic patients, during a surgical operation	Dhenkanal and Puri
3.	Dehumidifier	Used for protection from excessive moisture/ humidity	Dhenkanal, Kandhamal, Nabarangpur and Puri
4.	Ultraviolet lamp	For disinfecting patients and operating rooms	Bhadrak, Dhenkanal, Kandhamal, Nabarangpur, Nuapada and Sundargarh

Sl. No.	Equipment	Utility of the equipment	DHHs, where equipment was not available
5.	Ethylene Oxide steriliser	(EO or EtO) gas used to sterilise objects, sensitive to temperatures greater than 60°C and / or radiation, such as plastics, optics and electrics	Bhadrak, Nuapada and Sundargarh
6.	Steriliser (Big Instruments)	Used to sterilise equipment and supplies, by subjecting them to high pressure saturated steam, at 121°C, for around 15‑20 minutes	Dhenkanal, Nabarangpur, Nuapada and Puri

(Source: Records of the test-checked DHHs and JPI)

The H&FW Department stated (February 2023) that indents had not been received for the equipment shown as deficit. It further added that some of the equipment were already available in the DHHs as per Biomedical Equipment Management Maintenance Programme (BEMP) dashboard. The reply was not tenable, as the concerned authorities including DHHs should ensure physical availability of the equipment as per IPHS norms.

4.2.2.2 Availability of Equipment in Laboratory services

IPHS prescribe 60 items of essential laboratory equipment, for the district hospitals[90]. Audit noticed that the full range of equipment, as per IPHS norms, was not available in the test-checked DHHs, with only 30 to 38 *per cent* of the requirements being available therein. It was also noticed that the equipment, though available, were lying idle in three of the test-checked DHHs, as detailed in **Table 4.13**.

Table 4.13: Idling of equipment

DHH	Idle equipment	Cost (in ₹ lakh)	Idle since	Reasons for idling
DHH, Bhadrak	One 5-part CBC machine	7.48	September 2021	Non-repair of the machines, even though the equipments were under warranty
	Two Electrolyte Analysers		April 2021	
DHH, Dhenkanal	Hematology Analyser (5 part)	8.83	September 2020	Want of reagents
	Auto Analyser	20.59	November 2020	
	Bio Safety Cabinet	2.26	September 2020	Excess supply
DHH, Nabarangapur	Fully Automatic Analyser	20.59	March 2021	Want of reagents
	CBC machine (5 part)	7.35	2013	Want of reagents

(Source: Records of the test-checked hospitals and JPI)

The H&FW Department stated (February 2023) that steps were being taken to issue instructions to the authorities for taking appropriate action for procurement of equipment for the laboratories, as per IPHS norms.

4.2.2.3 Shortage of equipment in Maternity Wings

IPHS prescribes 28 types of essential equipment for the labor wards, as well as for the neonatal and special newborn care units. Audit noticed that 8 to 17 types of equipment were not available in the Maternity departments of the test-checked DHHs. The maximum shortage (61 *per cent*) was noticed at DHH, Nabarangpur, followed by the DHHs of Puri (50 *per cent*), Dhenkanal

[90] District hospitals with 100 to 300 bed capacity

(39 *per cent*) and Bhadrak (36 *per cent*). Instances of non-availability of some critical types of equipment, in the test-checked DHHs, are given in **Table 4.14**.

Table 4.14: Shortage of equipment in maternity wing of the DHHs

Equipment	Utility of the equipment	DHHs, where equipment was not available
Baby incubator	An electrically-powered unit, designed to provide an enclosed controlled environment, to maintain an appropriate temperature for premature infants/ newborns, who cannot effectively regulate their body temperature	Bhadrak, Dhenkanal, Kandhamal, Nabarangpur, Puri and Sundargarh
Phototherapy Unit	A device to treat/ prevent hyperbilirubinemia (elevated serum bilirubin level).	Bhadrak, Dhenkanal, Kandhamal and Nuapada
Double-outlet oxygen concentrator	To concentrate oxygen from ambient air and deliver the concentrated oxygen.	Bhadrak, Dhenkanal and Nabarangpur
Foetal Doppler	A portable, hand-held, battery-powered device assembly, to non-invasively detect foetal heart beats, using ultrasound/ doppler technology.	Nabarangpur and Puri
Cardio-tocography monitor	Used to record foetal heart rate and uterine contractions, obtained *via* an ultrasound transducer, placed on the mother's abdomen.	Bhadrak, Dhenkanal, Nabarangpur, Nuapda and Puri
Vacuum extractor metal	Used for assisted delivery, if needed.	All DHHs
Baby Nebuliser	A device designed to generate aerosolised medication/ fluids, intended to be inhaled by a patient with respiratory disorder.	Dhenkanal and Nuapada
CPAP machine	A device to provide non-invasive respiratory support (CPAP) to newborn infants.	All DHHs, except Bhadrak

(Source: Records furnished by the DHHs and JPI)

The H&FW Department stated (February 2023) that steps were being taken to issue instructions to the authorities for taking appropriate action for procurement of equipment for the maternity wings as per IPHS norms and to use the idle equipment for patient care, at the earliest.

4.2.2.4 Equipment for the SNCU

The IPHS prescribed essential equipment for Labor ward, Neonatal and Special Newborn Care Unit (SNCU). The details of the availability of equipment are highlighted in **Table 4.15.**

Table 4.15: Availability of essential equipment in SNCU of DHHs

Sl. No.	Name of the equipment	Utility of the equipment	Audit findings
1	Baby Incubators	Clear boxes, which help maintain appropriate temperature and humidity levels, mainly for premature infants and other newborns, who cannot effectively regulate their body temperature	Not available in DHHs, Bhadrak, Kandhamal, Nabarangpur, Dhenkanal, Sundargarh, Nuapada and Puri
2	Baby Nebuliser	A device that turns liquid medicine into a mist, which is used to treat the swelling in child's airway, shortness of breath, coughing and wheezing	Available in all the DHHs

Sl. No.	Name of the equipment	Utility of the equipment	Audit findings
3	Radiant warmer	Electrically powered device, with a radiant heating source, intended to maintain the thermal balance of an infant	Not available in DHH, Kandhamal
4	Foetal Doppler	A hand-held ultrasound transducer, used to detect the foetal heart beat for prenatal care	Not available in DHH, Dhenkanal
5	Bubble CPAP with compressor	A non-invasive respiratory support modality, used to manage newborns with respiratory distress	Not available in DHHs, Bhadrak, Dhenkanal and Sundargarh
6	Portable X-ray machine	Mobile diagnostic X-ray system, used in a variety of routine X-ray imaging applications	Not available in DHHs Bhadrak, Kandhamal, Nabarangpur, Dhenkanal and Sundargarh
7	Haemoglobi no-meter	An instrument used to determine the haemoglobin content of the blood, by spectrophotometric measurement	Not available in DHHs, Puri, Nabarangpur
8	Suction machine	To aspirate fluids, secretions or other foreign material, from a patient's airway, by means of suction	Available in all DHHs
9	Glucometer	A small, portable machine used to measure glucose (a type of sugar) levels in the blood	Available in all DHHs
10	Phototherapy (Blue light)	A device to reduce the concentration of bilirubin	Not available in DHHs, Kandhamal and Nabarangpur
11	Neonatal Resuscitation kit	An essential medical device to save newborns from asphyxia at birth	Not available in DHHs, Kandhamal and Nabarangpur

(Source: Data obtained from the test-checked hospitals and JPI)

It was found that essential equipment, like baby incubators and C-PAP machines, were not available in three SNCUs (Bhadrak, Dhenkanal and Sundargarh) and two DHHs (Kandhamal and Nabarangpur), had no neonatal resuscitation kit. DHH, Kandhamal, had no radiant warmers to maintain the thermal balance of infants. Due to the non-availability of essential equipment, the neonates were being taken either to other departments (Radiology/ Pathology departments) of the hospital, or being referred to higher facilities, to avail the required services.

It was noticed (April 2022) that 12 radiant warmers (cost: ₹ 3.20 lakh) and 3 phototherapy units (cost: ₹ 1.02 lakh), had been lying idle in the SNCU of DHH, Bhadrak, since one year, due to the shortage of manpower (doctors and staff nurses). Resultantly, the quality of services was compromised, despite availability of equipment, as three neonates were found being treated in one phototherapy unit. Similarly, 13 Oxygen concentrators, costing ₹4.39 lakh, were also lying idle, due to receipt of equipment in excess of the actual requirements.

Three neonates being treated in a single Phototherapy unit at SNCU (Step Down Ward) of DHH, Bhadrak (6 April 2022)

The H&FW Department stated (February 2023) that instructions had been issued to the DHHs to provide indents to the procurement agency to make the equipment available in the SNCUs, as per IPHS norms.

4.2.2.5 Shortage of Endoscopy equipment

Endoscopy equipment, necessary for examining the internal organs and vessels of the body, without making large incisions, were available in only three out of the seven test-checked DHHs. Although two types of Endoscopy equipment were available in DHH, Sundargarh, endoscopy services were not provided, as one equipment was not in a serviceable condition and the other had not been installed. Endoscopy services were also not being provided in two DHHs (Puri and Nabarangapur), due to shortage of manpower and the endoscopy equipment in these DHHs was lying idle.

4.2.2.6 Shortage of ENT equipment

ENT equipment was not available in the ENT clinic of the DHH, Bhadrak. However, one 'ENT examination set' and eight 'ENT Headlight Ears', were lying idle in the sub-store, without being supplied to the ENT department, despite requests from the ENT specialist. Reasons for non-supply of the ENT equipment, were not found available on record.

Thus, the full range of equipment, as required under the IPHS, was not available in any of the test-checked DHHs. Non-functioning/ idling of the equipment added to the inadequacies in delivery of essential medical services, in the hospitals.

4.2.2.7 Shortage of equipment in Blood Centres

As per the Drugs and Cosmetic Rules 1945, there should be 22 types of equipment and instruments in blood centres.

Audit noticed shortage of equipment and instruments, in the BCs at the test-checked DHHs, ranging between one and seven items of equipment[91]. Some of the items of equipment, not available in most of the test-checked DHHs, are discussed below:

- RH view box (having inbuilt temperature indicator), for easy, and accurate monitoring of the viewing area to provide illumination of slide contents, was not available in the BCs of four of the test-checked DHHs (Bhadrak, Dhenkanal, Kandhamal and Sundargarh).
- Serological water baths/ serologic rotators were not available in these BCs of three of the test-checked DHHs (Dhenkanal, Kandhamal and Puri).
- Blood donor couches, which make blood withdrawals easier and safer, and provide a comfortable position for donors, were not available in the BCs at DHH, Nabarangpur and DHH, Puri.

Shortage/non-availability of equipment hampers the blood collection activities in the blood centres.

[91] Bhadrak:3; Dhenkanal:3; Kandhamal:2; Nabarangpur:4; Nuapada:0; Puri:7; Sundargarh:1

The H&FW Department stated (February 2023) that steps were being taken to provide required equipment to the BCs.

4.2.3 Shortage of equipment in CHCs

As per IPHS norms, 51 types of equipment should be available in the CHCs, under nine[92] categories of services, for providing assured medical care. Audit, however, observed that the CHCs were not well equipped with the essential equipment, as discussed below:

- Surgical sets were not available in two CHCs (Barapada and Khariar Road), while, seven[93] CHCs had no anesthesia equipment.
- Radiology equipment was not available in eight[94] of the test-checked CHCs and three CHCs[95] had no prescribed miscellaneous equipment.
- Dental instrument, dental chair and dental X-ray machine, costing ₹6.90 lakh, supplied to CHC, Kosagumuda, during September 2019 to February 2021, were lying idle, due to non-posting of a dentist.
- Only 11 to 22 items of essential equipment were available, against the requirement of 27, in Maternity wings of the test-checked CHCs. Equipment like C-PAP machines, Cardio-tocography monitors, cardiac monitors, *etc*., were not available.
- There was shortage of equipment for laboratory services. None of the five [96] tests under Biochemistry were being carried out in CHC, Basudevpur, due to non-functioning of the equipment (Semi Auto-analyser AGD 2020), since November 2020. This equipment was idle at CHCs, Barapada and Sriramchandrapur, due to shortage of manpower.
- Four[97] tests under Haematology and four[98] Biochemistry tests were not being conducted in CHC, Barapada, due to non-availability of a CBC machine and shortage of manpower, respectively.
- There should be 13 equipment available in an OT room of a CHC. Audit, checked the availability of nine major equipment and noted that:
    - CHC, Barapada had no equipment for OT services.
    - All the 13 CHCs had operation table (hydraulic), either major or minor.
    - An OT was functional in CHC, Khariar Road. The shadowless lamps (for eliminating shadows of medical workers), however, were not available in the OT.

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92 (i) Surgical set (ii) Equipment for Anesthesia (iii) Neo-natal Resuscitation (iv) OT (v) Radiology (vi) Immunisation (vii) Labour room (viii) Laboratory (ix) Miscellaneous

93 Baripada, Basudevepur, Sriramchandrapur, Kuarmunda, Raikia, Tikabali and Komana

94 Baripada, Khajuriakata, Sriramchandrapur, Raikia, Khariar Road, Komana, Papadahandi and Bangurigaon

95 Baripada, Kuarmunda and Lahunipada

96 (i) Blood sugar (ii) Blood urea/ Blood cholesterol (iii) Liver function test (iv) Kidney function test (v) Lipid profile

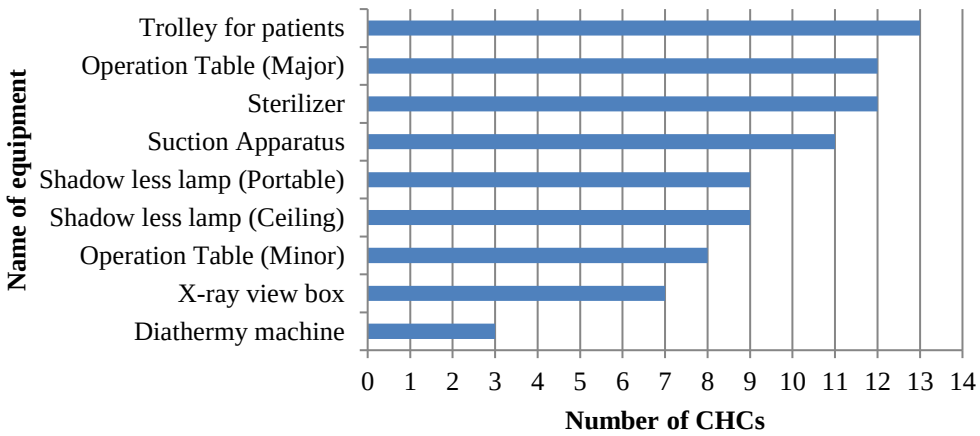
97 (i) Total Leukocytes count (ii) Total RBC count (iii) Platelet count (iv) Packed cell volume

98 (i) Blood urea/ Blood cholesterol (ii) Liver function test (iii) Kidney function test (iv) Lipid profile

- Diathermy machines, used to produce heat, deep inside a targeted tissue, were not available in 11 of the test-checked CHCs. These were available in CHCs of Basudevpur, Tikabali and Nimapara.

The availability of nine major types of OT equipment, is shown in **Chart 4.2**.

Chart 4.2: Availability of OT equipment



(Source: Data furnished by the test-checked CHCs)

Thus, the CHCs lacked essential equipment for providing assured healthcare services in the rural areas, thereby compelling patients to visit other hospitals, including private facilities.

The H&FW Department stated (February 2023) that the concerned authorities were being instructed to take necessary action for making available the required equipment in CHCs, as per IPHS norms.

4.2.3.1 Inadequate blood storage facility in CHCs

As per IPHS guidelines, the CHCs should have blood storage facilities, for meeting the emergent requirement of blood units.

It was noticed that:

- Blood storage units were available in only five CHCs, out of the 14 test-checked CHCs. Of these five CHCs, blood storage units were functional only in two of these CHCs (Nimapara and Kosagumuda) only.
- Blood storage units in three other CHCs (Basudevpur, Lahunipara, Papadahandi) were non-operational, due to non-availability of required manpower like blood bank technicians. Consequently, the blood storage units in these CHCs had remained idle.

Blood bank refrigerator/ unit lying idle at CHC, Basudevpur since May 2019 (27 April 2022)

- The other nine CHCs had no blood storage units for meeting the urgent need of the patients.

Due to non-availability/ non-functioning of blood storage units in CHCs, patients requiring blood administration were either referred to higher facilities (DHHs/ MCHs), or were asked to arrange the blood units on their own.

Thus, blood bank services in the State were not adequate and were severely constrained by shortage of manpower, equipment, *etc.*

The H&FW Department stated (February 2023) that instructions would be issued to the concerned authorities to take steps for availability of blood storage equipment, and proper functioning of the same.

4.2.4 Availability of equipment in PHCs

Audit examined the availability of 30 types of equipment, prescribed for PHCs under IPHS, and found that none of the 14 test-checked PHCs had all the essential equipment. The availability of equipment ranged between 7 and 24 types, in the test-checked PHCs. Normal delivery kits were not available in eight [99] out of the 14 test-checked PHCs, whereas five [100] PHCs had no calorimeters and light microscopes.

Binocular microscopes were idle at PHC, Ertal and Sabarang, for want of manpower.

The H&FW Department stated (February 2023) that the concerned authorities were being instructed to take necessary action for making available the required equipment in PHCs, as per IPHS norms.

4.2.5 Availability of equipment in Medical College Hospitals

As per MSRR norms, 628 types of equipment should be available in 13 clinical departments of the test-checked MCHs, for providing assured medical care to patients, as well as teaching medical students. Audit observed that there was shortage of different types of equipment, in 13 clinical departments, in the two test-checked MCHs, as compared to the MSRR norms.

4.2.5.1 Clinical Departments

Audit noticed that there was shortage of equipment in 13 clinical departments of the two sampled MCHs, as compared to the NMC norms, as detailed in **Table 4.16**.

Table 4.16: Availability of equipment in the test-checked MCHs

Sl. No	Department	Required	Types of equipment in PRM MCH		Types of equipment in MKCG MCH	
			Available	Shortfall (*per cent*)	Available	Shortfall (*per cent*)
1	Medicine	53	21	32 (*60*)	20	33 (*62*)
2	Paediatric	49	31	18 (*37*)	44	5 (*10*)
3	TB and Chest	13	7	6 (*46*)	8	5 (*38*)
4	Skin & VD	8	1	7 (*88*)	4	4 (*50*)
5	Psychiatry	13	4	9 (*69*)	7	6 (*46*)
6	Surgery	42	21	21 (*50*)	18	24 (*57*)
7	Orthopaedics	25	11	14 (*56*)	17	8 (*32*)

[99] Sabrang; Ertal; Rasol; Andali Jambahal; Ranjabradi; Darlimunda; Badaninigaon; Fakirsahi
[100] Sabrang; Ertal; Joronda; Indragada; Tarbod

8	Ophthalmology	39	26	13 (*33*)	30	9 (*23*)
9	ENT	178	130	48 (*27*)	153	25 (*14*)
10	O & G	97	58	39 (*40*)	64	33 (*34*)
11	Anaesthesiology	51	18	33 (*65*)	31	20 (*39*)
12	Central Casualty	50	44	6 (*12*)	44	6 (*12*)
13	Radiology	10	8	2 (*20*)	10	0 (*0*)

(Source: Data furnished by the test-checked MCHs)

- The maximum shortage of equipment (in percentage terms) was noticed in the Medicine (60 to 62 *per cent*), Skin & VD (50 to 88 *per cent*) and General Surgery (50 to 57 *per cent***)** departments, of both the MCHs.
    - Echocardiography equipment, for treating heart problems; Invasive mechanical ventilator, for patients suffering from acute respiratory failure; Arterial Blood Gas analyser, for measuring oxygen/ carbon dioxide levels, *etc*., were not available in the Medicine Departments of both the test-checked MCHs.
    - The Skin and VD departments of both the MCHs, lacked equipment like Cryotherapy with liquid Nitrogen for removal of abnormal tissue; Iontophoresis machines to treat hyperhidrosis disorder, *etc*.
    - Equipment like Cystoscope and Resectoscope, to locate and remove tissues from the urinary tract; Flexible Video Colonoscope, to diagnose and treat gastrointestinal problems; C-arm image intensifier, for intra-operative imaging, *etc*., were not available in the General Surgery departments of both the MCHs.

4.2.5.2 Non-clinical Departments

The MSRR prescribes 469 types of equipment/ instruments, for eight non-clinical departments. Non-clinical departments of both the test-checked MCHs were not fully equipped, as per the MSRR norms of NMC/MCI guidelines. Against the minimum requirement of 469 types of equipment/ instruments, only 226 to 258 types of equipment were available, in eight non-clinical departments of both the MCHs. The maximum shortages were noticed in the departments of Micro-Biology, Forensic Medicine Toxicology, Community Medicine, *etc*.

- Equipment like fully automated immune-histo-chemistry set-up with continuous supply of important antibodies, Lymphoma panel, *etc*., for cancer testing, fully automated flexible cover-slipping workstation, for tissue cutting embedding purpose, *etc*., were not available in the Pathology departments of both the MCHs.
- In PRM MCH, refrigerators, centrifuges, infra-red spectroscopes, water baths for tissue floatation, *etc.*, were not available in the Forensic Medicine and Toxicology (FMT) department. The same department, at MKCG MCH, lacked an automatic tissue processing machine, deep freezer for tissue binocular research, *etc*.
- Major equipment, like barometer, chloroscope, *etc*., were not available in the Community Medicine departments, of both the test-checked MCHs.

Thus, clinical and non-clinical departments, of both the test-checked MCHs, were not adequately equipped with essential equipment and instruments for providing quality tertiary healthcare to patients and also for the learning/ research activities of the students, as envisaged in the NMC guidelines.

The H&FW Department stated (February 2023) that the concerned authorities were being instructed to take necessary action for making available the requirement equipment in MCHs, as per NMC norms.

4.2.5.3 Availability of equipment in the OPDs of MCHs

MSRR prescribes the minimum requirement of equipment, for OPDs of different clinical departments. Audit test-checked the availability of equipment/ items in the OPDs of four departments (ENT, Surgery, Ophthalmology and Orthopedics), as required under MSRR, and noticed that MCH, Baripada, had only 80 (48 *per cent*) functional, items of equipment, while 101 (49 *per cent*) functional items of equipment were available in MCH, Berhampur, as detailed in **Table 4.17**.

Table 4.17: Equipment available in the test-checked MCHs

Sl. No.	OPD	Equipment in PRM MCH		Equipment in MKCG MCH	
		Required	Available (functional)	Required	Available (functional)
1	ENT	49	43	49	45
2	Surgery	30	06	40	11
3	Ophthalmology	42	29	72	41
4	Orthopedics	46	2	46	4
	Total	**167**	**80**	**207**	**101**

(Source: Information furnished by the MCHs)

- Major items of equipment, like Nasal Otoendoscopes, for providing superior quality images of the middle ear space; Nasal endoscope, for evaluating nasal mucosa; Laryngeal telescope with camera, to see the voice box (larynx) and vocal cords, *etc.*, were not available in ENT OPDs of PRM MCH.
- Equipment like Proctoscopes, to diagnose problems with the rectum and anus, were not available in the Surgery OPDs of PRM MCH.
- The Ophthalmology OPDs lacked equipment like Automated Perimeter, for testing of visual fields; Synoptophore, to assess the angle of deviation and binocular vision; Madox wing, for testing the symptoms of diplopia (double vision), *etc.*, in both the test-checked MCHs.
- Similarly, the Orthopaedics OPDs had no Reflex hammer, for testing deep tendon reflexes, to assess the peripheral and central nervous system and Goniometer, for measuring an angle or permitting the rotation of an object to a definite position, *etc*.

In the absence of such basic equipment in the OPDs of the two test-checked MCHs, Audit was unable to derive assurance on the effectiveness of diagnosis in the OPDs, for patients, as well as on the learning environment for medical students.

The H&FW Department stated (February 2023) that the concerned authorities were being instructed to take necessary action for making available the required equipment in OPDs of the MCHs, as per NMC norms.

4.2.5.4 Availability of equipment in OTs

MSRR prescribes the minimum requirements of equipment for OTs in MCHs. Audit noticed that full range of prescribed equipment, was not available in both the test-checked MCHs, as detailed in **Table 4.18.**

Table 4.18: Availability of essential equipment in the OTs of the sampled MCHs

Department/ OT	PRM MCH (for 100 admissions)		MKCG MCH (for 250 admissions)	
	Numbers of equipment required	Shortage	Number of equipment required	Shortage
O&G	55	17	82	41
Surgery	110	79	163	129
Ophthalmology	20	12	37	26
ENT	215	70	215	64
Orthopedics	32	21	55	24
Total	**432**	**199**	**552**	**284**

(Source: Records of the test-checked MCHs)

Audit noticed that:

- There was shortage of equipment in Obstetrics and Gynaecology (O&G) OT, including shortage of Tuboplasty sets, used for treatment for repairing fallopian tubes or removing blockages; Resectoscopes used for removing tissues from inside the body for biopsy damaged tissues, *etc*.; Operative Microscopes, for providing the surgeon stereoscopic, high quality magnified and illuminated image of the small structures in the surgical area, *etc*.
- The Surgery OTs did not have equipment like Cystoscope and Resectoscopes, used for locating tumours and removing tissues; flexible video Colonoscopes, for diagnosing and treating gastrointestinal problems; C-arm image intensifiers, for intra-operative imaging during surgical, orthopedic, and emergency care procedures, *etc*.
- Equipment not available in the Ophthalmology OT of PRM MCH included Cryo Units, for surgical procedures of the eye; Glaucoma sets, for glaucoma surgery to reduce eye pressure; Entropion sets for providing support to diseased eyelids, *etc.*
- Non-availability of equipment in the Orthopaedics OT of both the test-checked MCHs, included interlock nailing sets, for the repair of traumatic long bone fractures; external fixators, for keeping fractured bones stabilised and in alignment; Pneumatic drill and reamer, for making holes in bones, for fixing immobilisation screws/ wires/ plates, *etc*.

In the absence of such basic equipment, in the five OTs of the two test-checked MCHs, Audit was unable to derive assurance on the quality of operations conducted for patients, as well as on the learning environment for medical students.

4.2.6 Idling of equipment

Audit noticed that 57 kinds of equipment, received from OSMCL, NHM, PM Cares, *etc*., were lying in the sub-stores of three DHHs (Bhadrak, Dhenkanal and Sundargarh), without having been installed. Some instances are given in **Table 4.19**.

Table 4.19: Equipment lying in the sub-stores of the test-checked DHHs

DHH	Types of equipment	Numbers of equipment	Cost of the equipment (₹ in lakh)
Bhadrak	29	456	174.53
Dhenkanal	17	423	192.60
Sundargarh	11	747	87.07
Total	**57**	**1,626**	**454.20**

(Source: Records of the test-checked DHHs)

Audit observed that:

- One laparoscopic unit, costing ₹20.89 lakh, had been lying idle at DHH, Puri, since March 2006, due to want of trained technical staff. Similarly, one Remidio digital Fundus camera (₹4.97 lakh), received in DHH, Nabarangpur, in November 2021, had not been put up to use, due to non-posting of an Ophthalmologist and an Ophthalmic Assistant, in the hospital.
- Two dental X-ray machines were lying idle in the Radiology department of DHH, Bhadrak, due to want of manpower/ technicians. Dental treatment requiring X-ray services was not possible in the DHH, due to which patients were left with no option but to visit private clinics, incurring out-of-pocket expenditure.
- Eight types of Physiotherapy Equipment, procured under the National Programme for Health Care of the Elderly (NPHCE), at a cost of ₹5.50 lakh, during November 2020, by DHH, Bhadrak, were supplied to four PHCs and seven CHCs. During Joint Physical Inspection of the stores at two CHCs (Barapada and Basudevpur), these physiotherapy equipment were found lying idle, without installation, since January 2021.
- Shredders and Autoclaves, supplied to the CHCs/ PHCs for Bio-medical waste management, were lying uninstalled, for want of required infrastructure, such as buildings for housing the equipment and three-phase electricity for their functioning. Similarly, ventilators, oxygen concentrators, multipara monitors, *etc*., supplied for Covid-19 management, remained non-functional, without having been installed, due to want of infrastructure and manpower.
- In the test-checked CHCs, it was noticed that 199 items of equipment, such as semi-auto analysers, pulse oxymeters, dental instruments, oxygen concentrators, autoclaves, *etc*., were lying idle, due to non-provisioning of infrastructure, manpower, *etc*.

Thus, equipment and instrument had been supplied to the DHHs, without providing the required infrastructure and manpower. Resultantly, the equipment remained uninstalled, impacting healthcare services, despite the same having been reported as having been installed, by the OSMCL.

The H&FW Department stated (February 2023) that procurement of EIFs is initiated on the availability of sites, availability of trained manpower for operating the equipment, and procurement is made based on the indents received after approval of the SEMC. The reply was not tenable, as the concerned authorities should ensure availability of required equipment as per IPHS, for providing quality healthcare service to the patients.

4.2.6.1 Equipment not put to use in MCHs, after procurement

Scrutiny of records and joint physical inspection of clinical and non-clinical departments of the two test-checked MCHs, revealed that 553 items of equipment, costing ₹17.76 crore, had remained idle/ defunct, as detailed in ***Appendix 4.2.***

Instances of some such items of equipment, procured and not put to use, due to want of infrastructure, mandatory permissions, reagents, *etc*., are detailed in **Table 4.20**.

Table 4.20: Details of equipment, not put to use after procurement

Sl. No.	Equipment	Period of idling	Cost (in ₹ crore)	Purpose of procurement	Reasons for non-utilisation
PRM MCH, Baripada					
1	15 Dale's Bath, 3 Operation Tables, 3 Large Extension Kymographs, in the Physiology department	March 2018 to February 2020	1.20	For conducting experiment on animals.	Remained idle, as the experiment on animals have not been permitted, since March 2014.
2	Gas Analyser	September 2020	0.40	For teaching UG students.	Remained idle due to want of reagents.
3	15 items of equipment such as Actimeter, Computerised Physiographs, *etc*., in the Pharmacology department	December 2017 to July 2020	0.37	For PG students.	Remained idle as PG courses were not opened.
4	14 Biochemistry equipment (Ice lined refrigerator, Elisa Reader, Vacuum pumps, *etc*.)	December 2017	0.21	For PG students.	Remained idle as PG courses were not opened.
5	Autopsy tables, Autopsy Saw with accessories, four Body Mortuary Chambers, *etc*.	December 2017 to June 2020	0.70	For Autopsy.	Remained idle due to absence of the required permission for use.
6	RETCAM 3 wide Field Digital Imaging System	December 2019	1.41	For opthalomogy Department, to capture colour images of the retina and interior chamber.	Remained idle due to non-readiness of site.
MKCG MCH, Berhampur					
7	25 computers with accessories, in the Pharmacology Department	April 2021	0. 26	For computer assisted learning programmes.	Remained idle due to non-readiness of the Lab complex
8	Water purification system in pathology department	March 2021	0.17	For purification of water.	Not installed, due to want of space.
9	Bio Safety Cabinet and Deep freezer in Microbiology Department	April to October 2020	0.07	Received for Covid-19 testing purpose.	Lying uninstalled.
10	One CO_2 Incubator, one Shaker Incubator and one Real Time PCR in Multi-Disciplinary Research Unit	June 2019 to September 2021	0.30	For research purpose	Remained idle due to non-collection of research samples and non-procurement of consumables.
	Total		**5.09**		

(Source: Records of the test-checked MCHs and JPI)

Instances of idle/ defunct equipment:

Elisa Reader at MCH, Baripada (20 April 2022)

Digital Imaging System at MCH, Baripada (13 April 2022)

Thus, the equipment was procured without assessing requirements and also without non-provisioning of ancillary infrastructure, reagents, *etc*., by the MCHs/ procurement agency. Resultantly, such equipment had not been put to use, for years together. This impacted not only the learning and research activities of the medical students, but also rendered the expenditure unfruitful.

The H&FW Department stated (February 2023) that concerned authorities were being instructed to utilise the procured equipment for patient care, without idling the same.

4.2.6.2 Non-use of Cath lab in the Cardiology Department

The Indoor hospital building of MKCG MCH, was declared unsafe in August 2012. The H&FW Department instructed (October 2012) the Principal and Dean of the college, to shift the Cardiology department, functioning in the said building, to some other place. The College authorities did not take early action and the Cardiology department continued to function in the unsafe building, up to March 2022. The Superintendent, MKCG MCH had, however, entrusted M/s Siemens Healthcare Private Limited, Rourkela, to dismantle and re-install the Cath Lab of the Cardiology department, in December 2021, after nine years of the building having been declared unsafe. During JPI (8 July 2022), the Cath Lab and the accessories, worth ₹3.13 crore, was found to have not been shifted, and were lying idle.

Lithotripsy machine, lying unused in Urology, Department at MKCG, MCH (29 July 2022)

Further, one Lithotripsy machine (₹3.22 crore), for treatment of kidney stones, installed (November 2014) in the Urology Department, in the Indoor Hospital Building, was also lying idle and had not been used since March 2020, even

though the Urology Department had been shifted (March 2022) to the new PMSSY building.

4.2.7 Delay in installation and operationalisation of equipment

The Pradhan Mantri Swasthya Surakshya Yojana (PMSSY) aims at correcting regional imbalances in the availability of affordable and reliable tertiary services and augmenting facilities for quality medical education. The PMSSY, Phase III, was implemented at a cost of ₹ 150 crore[101], in MKCG MCH, to improve tertiary care and quality medical education, by establishing super specialty Blocks. As per stipulation, the civil construction work, procurement and installation of equipment, *etc*., was to be completed and the super specialty blocks were to be made functional, by September 2018.

Audit noticed that, despite completion of the building in July 2020 and procurement of equipment, the super specialty block had not been made fully functional, as of July 2022. Out of 233 items of equipment required, 210 had been procured during February 2018 to February 2022. The remaining 23 equipment had not been received from the vendor.

It was noticed that, out of the 210 items of equipment received, 52 items of equipment, valuing ₹8.23 crore, had not been installed and 70 installed items of equipment (₹7.44 crore) were not being used (July 2022) and were lying in different departments. Besides, 65 items of furniture[102], valuing ₹99.18 lakh, received during October 2020, had not been put to use, due to non-functioning of the 54-bedded ICU. Non-utilisation of the installed equipment, even after one to four years of procurement, impacted the quality of patient care services in the hospital.

Thus, the super specialty departments, established under PMSSY, were yet to function optimally, for improving the tertiary healthcare and quality medical education.

The H&FW Department stated (February 2023) that 166 equipment had been installed and other equipment would be installed shortly. The fact, however, remained that even the installed equipment had not been put to use.

4.2.8 Non-condemnation of defunct EIF

As provided under the Odisha General Financial Rules (OGFR), the competent authority should see that measures are taken to survey, segregate and consider the disposal of unserviceable, surplus and obsolete stores, in accordance with the prescribed procedure of the Government.

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[101] GoI share: ₹120 crore and State share: ₹30 crore

[102] Fully 105otorized beds (30) valuing ₹52.50 lakh; Semi-motorised beds, valuing (25) ₹36.33 lakh; and Emergency Trolley, valuing (10) ₹10.35 lakh

Audit noticed that 5,771 items of equipment costing ₹33.23 crore, had been proposed for condemnation, by M/s Kirloskar Technologies Private Limited (KTPL), during January 2020 to September 2021. These items of equipment were lying in different health institutions across the State. However, no steps had been taken on the condemnation proposal, as of March 2022.

Obsolete items stored in sub-store at DHH, Dhenkanal (29 April 2022)

Non-disposal of the condemned/ unserviceable EIF, not only led to unnecessary occupation of space, but also created an unhealthy environment in the hospitals.

The H&FW department stated (February 2023) that concerned authorities had been instructed to take appropriate steps for early condemnation of defunct/ obsolete equipment.

4.2.9 Procurement issues

4.2.9.1 Committee for finalising indents of EIF, not formed in PRM MCH

As per rational procurement planning and management of EIF, Heads of the respective departments are to prepare indents/ requisitions for the required items, in the prescribed format and place them before the Medical College Equipment Management Committee (MCEMC)[103]. The MCEMC is to finalise the indent list of Departments, on priority basis, and prepare a consolidated list, which is to be forwarded to the State Drug Management Unit, for being placed it before the State Level Equipment Management Committee (SEMC), for further action.

Audit noticed that PRM MCH, had not constituted a MCEMC, to validate the indent lists of departments. The heads of the concerned departments were placing their indents directly to the Director of Medical Education and Training, without any validation. As a result, the priority/ necessity of the equipment, could not be assessed, due to which some equipment had been procured, without immediate requirements and kept idle, as discussed in ***Paragraph 4.2.6.1.*** On the other hand, instances of shortage of essential equipment, in both-clinical and non-clinical departments, were noticed, as discussed in ***Paragraph 4.2.5.***

The H&FW Department stated (February 2023) that the PRM MCH was being instructed to form EIF committee.

4.2.9.2 Due procedure not followed in procurement of EIF at MKCG MCH

As per the decision (August 2017) of the SEMC, EIFs valuing up to ₹5 lakh, are to be procured at the institutional level. Indents, for items covered under existing Rate Contract of OSMCL, are to be routed through OSMCL.

Further, all Government offices are required to make maximum procurement through the Government e Marketplace (GeM) portal, to achieve the best value

[103] The Dean and Principal of the Medical College heads the committee

for money spent on Government procurement. In case the procurement is inevitable through open bidding, a certificate is to be furnished by the officer responsible for the procurement, to the effect that the item procured is either not available on GeM, or the price discovered in open bidding is less than the price available at the GeM portal.

On scrutiny of records and information made available, Audit observed the following:

- **Procurement without approval of SEMC/SLPC:** The Dean and Principal, MKCG MCH, Berhampur, procured 38 kinds of equipment (426 numbers), costing ₹8.41 crore, each above ₹5 lakh, during July 2016 to November 2021, without submitting indents to the SEMC, for scrutiny and procurement by the State Level Procurement Agency, *i.e.* OSMCL. Due to procurement at its own level, need assessment, like choice of technology, availability of man-power, infrastructure, *etc*., could not be examined by the SEMC. Resultantly, some of the procured equipment could not be installed/ made functional, due to want of infrastructure, manpower, *etc*., as discussed in ***Paragraph 4.2.6.1***.
- **Procurement of EIF at higher rate:** Audit test-checked 12 items of EIF (36 numbers), procured by the College Authority, during March 2018 to August 2021 and found that, in 12 cases, the procured rates were more than the contract price of OSMCL, leading to extra expenditure of ₹9.92 lakh, as detailed in ***Appendix 4.3.***
- **Procurement beyond GeM portal:** The Dean and Principal, MKCG MCH, procured 277 types of items, costing ₹8.41 crore, during May 2019 to March 2022, through open tender and Local Purchase Committee, without exploring the availability of lower rates in the GeM portal, despite instructions of the Government. In these cases, the officer responsible for the procurement had not furnished necessary certificates to the effect that the items procured either were not available on GeM or the price discovered in open bidding was less than the price available at the GeM portal, though this was required under Government instructions. The action of the college authorities was, therefore, contrary to the Government instructions.

Thus, procurement of EIF, by the test-checked MCHs, as discussed above, was not in conformity with the policy and instructions of the Government.

The H&FW Department stated (February 2023) that steps were being taken to inquire into the matter and to take appropriate corrective steps.

4.2.10 Procurement and supply of equipment for Covid-19 management

The OSMCL was the designated agency for procuring and supplying different kinds of equipment, like ventilators, oxygen concentrators, oxygen cylinders, *etc*., to the health care facilities, including dedicated Covid-19 hospitals. Details of the equipment procured and supplied by the OSMCL, are given in **Table 4.21**.

Table 4.21: Equipment received and supplied by OSMCL, for Covid-19

Name of the equipment	Quantity procured/ received				Quantity supplied
	Procured by OSMCL	Through PM Cares/ GoI	Through other agencies	Total	
ICU ventilators	423	707	230	1,360	1,235
Oxygen Concentrators	7,516	936	2,903	11,355	9,238
Oxygen Cylinders	29,282	35,741	11,001	76,024	37,898
Total	**37,221**	**37,384**	**14,134**	**88,739**	**48,371**

(Source: Data provided by the OSMCL)

Audit observed that:

- OSMCL had supplied 402 ICU ventilators (cost[104]: ₹11.77 crore), to 13 private hospitals, for treatment of Covid-19 patients. After the Covid-19 pandemic, these ventilators were to be returned to Government[105]. It was, however, noticed that these ventilators had not been returned by the private hospitals. During JPI of 10 such hospitals, these ventilators were found to be lying in the stores of these private hospitals.
- OSMCL had also supplied 930 oxygen cylinders (cost[106]: ₹88.99 lakh) to seven private hospitals. The return of these cylinders, to Government, was not found available on records. However, during JPI of these private hospitals (May-July 2022), the hospitals stated that they had returned the cylinders to OSMCL.
- OSMCL had supplied 817 Multi-Para monitors[107], (cost: ₹10.95 crore)[108] to 12 private hospitals, which were lying with them.
- The test-checked DHHs had received 84 ICU ventilators, 2,081 Oxygen concentrators and 122 multi-para monitors, for Covid-19 management. During JPI, these equipments were found lying idle, due to want of infrastructure like ICU facilities, manpower, *etc*. Consequently, intended medical care could not be provided to the patients.
- As per data provided by the OSMCL, 84 ICU ventilators had been supplied to seven of the test-checked DHHs. However, the DHHs reported receipt of only 64 ventilators. Thus, there was a discrepancy of 20 ventilators.

The main reason for the idling of these items of equipment was the lack of coordination between the Government entities and offices, that were involved in the Government's response to the Covid-19 outbreak. Moreover, the ventilators in the DHHs were also lying idle, due to non-provisioning of the required infrastructure and manpower, as noticed during the JPI conducted by Audit with the hospital staff.

The H&FW Department stated (February 2023) that the equipments were retained in the empaneled private Covid-19 hospitals for any eventuality in future. The fact, however, remained that the equipment supplied to the private

[104] Calculated at ₹2,92,905 per unit, being the unit price for ventilators supplied by GoI
[105] As per draft agreement sent by the H&FW Department to the Collector, Sambalpur
[106] Computed at ₹9,569 per unit, being the unit price for cylinders supplied by GoI
[107] Multipara monitors measure and display the relevant vital parameters of patients such as saturation of peripheral oxygen / non-Invasive blood pressure/temperature
[108] ₹1.34 lakh per unit x 817 nos.

hospitals should be properly stored to avoid any damage/ deterioration in the conditions of these equipment.

4.2.11 Working of Oxygen Plants

Oxygen is an essential element of basic emergency care. It is required for surgery, as well as treatment of several respiratory diseases, both chronic and acute. Availability of medical oxygen was a challenge in hospitals across the country, during the Covid-19 pandemic.

As per the data provided by the H&FW Department, the State had established 82 Oxygen Plants[109] (including those established through the PM CARES fund), for ensuring uninterrupted oxygen supply in hospitals. The Department has also provided ₹58.93 crore to the Works (R&B) Department, for civil construction, procurement of Diesel Generators and transformers, including electricity connection and Medical Gas Pipeline System works. The aim of establishing the plants was to further strengthen the public health system and ensure that each of these hospitals had a captive oxygen generation facility, with the idea that such an in-house captive oxygen generation facility would address the day-to-day medical oxygen needs of these hospitals and the concerned districts.

Out of the 82 Oxygen plants established in the State, 81 had been commissioned during June 2021 to January 2022 and had been reported as being functional, in different hospitals, by the Department. Audit noted that Oxygen generation plants had been established in all the test-checked DHHs. The status of Oxygen plants, in the test-checked districts, is given in **Table 4.22**.

Table 4.22: Details of Oxygen Generation Plants in test-checked DHHs

Name of DHHs	Oxygen Plants	PM CARES	State fund	Date of Installation
Bhadrak	2	1	1	November 2021
Dhenkanal	1	1	-	October 2021
Kandhamal	2	1	1	June 2021/ Jan 2022
Nabarangpur	1	1	-	July 2021
Nuapada	1	1	-	July 2021
Puri	2	1	1	August 2021
Sundargarh	1	1	-	Not Available

(Source: Data obtained from the test-checked DHHs)

In this regard, Audit observed that:

- The Oxygen plants at three DHHs (Nuapada, Puri, Sundargarh) were functional.
- The Oxygen plants at the DHHs of Dhenkanal and Kandhamal, were not functional, due to want of technicians.
- The Oxygen plant at DHH, Nabarangpur, was not operational, due to incomplete pipe laying work, whereas the plant at DHH, Bhadrak, was not functioning, medical gas pipeline system was only available in the TCC, for which less amount of oxygen was required. The other plant

[109] PM CARES: 39; State CSR: 30; Ministry of Petroleum and Natural Gas: 09; Ministry of Railways: 04

was idle, due to non-handing over of the newly constructed MCH building to the DHH authorities.

Thus, uninterrupted Oxygen supply to the patients had not been ensured in all the hospitals, despite installation/ establishment of Oxygen generation plants and provision of funds for ancillary works, even though these plants had been reported as being 'functional' by the Department.

The H&FW Department stated (February 2023) that infrastructure strengthening work, such as extension of medical gas pipeline, was under process and the district authorities had been instructed to appoint technicians for the same.

4.2.12 Maintenance of equipment

OSMCL entered into an agreement with M/s KTPL, on 29 December 2020, to carry out bio-medical maintenance activities, in all healthcare facilities of the State, from 1 January 2020 onwards, for a period of five years, subject to annual performance review.

On scrutiny of records and information provided by the test-checked MCHs, Audit noticed the following:

- **Resolving complaints**: As per the agreement, three Nodal Officers were to be identified in each hospital. The service provider M/s KTPL would report breakdowns/complaints received from the users and communicate the rectification/resolution status of the complaints, to the nodal officers. However, Nodal Officers had not been identified in PRM MCH, while, in MKCG MCH, a Hospital Manager had been designated as the Nodal Officer.

  It was noticed that 29 complaints, lodged at MKCG MCH, for assets worth ₹ 84.56 lakh, during the period from February 2020 to March 2022, had not been resolved, as of July 2022. The status of these complaints was shown as '*work in progress or work assigned'*. Delay in resolving the complaints, led to non-functioning of the equipment, impacting patient care and medical education in the MCHs.

- **Training not imparted:** As per the terms and conditions of the agreement, the service provider (M/s KTPL) was to impart periodic user trainings, at least twice a year or as and when requested by the Nodal Officer. However, the service provider had not provided any training to the users, at both the test-checked MCHs.

- **Preventive maintenance*:*** The service provider did not undertake preventive maintenance, testing and calibration of all bio-medical equipment, installed in PRM MCH. Instances of non-maintenance of equipment were noticed. For example, a complaint in regard to the Parafin Embedding Bath with Cold Plate (KTPL Barcode No. 135380 and 135376), costing ₹10.76 lakh had not been resolved, as of April 2022, even though the machinery had been out of order since October 2021.

- **Defunct equipment, costing ₹2.06 crore, in MKCG MCH**: As on 16 July 2022, 65 items of equipment, costing ₹2.06 crore (***Appendix 4.4***),

were in a non-working condition, in MKCG MCH. Out of these, 50 items of equipment were under warranty, while the warranty period of 15 had expired, as of March 2022. Details of these defunct items of equipment, such as date from which it had been non-working, complaints lodged to KTPL, status of repairs, *etc.*, were not made available to Audit.

Due to non-providing of trainings to users, non-conducting of regular preventive maintenance, delays in resolving breakdown complaints by the service provider (M/s. KTPL), proper implementation of the Biomedical Equipment management & maintenance programme, was not ensured.

The H&FW Department stated (February 2023) that instructions were issued to the concerned nodal officers for taking appropriate measures for maintenance of disordered equipment, by placing the same before the service providing agency without delay.

Recommendation 4.2:

State Government may ensure availability of the full range of essential equipment, at all levels in hospitals. It may also ensure correlation between the availability of infrastructure, manpower and equipment, to avoid idling of medical equipment and medical devices.

Chapter 5

Healthcare Infrastructure

CHAPTER 5

Healthcare Infrastructure

Health facilities, at the primary and secondary levels of the healthcare system, did not adequately conform to the Indian Public Health Standards and National Health Policy norms. Hospital beds in health facilities were scarce, as only 0.35 beds were available per 1,000 populations in the State. Delay in completion of works and failure of the Department to utilise the completed buildings, aggravated the problem of access to quality healthcare. There was acute shortage of staff quarters for accommodation of staff, including doctors, nurses, paramedics, *etc.* in healthcare facilities.

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.

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

5.1.1 Availability of infrastructure facilities in CHCs, PHCs and SCs

IPHS provides that each SC and PHC should have its own hospital building, adequate space and residential accommodation. Further, it should be adequately serviced with public utilities, such as water, electricity, *etc*.

Audit noticed that, while all CHCs in the State had their own buildings, there were deficiencies in PHCs and SCs in this regard. Out of the 1,340 PHCs and 6,688 SCs in the State, 29 PHCs

[110] (two *per cent*) and 1,737 SCs (26 *per cent*) did not have their own buildings. The SCs in the State were found deficient in regard to infrastructure and amenities, as below:

- Only 5,743 (86 *per cent*) SCs had electricity connections, while 1,480 (22 *per cent*) had provision for piped water supply.
- Separate toilets were available only in 126 (two *per cent*) SCs.
- Residential accommodation for Auxiliary Nurse Midwives was available in 5,398 (81 *per cent*) SCs.

[110] Rural Health Survey Report, 2020-21

Thus, the PHCs and SCs were not IPHS compliant, in terms of infrastructure/ facilities, as stated above, for providing quality healthcare services to the rural population.

The H&FW Department stated (February 2023) that administrative approval for construction and renovation of health infrastructure was a continuous process and was being followed without delay.

5.1.2 Construction/ upgradation of health infrastructure

Construction and renovation of hospital buildings, under the H&FW Department, are assigned to the line departments[111] of the State. The H&FW Department accords administrative approval for creation of health infrastructure and communicates it to the line departments, for execution of the approved works, following due procedure.

NHM, Odisha, had accorded administrative approval for execution of 5,737 works, during the FYs 2016-17 to 2021-22, with a sanctioned amount of ₹1,501.57 crore. Out of this, 3,556 works were completed and 2,167 works were lying incomplete, as of 31 March 2022, as detailed in **Table 5.1.**

Table 5.1: Status of works approved by NHM, Odisha (amount in ₹ lakh)

Financial Year	Works sanctioned		No. of works completed	No. of works lying incomplete	Expenditure on incomplete works	No. of works dropped/ cancelled
	No. of works	Sanctioned cost				
2016-17	95	NA	89	3	1,736.45	3
2017-18	288	19,701.58	260	23	4,495.20	5
2018-19	851	15,500.51	783	68	2,782.40	-
2019-20	1,835	47,474.89	1,467	362	7,580.50	6
2020-21	1,063	16,448.07	761	302	2,329.69	-
2021-22	1,605	51,032.12	196	1,409	2,802.29	-
Total	**5,737**	**1,50,157.17**	**3,556**	**2,167**	**21,726.53**	**14**

(Source: Data provided by NHM, Odisha)

Audit noted that construction of 456 (15 *per cent*) projects, approved during FYs 2016-17 to 2019-20, had not been completed, even after two to five years of approval. An amount of ₹165.95 crore had been incurred on these incomplete works. These incomplete works included construction of MCH buildings, construction/ upgradation of CHC buildings, labour rooms, OPD buildings, SC buildings, *etc*.

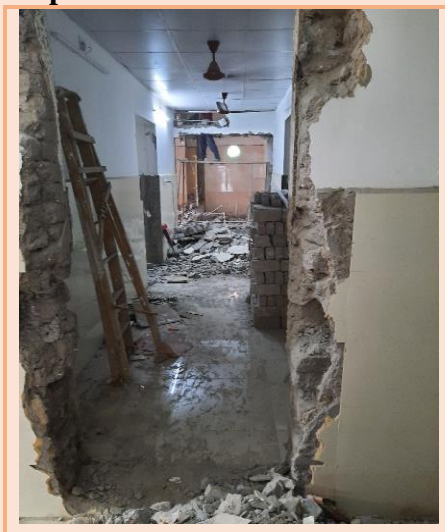
Audit observed that reasons for the delays in execution included non-finalisation of tenders, pending settlement of land disputes, non-signing of agreements, *etc*. Besides, there were deficiencies in the monitoring and follow-up mechanism adopted by NHM, to keep track of the progress of works.

[111] R&B Divisions under the Works Department; Rural Works Divisions under the Rural Development Department; Panchayati Raj Department, *etc*.

Construction of one 50-bedded IPD building, with an OPD complex, at the Sub-Divisional Hospital, Kamakshyanagar, was sanctioned during 2017-18, with an estimated cost of ₹ 2.30 crore.

The building was to be completed by December 2020. NHM, Odisha, reported (February 2022) that the building had been completed. During JPI (May 2022), the building was found to be incomplete, with expenditure of ₹ 1.73 crore, having been incurred thereon. The internal electrification work of the first floor and PH work had not been completed. Modification work of the OPD and construction of an emergency exit was going on by dismantling some portion of the newly constructed building. The SDH building had not been completed even after 17 months of the stipulated period had elapsed and the SDH was functioning in the old building.

The misreporting of the status of the hospital building, without reference to the actual status on the ground, indicated severe deficiencies in the monitoring and supervision mechanism, adopted by the NHM and the hospital authorities.



Modification work at the newly constructed SDH Building (10 May 2022)

Dismantling of the OPD portion of the building, for extension of OPD (10 May 2022)

Details of the works approved/ sanctioned under the State plan were not available with the district hospitals. They were, therefore, not in a position to effectively supervise the ongoing execution of works, intended for their end use. The H&FW Department and DHS, after according administrative approval for creation of health infrastructure under the State Plan, did not monitor the status of execution of these works. No database/ register, for recording and maintaining the updated status of these works, was being maintained at the Directorate/ Department level.

As a result of the above systemic lapses and absence of key internal controls to monitor the status of execution of works, there were significant delays in the completion of works.

The H&FW Department stated (February 2023) that the delay in completion of works would be looked into and the engineering personnel under NHM would be sensitised about the matter.

Recommendation 5.1:

The Department and its field functionaries may maintain a database of the approved works and coordinate with the line departments to monitor execution of the works, for ensuring their completion and handing over the same to the user agencies, as per the schedule.

5.1.3 Status of utilisation of healthcare infrastructure

5.1.3.1 Medical College Hospitals

During FYs 2016-17 to 2021-22, the H&FW Department/ DMET, Odisha, accorded administrative approval for four works, with an estimated cost of ₹269.11 crore, for the Pandit Raghunath Murmu Medical College and Hospital (PRM MCH). As of May 2022, three of these four works, were under progress and the scheduled date of completion (June 2021) of one work (non-teaching residence, nursing hostel) was over. Two works[112] were scheduled to be completed by September and November 2022, whereas demarcation of land for another work (hostel building) had not been completed (May 2022). The expenditure incurred on these works was only ₹59.06 crore, which was 22 *per cent* of the estimated amount.

In case of MKCG MCH, data relating to approval of works, status of the approved works, *etc*., was not provided to Audit.

Audit further noticed that the building infrastructure, created in these two test-checked MCHs, had not been put to use, even after a lapse of four to five years of handing over, as detailed in **Table 5.2.**

Table 5.2: Idle infrastructure in the test-checked MCHs

MCH	Infrastructure not in use	Date of handing over	Cost of construction (₹ in crore)	Reasons for non-utilisation
MKCG MCH, Berhampur	Laboratory Complex Building	July 2018	11.43	No security arrangement and pending minor works.
	28-bedded ICU building	November 2018	6.93	Gas pipeline work in progress.
PRM MCH, Baripada	Autopsy Block	September 2017	NA	Absence of permission to carry out medico-legal autopsies.
	Animal House	September 2017	NA	Non-posting of required staff and want of license to keep animals.

(Source: Records of the test-checked MCHs and JPI)

[112] Construction of teaching hospital (650-bedded hospital, service block, medical gas pipeline system): November 2022; Construction of approach road of teaching hospital: September 2022

Audit observed the following in this regard:

- The laboratory complex of MKCG MCH, Berhampur had been allotted to seven departments[113] of the college, for running their practical classes. The departments had, however, not been able to shift their laboratories to the new building, as the College authorities had not addressed the security issues and had also not ensured completion of the pending minor works. Resultantly, the building had remained unused, even after four years of completion, compelling the departments to continue to run the practical classes in the existing infrastructure, with considerable difficulty. The building was reported to have been damaged by some miscreants, with theft of hardware and other items valued at ₹ 5 lakh, as per the FIR lodged (January 2022) by the College, with the local police.
- The ICU building had not been used for patient care, even after four years of its completion, as the gas pipeline work for the ICU was under progress, indicating the apathy of the College authorities towards putting the created infrastructure to use, for better patient care.
- Despite the fact that the Autopsy building for PRM MCH, Baripada, had been completed and handed over in September 2017, the College authorities had neither obtained permission from Government to carry out medico-legal autopsies, nor had they made any MoU with the Government/ district hospital, for conducting post-mortems to teach and train students, as required under the NMC Regulations. Instead, the medical students continued to attend autopsies at the old mortuary building (DHH Campus), which lacked adequate infrastructure.

  The Dean and Principal of PRM MCH stated (May 2022) that the post-mortem works would be made in the autopsy block, soon after the completion of the attached hospital building, after obtaining order from the Government.
- Although the Animal House had been complete since September 2017, PRM MCH, Baripada, applied for registration to CPCSEA[114], only in May 2020, for keeping animals. The registration/ license had not been obtained till date (May 2022). Besides absence of permission, the required manpower (Veterinary Officer, Animal attendants, Technicians) was also not available, for conducting research work on animals. As a result, the building had been lying idle, since the last five years. The Dean and Principal of the MCH stated (May 2022) that the required manpower would be posted, after registration of the Animal House.

[113] Departments of Microbiology; Pathology; Community Medicine; Biochemistry; Pharmacology and Physiology; Forensic Medicine; Toxicology

[114] Committee for the Purpose of Control and Supervision of Experiments on Animals, Government of India

	
Laboratory complex at MKCG MCH, Berhampur (16 July 2022)	**Autopsy building at PRM MCH, Baripada (20 April 2022)**

Thus, the College authorities exhibited a lack of concern in regard to utilisation of the created infrastructure for medical education and patient care, rendering the expenditure incurred thereon futile.

The H&FW Department stated (February 2023) that the Autopsy Block would be made functional after receipt of permission from the Home Department, and the Animal House was functioning with the help of the local veterinary surgeon, as the required posts had not been created. The reply was not tenable, since there was abnormal delay in availing the necessary permission and deployment of required manpower.

5.1.3.2 DHHs/ CHCs/ PHCs

Scrutiny of records of the test-checked hospitals and JPI conducted during April 2022 with the hospital staff, Audit came across various instances of non-utilisation/ utilisation of the created infrastructure for purposes other than intended, as discussed below:

- ***Kandhamal***: 12 E-type quarters, one transit house and third floor of the MCH[115] building for the DHH, constructed with an expenditure of ₹5.51 crore, were reported by the DHH as having been completed during June-July 2021. It was, however, noticed, during JPI, that some works were still going on, due to which the buildings had not been handed over.
- ***Bhadrak***: The building for labour room and ward, constructed at a cost of ₹21 lakh, for PHC, Ertal, was lying idle, without having been handed over to the hospital, for the last two years, as of April 2022. The building had not been handed over, as the required rectification works had not been carried out by the executing agency, *i.e*. Rural Works Division-II, under the Rural Development Department.

  The OT building at CHC, Barapada, was being utilised for storage of sanitary napkins, distributed under KHUSI[116] programme, as no OT services were available in the CHC, due to want of required manpower. Further, as the Nutritional Rehabilitation Centre at DHH, Bhadrak, was

[115] Mother and Child Healthcare building

[116] A State Government intervention to provide sanitary napkins to the girl students reading in Class VI to Class XII

under repair and maintenance, the Geriatric ward of the hospital, was being utilised as the rehabilitation centre.

- ***Dhenkanal***: The 10-bedded Geriatric ward at the DHH constructed at a cost of ₹29.92 lakh had not been handed over as of September 2022, though it was reported as having been completed during December 2021.
- ***Nabarangpur***: The 10-bedded Geriatric ward, constructed at the DHH, was being used as an ICU.

E-type quarters at DHH, Kandhamal, not handed over after completion (29 April 2022)

Labour room and Ward constructed at PHC, Ertal, lying idle for the last two years (29 April 2022)

Non-utilisation of assets after completion, indicated inadequate coordination with the executing agencies and lack of effective monitoring by the Hospital authorities. Consequently, the created infrastructure was not put to end use, as intended. Reasons for non-handing over of these buildings, were not found on record.

The H&FW Department stated (February 2023) that the MCH building at DHH, Kandhamal had been made functional and the electricity connection to the E-type quarters was awaited. It further added that the rectification work at PHC, Ertal would be completed soon, and necessary steps had been taken for handing over the buildings at DHH, Dhenkanal and Nabarangpur.

5.1.4 Repair and maintenance of infrastructure

The CDM & PHOs of the districts are to prepare estimates and execute works for proper upkeep of the hospital buildings, through periodic maintenance, to utilise the created infrastructure optimally and to ensure availability of a safe, clean and conducive environment for the public and hospital staff.

Audit observed that the CDM & PHO had not taken effective steps for repair and maintenance of infrastructure in the test-checked DHH, Bhadrak and PHC, Khuntagaon, as discussed below:

5.1.4.1 DHH, Bhadrak

- The building used for storing linen was in a dilapidated condition and had not been repaired/ renovated.
- The lifts were stated to have been out of order for several months, causing severe hardship to patients, who had limited mobility, in the four-floor buildings.
- ACs fitted in OTs and SNCU had not been repaired and were non-functional during the summer months.
- The front floor area of the Drug Distribution Counters (DDCs) was in a damaged condition. The upper part of the walls, below the roof, had growth of algae and mosses, due to seepage of rain water.
- Computer systems and scanners in the DDCs had not been repaired/ replaced, hampering the drug distribution services.

5.1.4.2 PHC, Khuntagaon

- The ceiling of the patients' observation room at PHC, Khuntagaon, was in a damaged condition and had not been repaired.
- The staff quarters, though in an inhabitable condition, had not been repaired/ renovated. The hospital staff were residing in these damaged quarters.

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<td>Dilapidated building used for storage of linens at DHH, Bhadrak (3 June 2022)</td>
<td>Dilapidated condition of the patient observation room at PHC, Khuntagaon (24 June 2022)</td>
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	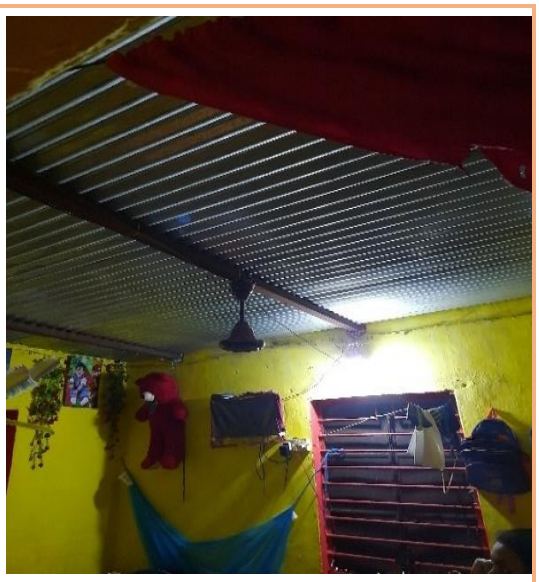
Ceiling of a residential quarter at PHC, Khuntagaon, not repaired (24 June 2022)	**Staff quarter with a tin sheet below the roof, at PHC, Khuntagaon (24 June 2022)**

The H&FW Department stated (February 2023) that necessary steps had been taken for repair and renovation of the buildings.

5.1.5 Inadequate basic facilities

IPHS provide that hospitals should have proper patient amenities, like potable drinking water, functional and clean toilets with running water and flush, fans and seating arrangement as per load of patients for OPD services.

Although these amenities had been provided in the test-checked DHHs, CHCs and PHCs, the following deficiencies were noticed in Audit, in regard to availability of amenities for OPD patients:

- DHH, Bhadrak, did not have adequate seating facility for patients and attendants, as they were found standing in queues, for availing OPD services. Separate toilets for males and females were also not available for OPD patients.
- DHH, Nabarangpur, did not have toilets for OPD patients.
- Five PHCs (Badaninigaon, Fakirsahi, Maidalpur, Sabarang and Khuntagaon) did not have separate toilets for male and female OPD patients.

5.1.5.1 Availability of other facilities/ amenities in SNCU

Out of the four ACs installed in the SNCU ward at DHH, Bhadrak, two were not functioning. As a result, the room temperature of SNCU ward was not being maintained as per the requirement (within 22 to 25 degrees centigrade). The room temperature of SNCU was found to be 28 degree centigrade, on 6 April 2022, during JPI.

An SNCU was functional in the third floor of the four storied building at DHH, Bhadrak. Other clinics, like the sunstroke ward, dengue ward, female medicine ward and pediatric ward, were also functional in the building. The lift installed for the building was functioning intermittently. A ramp facility, for physically challenged people/ patients and transportation of other serious/ critical patients,

was, however, not available in the building. Resultantly, the patients, after delivery, were compelled to use the staircase, with much inconvenience.

Thus, the SNCU facilities of DHH, Bhadrak, did not have adequate infrastructure, human resources and equipment, contributing to neonatal deaths and referral to other hospitals.

The H&FW Department stated (February 2023) that steps had been taken to functionalise the ACs to maintain the required temperature.

Recommendation 5.2:

State Government may ensure fully equipped SNCUs, as per the MNH toolkit and IPHS, for treating critically ill newborns, in district hospitals.

5.1.6 Availability of clinical infrastructure

5.1.6.1 At DHHs

As per the IPHS/ NHM Assessors' Guidebook, hospitals should have clinical infrastructure, for providing essential medical services to the public.

Audit examined the availability of 22 essential clinical infrastructures (clinics/ wards) in seven DHHs and found shortage in six DHHs, as detailed in **Table 5.3.**

Table 5.3: Details of clinics/ wards which were not available in the test-checked DHHs

DHH	Clinics / wards not available
Bhadrak	Burn ward, Psychiatry clinic, Neonatology clinic, Malaria ward, Infectious diseases ward and Private ward
Dhenkanal	Emergency/trauma ward, Neonatology clinic, Dermatology and Venereology clinic
Kandhamal	Geriatric ward
Nabarangpur	Psychiatry, Malaria ward, Infectious diseases ward, Geriatric ward, Dermatology and Venereology clinic
Nuapada	Dermatology and Venereology clinic
Sundargarh	-
Puri	Post-operative ward and Geriatric ward

(Source: Data obtained from the test-checked DHHs and JPI)

DHH, Sundargarh, had physical infrastructure for all the 22 clinics/ wards, for delivery of clinical services to the public.

The DHHs of Bhadrak and Nabarangpur had a higher extent of shortage of clinical infrastructure, compared to the other test-checked DHHs.

5.1.6.2 At CHCs

In 14 CHCs, test-checked by Audit in seven districts, Audit examined the availability of nine clinical infrastructure facilities, prescribed under IPHS, and noticed that:

- An OPD room, Pharmacy, Labour Room and Laboratory, were available in all CHCs.
- No waiting room was available in the CHCs of Lahunipara and Sriramchandrapur.

- No OT was available in two CHCs (Kuarmunda and Lahunipara).
- No X-ray room was available in nine[117] CHCs.
- No Blood storage facilities were available in 10[118]CHCs.

5.1.6.3 At PHCs

In 14 PHCs, test-checked by Audit, in seven districts, Audit examined the availability of seven clinical infrastructure facilities, prescribed under IPHS, and noticed that:

- A dedicated OPD room was available in all PHCs, except Sabarang.
- No separate dispensing-cum-store was available at the PHCs of Indragada and Sabarang.
- Dedicated laboratories were not available at the PHCs of Sabarang, Indragada and Darlimunda.
- Patients' waiting area was available in all PHCs.

OPD service provided at the door step and pharmacy running at the window of a single room at PHC, Sabarang (19 April 2022)

- Minor OT/ dressing/ injection/ emergency rooms were not available in five[119] PHCs.
- Three PHCs, at Ertal, Badaninigaon and Fakir Sahi, had no labour room for maternity services.
- Cold chain room was not available in five PHCs (Andali Jambahal, Kodinga, Badaninigaon, Fakir Sahi and Ranjabradi).

Thus, not all of the clinical infrastructure, as prescribed under IPHS, was available in the test-checked healthcare facilities.

The H&FW Department stated (February 2023) that the burn, psychiatric, infectious disease wards, *etc.*, had been included in the new building under construction at DHH, Bhadrak and proposal for PHC building at Sabarang was under process. It further added that the CHC at Barapada had neither been declared as a delivery point nor blood storage unit was approved for the CHC. The fact, however, remained that the CHC, Barapada, which was a secondary level healthcare facility, lacked required manpower, though basic infrastructure had been created.

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[117] Barapada; Raikia; Khariar Road; Komna; Kosagumuda; Bangurigaon; Sriramchandrapur; Khajurikata; Papadahandi

[118] Sriramchandrapur; Khajuriakata; Barapada; Bangurigaon; Papadahandi; Khariar Road; Kuarmunda; Raikia; Komna; Tikabali

[119] Khuntagaon; Anadali Jambahal; Sabarang; Indragada; Darlimunda

5.1.6.4 Clinical infrastructure in MCHs

The Minimum Standard Requirements Regulations (MSRR) guidelines of the Medical Council of India (NMC) provide that each ward should, *inter alia*, include a clinical demonstration room, examination and treatment room, residential doctors' and students' duty room and ward pantry. Audit, however, observed shortcomings in the test-checked MCHs, as detailed in **Table 5.4.**

Table 5.4: Availability of clinical wards in the test-checked MCHs

Infrastructure Item	Availability in PRM MCH (24 wards)	Availability in MKCG MCH (50 wards)
Clinical demonstration rooms	8 wards	42 wards
Examination and treatment rooms	9 wards	41 wards
Resident doctors' and Students' duty room	11 wards	48 wards
Store Room for linen and equipment	12 wards	50 wards
Ward pantry	3 wards	27 wards

(Source: Information furnished by the test-checked MCHs)

Shortages of clinical demonstration rooms and examination and treatment rooms, were areas of concern, as they could result in significant lowering of standards for patient-care and privacy, as well as the quality of learning for the medical students.

Audit reviewed the documents and records related to proposals for identification of need for the deficient infrastructure and noticed that, while construction of a new attached hospital, for PRM MCH, was in progress, MKCG MCH had not submitted any proposal for creating the missing infrastructure required for clinical demonstration rooms and examination and treatment rooms.

The H&FW Department stated (February 2023) that clinical infrastructure problem would be solved after completion of the hospital building, which was under construction.

5.1.6.5 Oxygen supply to IPDs in MCHs

As per NMC norms, all wards, in the Orthopedic, Surgery and Paediatrics Departments of the MCHs, should have wall mounted suction lines, along with piped wall mounted central oxygen lines, on all beds, and at least five beds, in each ward of the Ophthalmology department, should have an oxygen supply facility.

Audit noticed that the IPD beds/ wards, in the two test-checked MCHs, lacked the central oxygen supply facility, as discussed below:

- In MCH, Baripada, out of 245 IPD beds in four departments, only 20 beds in the paediatric ward had the facility for oxygen supply. The other 225 beds, in the Orthopaedic, Surgery and Paediatrics departments, did not have the central oxygen supply facility, due to want of pipelines for supply of oxygen.
- In MCH, Berhampur, out of 530 IPD beds to be provided with central oxygen supply, only 305 beds, in the Surgery and Orthopaedics departments, were connected with the central oxygen supply pipeline. The remaining 225 beds were not equipped with this facility. None of

the beds, in the Paediatrics and Ophthalmology departments, were equipped with central oxygen supply facility.

Despite the availability of five oxygen plants[120], along with Manifold Gas Pipe System, non-installation of a wall-mounted suction line, along with central oxygen supply pipelines to the IPD beds, indicated severe lapses on part of the hospital authorities, towards delivery of essential healthcare services in both the test-checked MCHs.

Thus, IPD services in the test-checked hospitals suffered from deficient manpower, equipment and infrastructure, impacting healthcare services adversely, in the State. This was evident from the fact that 1,42,137 patients had been treated in empaneled private hospitals, under BSKY[121], during FY 2021-22, with a three-fold increase in the number of patients (35,784) treated during FY 2020-21.

The H&FW Department stated (February 2023) the central oxygen pipelines as per requirement, would be provided in PRM MCH, after completion of the building under construction, and steps were being taken to provide manpower and central oxygen supply in MKCG MCH.

5.1.7 Adequacy of hospital beds

The number of functional beds is of fundamental importance to both the patients, as well as the staff. The projected population of the State during 2021, was 4,56,96,000[122]. As per the National Health Policy, 2017, the State should have had 91,392 hospital beds (2 beds per 1000 population). Against this, only 32,767 hospital beds (including 7,131 beds in private hospitals), were available in the State, as of March 2022. Thus, the State had a shortage of 58,625 (64 *per cent*) beds, compared to the requirement under NHP.

Shortage of beds seriously impacts hospital functions, as it is the primary cause for denial of admissions, cancellations of surgeries and delays in emergency admissions.

5.1.7.1 Availability of hospital beds in DHHs and CHCs

As per IPHS norms: (i) a district hospital should have a minimum of 275 IPD beds (at 100 *per cent* occupancy), in a district having a population of 10 lakh and (ii) each CHC should have a minimum of 30 beds.

Audit observed that, against the requirement of 12,519 beds in the DHHs of the State, as per the population norm, only 7,288 beds had been sanctioned. Thus, there was a shortage of 5,231 (42 *per cent*) IPD beds in the DHHs of the State, as of March 2022. Against the sanctioned strength of 7,288 beds, the DHHs had 10,471 functional beds, as of March 2022, as detailed in ***Appendix 5.1.***

Similarly, there should have been a minimum of 11,460[123] beds in the 382 CHCs functioning in the State, as required under IPHS. Government had, however,

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120 MKCG MCH: 3 (Central: 1 PSA Plant; State: 2 PSA Plants); PRM MCH: 2 (PM Care fund: 1 and CSR fund by State: 1)

121 Biju Swasthya Kalyan Yojana, a flagship scheme of the State Government for providing universal health service to the people, free of cost, in public health facilities and in empaneled private hospitals up to ₹ 5 lakh per family per annum.

122 Economic Survey of Odisha, 2021-22

123 382 CHCs @ 30 beds for each

sanctioned only 5,789 beds for these CHCs. Thus, there was a shortage of 5,671 (49 *per cent*) beds for CHCs, compared to the IPHS norms.

In the seven test-checked DHHs, Audit noticed that the IPD beds were not adequate. Five out of the seven test-checked DHHs had put additional beds in a congested manner, to accommodate the patient load. The status of the required number of beds, sanctioned bed strength and functional beds (including the additional beds), in the test-checked DHHs, as of March 2022, is given in **Table 5.5**.

Table 5.5: Requirement and availability of beds in the test-checked DHHs

DHH	Population of the district (2021)	Requirement, as per IPHS norms	Number of beds available		Percentage of sanctioned beds, compared to IPHS
			Sanctioned bed strength	Functional beds	
Bhadrak	16,74,000	367	191	336	52
Dhenkanal	12,61,000	345	300	300	87
Kandhamal	8,07,000	221	186	236	84
Nabarangpur	13,82,000	379	200	252	53
Nuapada	6,54,000	179	120	315	67
Puri	18,33,000	502	280	451	56
Sundargarh	22,81,000	625	330	330	117[124]
Total	**98,92,000**	**2,618**	**1,607**	**2,220**	**61**

(Source: Records of the test-checked DHHs and DHS, Odisha) (Red colour depicts shortage and green shows no shortage)

Thus, against the sanctioned strength of 1,607 beds, in the seven test-checked DHHs, 2,220 beds were functional, with the existing manpower and infrastructure. The sanctioned bed strength in DHH, Bhadrak and Nabarangpur, was about 50 *per cent* of the requirement. The number of sanctioned beds was more than the IPHS norm only in the Sundargarh district, as the Rourkela Government Hospital (RGH), which had DHH status, had 400 beds.

The additional beds, made functional by the DHHs, in the common spaces and verandahs, resulted in spatial congestion, as can be seen in the following pictures.

Beds placed in the verandah, to accommodate patients, at DHH, Sundargarh (25 July 2022)

[124] Calculated including 400 beds sanctioned for RGH, Rourkela, in the Sundargarh district

Three beds joined together and accommodated in the verandah, at DHH, Bhadrak (20 May 2022)

Similarly, in 11 out of the 14 test-checked CHCs, the sanctioned bed strength was less than the minimum requirement of 30 beds. The details of beds sanctioned and available in the test checked CHCs are given in **Table 5.6.**

Table 5.6: Sanctioned strength and functional beds in the test checked CHCs

Sl. No.	CHC	Minimum beds required as per IPHS	Number of beds available	
			Sanctioned bed strength	Functional beds
1	Raikia	30	16	16
2	Tikabali	30	30	30
3	Khariar Road	30	16	16
4	Komana	30	16	16
5	Basudevpur	30	60	60
6	Barapada	30	6	0
7	Sriramchandrapur	30	16	16
8	Khajuriakata	30	6	6
9	Lahunipada	30	16	35
10	Kuarmunda	30	16	16
11	Kosagumuda	30	16	16
12	Papadahandi	30	16	16
13	Nimapara	30	44	44
14	Bangurigaon	30	16	16
	Total	**440**	**290**	**303**

(Source: IPHS norms and data provided by the test-checked CHCs)
(Yellow colour denotes non-availability; Light red shows shortage and green colour represents no shortage)

Audit noticed that:

- The sanction strength of the 11 test-checked CHCs was less than the minimum requirement of 30 beds compared to the IPHS norms.
- CHC, Lahunipara, had 35 functional beds, against the sanctioned strength of 16.

- In CHC, Barapada, though six beds had been sanctioned, IPD services were not available, due to lack of required manpower.

Thus, availability of hospital beds in the State was neither IPHS compliant, nor was it in consonance with the National Health Policy.

The H&FW Department stated (February 2023) that necessary steps were being taken for upgradation of hospital beds, as the State is committed to provide quality healthcare service to the public.

5.1.7.2 Availability of beds in maternity wing

As per IPHS norms, there should be 10 beds for 100 deliveries in a month, for maternity services in the hospitals.

Audit noticed that:

- The beds available for maternity services, in all the test-checked DHHs, were more than the IPHS norms.
- Despite the above, the beds available in two DHHs (Bhadrak and Kandhamal) were still not enough to house the patients requiring maternity services, as the average BOR in these hospitals remained above 150. Resultantly, the patients were accommodated by placing additional beds in the wards/verandahs, in a congested manner, as also on the floors of the maternity and pediatric wards.
- The BOR of the maternity wings of five test-checked DHHs remained between 69 and 93.

Patients being treated on the floor of the Maternity Ward, at DHH, Bhadrak (26 May 2022)

Patients treated on the floor of the Verandah of the paediatric ward, at DHH, Kandhamal (11 May 2022)

Treatment of mothers and children, in an inappropriate clinical environment, is fraught with the risk of hospital induced infections, contributing to maternal and neo-natal mortality.

The H&FW Department stated (February 2023) that steps were being taken to provide beds in hospitals, as per IPHS norms.

5.1.7.3 Availability of beds in SNCUs

As per IPHS, there should be, at least, 12 beds in the main SNCU, to cater to the sickest children in the hospital. An additional six beds are required, in the Step down Unit, for recovering neonates, who do not need intensive monitoring. Further, the SNCU ward should have 10 more beds, where both the mother and the newborn can stay together, for neonates who require minimal support, such as phototherapy, uncomplicated low birth weight, *etc*.

Audit observed that:

- All the test-checked DHHs had the required number of beds in the main SNCU.
- In the Step Down Units, there were shortages of two to four beds, in four of the test-checked DHHs (Dhenkanal: 3, Kandhamal: 4, Nabarangpur: 2 and Nuapada: 4).
- An SNCU ward, with 10 beds, to accommodate both the mother and the newborn was not available in any of the test-checked DHHs.
- No follow-up area had been provisioned in any of the DHHs, for the newborns discharged from the SNCUs of the DHHs, for counselling of the mothers, during discharge and for imparting family participatory care.

The H&FW Department stated (February 2023) that beds had been planned for treatment of newborns only inside the SNCU as the newborns are highly susceptible for infection. MNCU concept was being adopted in the DHHs depending upon the space availability.

5.1.7.4 Enhancement of bed strength

The Director of Health Services, Odisha, had forwarded proposals (March/ July 2018) to the Government, for enhancement of bed strength in selected CHCs, SDHs and DHHs, based on the IPHS norms and bed occupancy rates of hospitals, as shown in **Table 5.7.**

Table 5.7: Details of proposals to increase the bed strength

Type of Health facility	Existing capacity	Proposed bed capacity for each
Community Health Centres	6 CHCs with 30 beds	50
	54 CHCs with less than 30 beds	30
Sub-Divisional Hospitals	4 SDHs with less than 40 beds	50
	1 SDH with 10 beds	100
	8 SDHs with 40 and more beds	100
District Headquarter Hospitals	1 DHH with 60 beds	150
	12 DHHs with 92 to 186 beds	200
	12 DHHs with 99 to 225 beds	300
	1 DHH with 576 beds	600

(Source: Records of the Office of the Director of Health Services)

Government had enhanced the existing bed strength of 10 DHHs, from 1,473 beds to 2,596 beds, during March 2020. The bed strength of other hospitals had not been increased.

Despite acute shortage of beds in hospitals and substantial increase in patient load, Government had not increased the bed strength of other hospitals in

compliance with the IPHS norms and National Health Policy.

In the absence of adequate bed facilities in the DHHs, patients had to either opt for private hospitals, or obtain treatment in an overcrowded environment, in Government hospitals. The patients treated in congested / crowded areas, were also at an increased risk of hospital induced cross-infections.

The H&FW Department stated (February 2023) that necessary steps were being taken for augmentation of hospital beds.

5.1.7.5 Availability of beds in Medical College Hospitals

As per the Minimum Standard Requirements Regulation (MSRR) of NMC, a minimum of 470 beds, with 19 units (up to 30 beds in each), are required for admission of 100 students, annually. Similarly, 1,100 beds, with 37 units, are required for admission of 250 students, annually.

Audit noticed that there was a shortage of sanctioned beds in the two test-checked MCHs, as discussed below:

- In PRM MCH, 470 beds were available in 17 units, resulting in shortage of one unit each in two departments, namely, General Medicine and General Surgery. These two departments had three units each, with 40 beds, against the prescribed norm of four units each, with 30 beds, which carried the risk of higher levels of patient crowding.
- In MKCG MCH, although UG seats had been increased to 250 from FY 2016-17, Government had sanctioned only 908 beds, against the requirement of 1,100 beds. However, 1,259 beds were found functional in the MCH.

  Compared to the bed strength, there was a shortage of eight units, in six[125] in-patient departments, resulting in a risk of higher levels of patient crowding. The shortage of separate units was highest in the Obstetrics and Gynaecology department, due to the higher number of beds that had been made functional in each unit.

  The Dean and Principal had requested (8 June 2017) the Government for sanction of additional beds, due to enhancement of the UG, PG and DM seats, as per NMC norms. The same had, however, not been sanctioned as of July 2022.

  The H&FW Department stated (February 2023) that steps were being taken to maintain bed strength in the MCHs, as per NMC norms.

5.1.8 Availability of land and buildings

To provide comprehensive secondary healthcare services to the persons residing in a district, at an acceptable level of quality, the district hospital should have adequate infrastructure, in terms of space, circulation area, communication facilities and fire protection features, as per the IPHS norms.

5.1.8.1 Availability of land for MCHs

As per NMC's Establishment of Medical College Regulations, 1999, for

[125] TB & Chest (1 unit); Ophthalmology (1 unit); ENT (1 unit); General Medicine (1 unit); O&G (3 units); Orthopedics (1 unit)

construction of a medical college, a suitable single plot of land, measuring not less than 25 acres, should be owned and possessed by the applicant or should be possessed by the applicant by way of 99 years lease.

Audit noticed that:

- MKCG MCH, Berhampur, had ownership and possession of 166 acres of land.
- PRM MCH, Baripada, was in possession of 58.56 acres of Government land, including Jungle kisam land (Forest land), in the Rangamatia and Sankhabhanga villages. However, the MCH had neither got the legal ownership of the land nor did it have 99 years lease, for construction of the college. The CDMO, Mayurbhanj, had applied (September 2014 and July 2015) to the Tahasildar, Baripada, for settlement of the land, but the land had not been settled in favour of the Medical College (October 2022).

  Thus, the MCH had no ownership of the land, even though it had started functioning since FY 2017-18, after completion of the college building on the possessed land.

  The H&FW Department stated (February 2023) that conversion of forest land and transfer of ownership was in process.

5.1.8.2 Availability of building infrastructure in DHHs

Audit examined the availability of building infrastructure in the seven test-checked DHHs and noticed the following status (**Table 5.8**):

Table 5.8: Availability of infrastructure in the test-checked DHHs

DHH	Space for functional beds	Fire-fighting system/ equipment	Circulation area (Corridor, lift, ramp, staircase)	Telephone (Intercom)
Bhadrak	Acute shortage. The available area was only 12 *per cent* of the requirement.	Only fire-fighting extinguishers and sand buckets, were present.	Not adequate	Not available
Dhenkanal	Shortage of 47 *per cent* space.	Fire-fighting system was available.	Available	Available
Kandhamal	No shortage.	Fire-fighting system was partially available (only in the MCH building)	Available	Available
Nabarangpur	Acute shortage. The available area was only 12 *per cent* of the requirement.	Under construction	Available	Available
Nuapada	The available area was 73 *per cent* of the requirement.	Available	Available	Available
Puri	No shortage	Available	Available	Available
Sundargarh	The available area was 78 *per cent* of the requirement.	Available	Not adequate	Not available

(Source: Data obtained from the test-checked hospitals and Joint Physical Inspection)

Thus, the DHHs of Bhadrak and Nabarangpur had acute shortage of space for functioning of the hospitals. Further, the DHHs of Bhadrak and Sundargarh did not have an adequate circulation area.

5.1.8.3 Provision of staff quarters

IPHS norms prescribe that staff quarters should be provided at the healthcare

facilities, for accommodation of staff, including doctors, nurses, paramedics, *etc*.

Audit examined the availability of staff quarters, in the test-checked DHHs, and noticed the position given in **Table 5.9**.

Table 5.9: Availability of residential quarters in the test-checked DHHs

DHH	Number of staff quarters available	Number of staff members, who were allotted quarters	Number of staff members, who were not allotted quarters
Bhadrak	11	10	120
Dhenkanal	24	20	168
Kandhamal	47	46	120
Nabarangpur	88	82	155
Nuapada	76	72	20
Puri	21	16	266
Sundargarh	45	44	130
Total	**312**	**290**	**979**

(Source: Data furnished by the test-checked DHHs)

Thus, only 312 staff quarters were available in the seven test-checked DHHs, of which 290 had been allotted to the staff. The remaining quarters were either in an uninhabitable condition or were being utilised for other purposes. About 979 staff, including doctors, staff nurses, paramedics, *etc*., had not been provided with residential accommodation, in the test-checked DHHs. The availability of residential accommodation was lower in three DHHs (Bhadrak, Dhenkanal and Puri), compared to other test-checked DHHs.

In the 14 test-checked CHCs, 199, out of 253 residential quarters, had been allotted to staff. Of the remaining 54 quarters, 42 were in a damaged condition and 12 were lying vacant due to lack of applicants/ staff in four CHCs. Further, 62 staff members, in six CHCs, had not been allotted residential quarters.

In the 14 test-checked PHCs, 65 residential quarters were available in 13 PHCs, while one PHC (Fakirsahi) had no residential quarters. Out of the 65 quarters, only 46 had been allotted to staff. The remaining quarters were either in a damaged condition or were lying vacant. Four residential quarters, constructed at PHC, Ranjabradi (Kandhamal), had been lying vacant since their completion, due to lack of water supply.

Due to non-availability/ non-occupation of government accommodation, the staff had to reside outside the hospital vicinity. As such, it would be difficult for them to reach the hospital immediately, to attend to emergency cases, as and when required. Further, at the time of natural calamities like cyclones, floods, *etc.*, it would be difficult for them to reach the hospital, due to transportation problems, hampering healthcare services at times of emergency.

The H&FW Department stated (February 2023) that the buildings for staff quarters were under construction.

5.1.8.4 Residential accommodation in MCHs

As per NMC's Minimum Standard Requirements Regulations (MSRR), at least 20 *per cent* each, of the nurses, teaching and non-teaching staff, should be provided residential accommodation, in Medical College and Hospitals.

Audit observed that the residential quarters, available in the two test-checked MCHs, were not adequate for providing accommodation to their staff, as discussed below:

PRM MCH, Baripada

- Only 84 (14 *per cent*) staff quarters were available for 613 nurses, teaching and non-teaching staff.
- None of the 222 staff nurses had been provided with residential accommodation, although at least 20 *per cent* of them were to be allotted staff quarters, as per NMC norms.
- Only 49 (16 *per cent*), out of 306 non-teaching staff, had been allotted staff quarters. However, 26, out of the 85 teaching staff (31 *per cent)*, had been provided residential accommodation.

MKCG MCH, Berhampur

- For the 1,306 staff working in the MCH, only 188 (14 *per cent*) staff quarters were available.
- Only 29 (4 *per cent*), out of 689 staff nurses, had been allotted staff quarters.
- 54 (16 *per cent*), out of 348 teaching staff, had been allotted staff quarters, while 87 (32 *per cent*), out of 269 non-teaching staff, had been provided residential accommodation.

Thus, residential accommodation, available in both the test-checked MCHs was quite insufficient, to house all the staff, including staff nurses.

The H&FW Department stated (February 2023) that the residential accommodation to staff nurses and non-teaching staff would be provided in the Nursing Block, which was under construction in the hospital campus.

5.1.8.5 Hostel accommodation in MCHs

As per Clause B.12 of MSRR, each hostel room should not have more than three occupants.

Audit noticed insufficiency of hostel accommodation, in both the test-checked MCHs, as discussed below:

- **MCH, Baripada:** Due to increase in the students' strength of the college, from 100 (2018-19) to 125 (2019-20), four students were accommodated in each room of the hostel, instead of three. Further, 35 girl students of the 2021-22 batch were provided accommodation in five staff quarters.
- **MCH, Berhampur**: Two old hostel buildings had been declared structurally damaged and unsafe, as per the proceedings of the joint site visit of the Director of Medical Education and Training (DMET), Odisha and the Engineer-in-Chief (Buildings), in February 2021. Despite that, 121 students were staying in the damaged hostel building, as noticed during joint physical inspection (1 August 2022) conducted by Audit along with MCH staff.

Hostel No. 2 (Gents) in damaged condition and declared unsafe, where 121 students were staying (1 August 2022)

Thus, hostel accommodation facilities, in both the MCHs, were insufficient, due to which, the students were constrained to stay in the staff quarters and unsafe buildings.

The H&FW Department stated (February 2023) that the budget provision had been made for construction of both the boys' and girls' hostel buildings, which would commence after completion of the tender process.

5.1.8.6 Deficient infrastructure for Dietary services

As per Kayakalp guidelines[126], the quality and quantity of food are the key factors for patient recovery. Thus, high standards of food hygiene should be maintained throughout the delivery of healthcare services. The need for adequate food hygiene facilities, is of paramount importance in the kitchen services of healthcare facilities.

Audit noticed that dietary services were being provided, in the test-checked DHHs/MCHs, by outsourced agencies. These dietary services were, however, deficient, as discussed below:

- **Infrastructure:** As per the National Building Code, kitchens, with fuel supply (gas cylinders), should not be located in the basement. During JPI, Audit found that:
    - The kitchens at the DHHs, Kandhamal and Nabarangpur, were running in the basement of the hospital building**.**
    - The kitchen at DHH, Bhadrak, was running by means of covering an open space, with steel/tin plates, from all sides, due to shortage of space.
    - At DHH, Dhenkanal, the kitchen was functioning in the vending zone.

[126] Guidelines issued (May 2015) by the Ministry of H&FW, GoI for promoting cleanliness, hygiene and infection control practices in public healthcare facilities

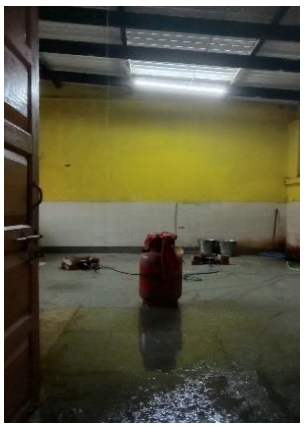
Kitchen shed for preparation of food, at DHH, Bhadrak (23 May 2022)

Vending zone used as kitchen, at DHH, Dhenkanal (30 March 2022)

- In both the test-checked MCHs, in-house kitchens, with asbestos roofs, were running in the basement. The roofs of the kitchens, at both the MCHs, were in a dilapidated condition, due to the seepage of rain water. The floor of the kitchen at PRM MCH was lower than the adjacent road level. Resultantly, rain water and drain water flowed into the kitchen area, creating an unhygienic environment. One pillar of the kitchen was in a damaged condition, with the possibility of collapsing any time.

Damaged pillar of kitchen, at PRM MCH, Baripada (30 April 2022)

Damaged floor of the kitchen, at PRM MCH (30 April 2022)



Water logging on the floor of the kitchen, at MKCG MCH (14 July 2022)

- **Preparation, handling, storage facility:** As per Kayakalp guidelines, proper hygiene and an infection-free environment should prevail in the kitchens. Further, there should be covered trolleys for food distribution, a separate room for storage[127], adequate supply of treated water and refrigerators, for storage of food items.

  During JPI of the kitchen at DHH, Bhadrak, no racks were found, for storage of rations and other material. The kitchen material was stored on the floor of the room. No refrigerator was available. Though one serving trolley was available, it was not being put to use, due to the non-existence of ramps and lifts to all the wards. Instead, steel buckets were

[127] Separate room for storage of raw material and vegetables, with appropriate numbers of refrigerators, racks, *etc.*

being used for serving meals. At DHH, Sundargarh, the available space for storage of the kitchen materials was inadequate, even though a dedicated room was being used for the purpose.

- **Hygiene and sanitation:** At DHH, Bhadrak, an open drain, from the hospital side, passed through the kitchen area, which was found blocked during JPI (23 May 2022). As such, there was every possibility of overflow/flooding of drain water, into the kitchen (cooking area), during rain. Utensils were also being washed near/ beside the open drain.

  Further, the spaces being used for washing of utensils, at MCH Baripada and the DHHs of Dhenkanal and Sundargarh, were also not clean and hygienic. Gathering of waste material was noticed in one corner of the kitchen, at PRM MCH. Cooked food was also found to have been kept in uncovered utensils, compromising the health and hygiene of the patients.

Washing area of utensils, at DHH, Sundargarh (16 July 2022)

Blocked open drain, passing through the kitchen and washing area for utensils, at DHH, Bhadrak (30 May 2022)

Uncovered food, at MKCG MCH (14 July 2022)

Food containers kept open and food packed in polythene bags for supply to patients, at MKCG MCH (14 July 2022)

Chapter 6

Financial Management

CHAPTER 6

Financial Management

Budgetary allocations and expenditure on health sector of the State was below the level, envisaged in the National Health Policy. There was no significant increase in health expenditure of the State, compared to Gross State Domestic Product. The budgetary control was not adequate, and funds allocated in the budget, were not utilised fully. Unutilised funds were also found lying with the field offices, for years together. There were persistent savings of the allocated funds, over the years. Despite efforts to manage the situation arising out of the Covid-19 pandemic, the funds allocated for creating infrastructure, to build resilient public health systems, to support preparedness and prevention related functions for emergency management, were not fully utilised. There was lack of oversight in examining bills submitted by private Covid hospitals, leading to irregular/ excess payments.

6.1 Adequacy of funding

Effective financial management ensures that decisions taken at the policy level, are implemented successfully at the administrative level, without wastage or diversion of funds. This Chapter reviews the allocative priorities of the State Government, the transparency of budget formulation and the effectiveness of its implementation.

The Health and Family Welfare Department (H&FW), Government of Odisha, received funds from two main sources: (i) State budget and (ii) Grants-in-Aid from GoI, under the National Health Mission (NHM), with the corresponding share of the State Government. Comparisons of the total budget of the State, with the allocation for the health sector and the Gross State Domestic Product (GSDP), with the actual utilisation of the budgetary outlay, revealed the following:

6.1.1 Share of the health sector in the total budget

National Health Policy (NHP), 2017, envisaged that the State's spending on the health sector should be increased to at least eight *per cent* of its budget, by 2020. The year-wise budgetary allocations and expenditure, on the health sector of the State, for the period from FYs 2017-18 to 2021-22, are given in **Table 6.1.**

Table 6.1: Budget allocation and expenditure on the health sector *(Amount in ₹ crore)*

Financial Year	Total State Budget	Allocation for the Health Sector		Utilisation	Savings	
		Amount	Percentage		Amount	Percentage
2017-18	1,20,028.57	5,827.10	4.85	4,928.42	898.68	15.42
2018-19	1,35,513.58	6,582.56	4.86	5,800.46	782.10	11.88
2019-20	1,55,630.00	7,296.06	4.69	6,378.67	917.39	12.57
2020-21	1,67,663.27	9,468.61	5.65	7,923.25	1,545.37	16.32
2021-22	1,95,723.37	11,474.40	5.86	10,420.45	1,053.95	9.19
Total	**7,74,558.79**	**40,648.73**	**5.25**	**35,451.25**	**5,197.48**	**12.79**

(Source: Appropriation Accounts of the respective years)

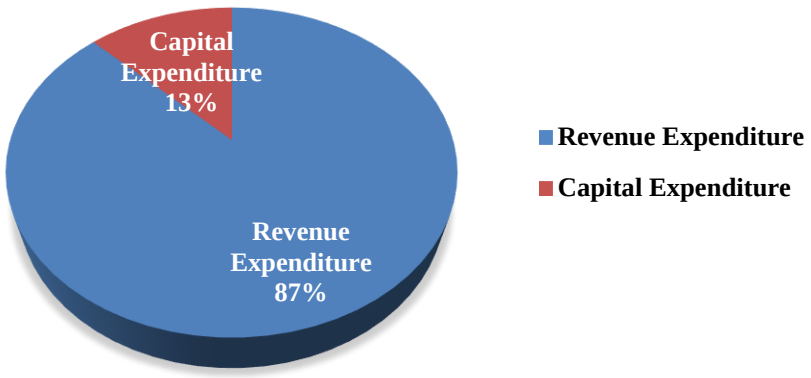
Audit observed the following, in regard to the above mentioned period:

- Allocation of funds for the health sector ranged between 4.69 *per cent* and 5.86 *per cent* of the State budget. Thus, budgetary allocation remained less than that envisaged in the NHP, at the end of March 2022.
- The health expenditure of the State had remained between 4.10 *per cent* and 5.32 *per cent* of the State budget, against the minimum of eight *per cent*, as envisaged in the NHP.

  The H&FW Department stated (February 2023) that there was incremental growth in health expenditure over the years and the State would achieve eight *per cent* expenditure by 2025.
- Thus, while, the budgetary allocations remained below the level envisaged in the NHP, the sums, as provisioned in the budget, were also not utilised fully, in any of the years. There were persistent savings of the allocated funds, with overall savings of 12.79 *per cent* (₹5,197.48 crore) of the total budget outlay.

  The H&FW Department stated (February 2023) that budget, being a financial estimation, it was difficult to anticipate the exact expenditure and added that 10 *per cent* savings were acceptable. The fact, however, remained that there were persistent savings over 10 *per cent* during the period from FYs 2017-18 to 2020-21, with overall savings of 12.79 *per cent*.
- During FYs 2017-18 to 2021-22, out of the total expenditure on the health sector, capital expenditure constituted ₹4,466.59 crore (13 *per cent*) only, as shown in **Chart 6.1**.

Chart 6.1: Revenue and Capital Expenditure in health sector during 2017-22



(Source: Appropriation Accounts of the respective years)

The year-wise allocation and expenditure under revenue and capital heads in health sector, during the period FYs 2017-18 to 2021-22, is given in **Table 6.2**.

Table 6.2: Allocation and expenditure under Revenue and Capital heads

Year	Revenue (₹ in crore)		Capital (₹ in crore)	
	Allocation	Expenditure (*per cent*)	Allocation	Expenditure (*per cent*)
2017-18	4,609.80	4,093.04 (*89*)	1,217.30	835.38 (*69*)
2018-19	5,582.56	5,126.02 (*92*)	1,000.00	674.44 (*67*)

Year	Revenue (₹ in crore)		Capital (₹ in crore)	
	Allocation	Expenditure (*per cent*)	Allocation	Expenditure (*per cent*)
2019-20	6,324.06	5,836.67 (*92*)	972.00	542.00 (*56*)
2020-21	8,398.61	7,247.92 (*86*)	1,070.00	675.33 (*63*)
2021-22	9,576.14	8,681.00 (*91*)	1,898.26	1,739.44 (*92*)
TOTAL	**34,491.17**	**30,984.66 (*90*)**	**6,157.56**	**4,466.59 (*73*)**

(Source: Appropriation Accounts of the respective years)

The expenditure on revenue sector ranged between 86 *per cent* and 92 *per cent* of the allocation, with overall savings of ₹3,506.51 crore (10 *per cent*) during FYs 2017-18 to 2021-22. Similarly, there were 27 *per cent* savings (₹1,690.97 crore), out of the total capital outlay, intended for creating healthcare infrastructure.

The H&FW Department attributed (February 2023) the savings on capital outlay to non-availability of funds from the Centre, difficulty in land acquisitions and court cases.

- The H&FW Department did not maintain consolidated details of funds received from other sources, such as from the District Mineral Foundation (DMF) Trusts or from the corpus maintained by the Odisha Mineral Bearing Areas Development Corporation (OMBADC). In one sampled unit, *i.e.*, DHH, Sundargarh, Audit noticed that the DHH had received ₹119.08 crore from the DMF Trust of Sundargarh district, during the FYs 2017-18 to 2021-22, for infrastructure development, procurement of equipment, remuneration for additional manpower, *etc*. Similarly, records of the Director of Public Health, Odisha, showed that OMBADC had provided ₹ 27.40 crore, under the National Vector Borne Disease Control Programme, during FYs 2019-20 to 2021-22.

  The H&FW Department stated (February 2023) that steps had been taken for maintaining a consolidated details of funds received from other sources.

6.1.2 Percentage of GSDP spent in the health sector

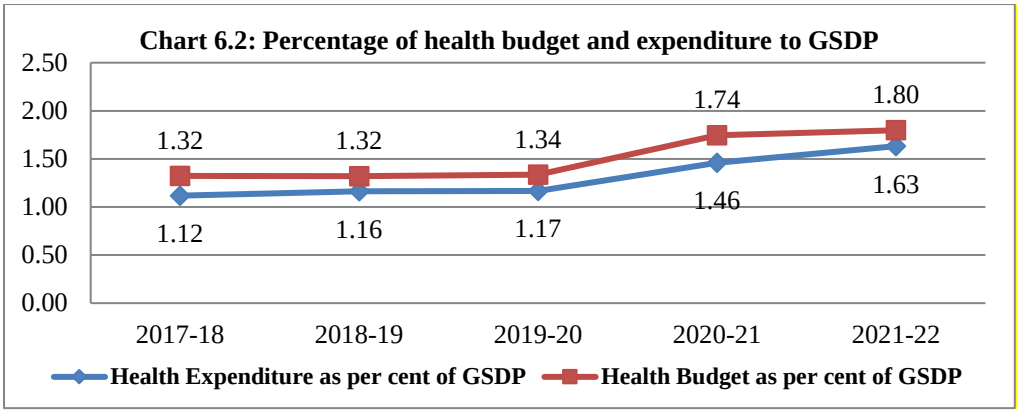
NHP, 2017, envisaged increasing expenditure in the health sector, from 1.15 *per cent* of GSDP to 2.5 *per cent* of GSDP, by 2025. The GSDP, Health Budget and utilisation of funds in the health sector of the State during FYs 2017-18 to 2021-22, is shown in **Table 6.3**.

Table 6.3: Health expenditure vis-à-vis GSDP ***(Amount in ₹ crore)***

Financial Year	GSDP of the State	Health Budget of the State	Expenditure on Health
2017-18	4,40,974	5,827.10	4,928.42
2018-19	4,98,576	6,582.56	5,800.46
2019-20	5,46,413	7,296.06	6,378.67
2020-21	5,42,889	9,468.61	7,923.25
2021-22	6,38,342	11,474.40	10,420.45
Total	**26,67,194**	**40,648.73**	**35,451.25**

(Source: State Finances Audit Reports and Appropriation Accounts of the respective years)

The percentage of health budget and health expenditure of the State to its GSDP, during FYs 2017-18 to 2021-22, is depicted in **Chart 6.2.**



(Source: State Finances Audit Reports and Appropriation Accounts of the respective years)

During FYs 2017-18 to 2021-22, the percentage increase in health expenditure of the State, as compared to its GSDP, was only 0.51 *per cent*.

The H&FW Department assured (February 2023) to achieve health expenditure of 2.5 *per cent* of the GSDP by 2025.

6.2 Budget Control

As per the Odisha Budget Manual, the Budget of the State is based on the departmental estimates, as submitted by the Controlling Officers. These departmental estimates are, in turn, based mostly on the estimates submitted by the district officers of the departments, so that the estimates are as accurate as possible.

The H&FW Department, after due scrutiny of the consolidated budget proposals received from the Controlling Officers, submits its proposal to the Finance Department, to enable it to process the annual/ supplementary budget for the Department.

To examine the procedure followed for budget preparation, Audit requested the Directorate of Health Services (DHS), Odisha, one of the Controlling Offices (CO) of the H&FW Department, to provide budget related records/ files. DHS did not, however, provide the related files/ records, owing to which Audit was unable to derive assurance in regard to compliance with the prescribed procedures, by the DHS.

DHS, however, provided details of the DDOs, who had submitted the budget estimates. It was noticed that only 11-27, out of the 519 DDOs under its administrative control, had submitted budget estimates to the DHS, for preparation of the annual budget, during FYs 2017-18 to 2020-21. Thus, the budget estimates, prepared by the DHS, were not based on bottom-up aggregation of the actual requirements from the field level. Resultantly, the budget was not accurate, as discussed below:

- The State budget had, *inter alia*, a provision of ₹5,144.20 crore for the DHS, for the FY 2020-21. Against this budget estimate, ₹6,147.07 crore was allocated, after re-appropriation of ₹1,002.87 crore, *i.e.* 19 *per cent* over the original budget. Against this allocation, only ₹4,034.68 crore could be utilised, resulting in surrender/ savings of ₹2,112.39 crore, which was about 34 *per cent* of the funds allocated to the DHS. Similarly, there were 30 *per cent* savings during FY 2021-22, as only

₹4,828 crore was expended against the budget allocation of ₹6,870.63 crore. This showed that the budget estimates prepared by the DHS, were not accurate and did not represent the actual requirements on the ground.

Further, during FYs 2017-18 to 2021-22, an amount of ₹2,562.87 crore was re-appropriated over the original budget estimates. However, an amount of ₹4,832.03 crore was surrendered during these five years. Thus, the amount of savings was more than the re-appropriated amount, indicating that re-appropriation was not necessary.

- During FYs 2018-19 to 2020-21, the DHS had allocated funds, ranging between ₹31.90 crore and ₹35.84 crore per year, to the State Blood Transfusion Council (SBTC), under the scheme 'Strengthening of blood services in the State'. The expenditure under the scheme remained between 9 *per cent* and 11 *per cent* of the available funds. The DHS, while preparing budget as a CO, did not take this into consideration and continued to allocate/ sanction funds under the scheme, which resulted in accumulation of ₹83.01 crore with the SBTC, by March 2021.

- The State Health Assurance Society (SHAS)[128] had been sanctioned ₹92.94 crore, during FY 2018-19, under the Rashtriya Swasthya Bima Yojana. Out of this, the Society incurred only ₹36.61 crore, during FY 2018-19 and the balance amount of ₹56.33 crore remained with the society. During FY 2019-20, the society incurred an expenditure of ₹8.47 crore out of this fund and ₹47.85 crore was still lying with the SHAS. The DHS/ Department had not taken any steps to get refund of the said amount from the society, even though the scheme was no more in operation in the State. This amount, along with accrued interest, had been lying outside the Government Accounts, in the Bank Account of SHAS, for more than three years, as of March 2022.

- Two test-checked MCHs had received ₹1,140.29 crore during FYs 2017-18 to 2021-22, towards: (i) medical education, (ii) running of the attached hospitals and (iii) implementation of various schemes, such as increasing of UG/PG seats, establishment of super specialty departments, medical research activities, *etc*. Out of this fund, an amount of ₹ 937.28 crore was utilised, leaving an unspent balance of ₹ 203.01 crore (MKCG MCH: ₹184.76 crore and PRM MCH: ₹18.25 crore), as of March 2022. The unspent amount had been lying in the bank accounts of the MCHs, for many years. For instance:
    - The unutilised amount of ₹1.61 crore, out of ₹4.61 crore received during FYs 2006-07 to 2010-11, towards setting up of a trauma care centre, was lying with the MKCG MCH as of July 2022.
    - The entire amount of ₹139.40 crore (including interest of ₹23.45 crore), received during FYs 2016-17 to 2019-20 for

[128] The society was to ensure health services for the beneficiaries under 'Rashtriya Swasthya Bima Yojana (RSBY)' scheme. RSBY, a centrally sponsored scheme was under implementation in the State, to provide health insurance coverage for Below Poverty Line (BPL) families, to provide protection to BPL households from financial liabilities, arising out of health issues, that involve hospitalisation

- The entire amount of ₹139.40 crore (including interest of ₹23.45 crore), received during FYs 2016-17 to 2019-20 for increasing of MBBS seats in MKCG MCH, was lying unutilised, as of August 2022.
- The entire amount of ₹1.82 crore, received during FY 2012-13 for installation of dedicated power supply in the MKCG MCH, was lying unutilised in the bank accounts, as of July 2022.

The above instances of unutilised amount show that the specific purposes for which they were intended had not been achieved. Thus, the process of preparation of the budget estimates was not in compliance with the provisions of the OBM Manual and resulted in surrender/savings of substantial amounts.

While admitting the fact of submission of budget estimates by only few DDOs during FYs 2017-18 to 2021-22, the H&FW Department stated (February 2023) that actual requirement of funds had been proposed to the Government for the FY 2023-24, as all the DDOs had submitted the budget estimates. It further added that less expenditure was due to less requirement, leading to surrender of funds. This indicates that budget estimate was not based on the actual requirement, as there was a considerable amount of savings/ surrender of funds.

Recommendation 6.1

State Government may enhance its health budget and expenditure for healthcare services, to ensure the availability of adequate and quality healthcare infrastructure and services.

6.2.1 Receipt and expenditure under the National Health Mission

The State had received ₹8,986.60 crore, under the National Health Mission (NHM) during FYs 2017-18 to 2021-22, for implementation of various programmes, as detailed in **Table 6.4.**

Table 6.4: Receipt and utilisation of funds under NHM **(₹ in crore)**

Financial Year	Opening Balance	Receipt		Total funds, including interest	Expenditure	Closing balance	Percentage of expenditure
		GoI	GoO				
2017-18	312.77	641.20	573.77	1,561.73	1,048.36	513.37	67
2018-19	513.37	644.39	708.13	1,892.93	1,117.67	775.26	59
2019-20	775.26	881.16	855.89	2,542.11	1,451.44	1,090.67	57
2020-21	1,090.67	966.84	1,089.29	3,168.52	1,725.83	1,442.69	54
2021-22	1,442.69	1,442.57	1,183.36	4,078.46	2,912.79	1,165.67	71
TOTAL		**4,576.16**	**4,410.44**		**8,256.09**		

(Source: Data provided by the NHM, Odisha)

Audit observed that the State Health Society had spent ₹8,256.09 crore, during FYs 2017-18 to 2021-22, under NHM, leaving an unspent balance of ₹1,165.67 crore, as on 31 March 2022. The huge savings were due to non/ partial execution of approved activities, contributing to non-achievement of targets/ goals, as discussed in **Chapter 9** of this report.

Thus, NHM, Odisha, failed to utilise the allocated funds for implementation of various programmes, with the percentage of year-wise expenditure of available funds remaining below 71 *per cent*, during FYs 2017-18 to 2021-22.

The H&FW Department stated (February 2023) that the unutilised funds did not relate to NHM only, but included other funds like COVID vaccination, Emergency COVID Response Packages, *etc*. The reply was not convincing, as the expenditure pertaining to the periods prior to COVID-19, was also low.

Recommendations 6.2:

The Mission Director, NHM may ensure optimum utilisation of funds received under various National Health Programmes, through effective implementation and monitoring.

6.2.2 Payment of incentive under Janani Suraksha Yojana

The Janani Suraksha Yojana (JSY) is a safe motherhood intervention, under the National Rural Health Mission (NRHM), being implemented with the objective of reducing maternal and neo-natal mortality, by promoting institutional deliveries among the poor pregnant women. All registered pregnant women are eligible for a cash incentive of ₹1,400 (₹1,000 for urban areas) and ₹500/- for home delivery, to meet the delivery expenses. The JSY incentive was to be paid within seven days of delivery.

Scrutiny of HMIS[129] Reports and information furnished to Audit, showed that 2,01,630 institutional deliveries had been made in the test-checked DHHs, during FYs 2016-17 to 2021-22, against which the JSY incentive had been paid to 1,85,885 mothers.

The JSY incentive had not been extended to 15,745 beneficiaries in the test-checked DHHs. It was noticed that 31 *per cent* (9,316) of the beneficiaries of DHH, Nuapada, had not been paid JSY incentive, followed by DHH, Nabarangpur, with 11 *per cent* non-payment cases.

The DHHs attributed non-payment of incentive to non-receipt of applications, deficiencies in bank account details, *etc*.

Non-disbursement of JSY assistance was indicative of inadequate supervision/ action by the DHHs, which adversely affected the objective of the scheme, *i.e*. to encourage institutional delivery among the poor pregnant women, which in turn, was expected to contribute to reduction of maternal and neo-natal mortality.

The H&FW Department stated (February 2023) that instructions were being issued to the concerned authorities for disbursement of JSY incentives within the prescribed timelines.

6.3 Funding and utilisation for Covid-19 management

The H&FW Department had received funds from different sources, like the State Disaster Relief Fund (SDRF), Emergency Covid Response Package (ECRP)[130], Public Health Response Fund (PHRF), *etc*., for preparedness and prevention related functions in the State, to manage the Covid-19 pandemic.

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[129] Health Management Information System

[130] ECRP: Under the package, funds are provided by the Government of India and the State Government for managing the Covid situation and strengthening public health facilities. PHRF: Funds provided by the State Government towards disaster management such as flood, cyclone, *etc*.

The details of funds received and released by the H&FW Department, during 2019-22, are given in **Table 6.5**.

Table 6.5: Receipt and release of funds for Covid-19 management (₹ in crore)

Name of Schemes	Receipt	Released
SDRF	1,668.31	1,668.31
ECRP - I (GoI)	156.26	156.26
ECRP –II (Central Share)	517.18	517.18
ECRP – II (State Share)	344.79	344.79
PHRF (State)	169.26	169.26
Information, Education and Communication (State)	13.00	13.00
TOTAL	**2,868.80**	**2,868.80**

(Source: Data furnished by the H&FW Department, Odisha)

The H&FW Department, after receipt of funds/ budgetary allocation, had released the amount to the DHS/ NHM, for Covid-19 management. The details of utilisation of funds, sanctioned in favour of various agencies, for Covid-19 management, were not available with the Department. This indicated that the Department had not monitored utilisation of the sanctioned amount. Audit, however, observed the following:

- NHM, Odisha, had received ₹1,027.14 crore from the State, of which ₹716.77 crore was utilised for Covid-19 management. There was an unspent balance of ₹311.18 crore with the NHM, Odisha as on 31 March 2022 (including the interest amount of ₹0.81 crore).
- The Director of Public Health (DPH) had received ₹169.26 crore under PHRF, for management of Covid-19. On scrutiny of the release orders/ expenditure vouchers, it was noticed that:
    - While sending the claim bills of Ziqitza Health Care Limited, towards supply of 300 laptops and accessories, the H&FW Department had requested the DPH to make payment, after verifying the claims. The DPH had paid (March 2021) ₹1.17 crore to Ziqitza Healthcare Limited, Bhubaneswar, towards outright procurement of 300 laptops and ₹1.53 lakh for 220 keyboards and mouses, being used for running the virtual call centres, during the Covid-19 period. Before making payment for outright procurement, the DPH had not enquired about the working condition of the laptops, guarantee/ warranty, the make and year of manufacture, *etc*. The current status/ whereabouts of these laptops, was also not known to the DPH.

      DPH, Odisha, stated (July 2022) that the payment had been made to the firms, as per the orders of the Government.
    - DPH had released ₹27.25 crore to the Chief District Medical & Public Health Officers (CDM & PHOs), Medical Colleges, Capital Hospital[131], *etc*., for Covid-19 management. However, no Utilisation Certificates, against the released amounts, were found available on record. In the absence of UCs, the actual

[131] One major hospital in Bhubaneswar with DHH status

utilisation of the released amounts, could not be ascertained in Audit.

- A total amount of ₹86.66 crore had been received for management of Covid-19, during FYs 2020-21 and 2021-22, at the Office of the Collector, Cuttack. Out of this amount, ₹67.69 crore had been disbursed to various implementing agencies and the balance amount of ₹18.97 crore, had been retained in the Bank Accounts (May 2022), maintained by the Collectorate. Thus, the unspent amount was lying with the Collectorate, outside the Government Account, without having been refunded to the funding agencies. The Directorate/ Department had not fully ensured utilisation of the sanctioned funds, for the purpose for which they had been sanctioned.
- An amount of ₹ 61.05 crore was received for management of Covid-19 at the Collectorate, Khurda, during 2020-21 and 2021-22. Out of this amount, ₹ 58.86 crore had been disbursed and the balance of ₹2.19 crore was lying with the Collectorate. Utilisation Certificates, for an amount of ₹ 24.12 crore, had not been received, as of October 2022.

Thus, the Department had failed to assure that the funds sanctioned for Covid-19, had actually been utilised for the purpose of sanction, in compliance with the extant guidelines and orders.

6.3.1 Utilisation of ECRP-II funds

The Emergency Covid Response Package-II intended to build resilient public health systems, to support preparedness and prevention related functions, that would address not only the current COVID-19 outbreak, but also such outbreaks, in future, in the country.

The funds provided under ECRP-II were to be utilised to enhance Covid essential diagnostics and drugs; lab strengthening for RT-PCR[132]; ramping of health infrastructure, with focus on paediatric care units, *etc*. All the activities were to be completed by 31 March 2022.

NHM, Odisha, received ₹861.97 crore (including the Central share of ₹517.18 crore), under ECRP-II, during 2019-22. Audit observed the following in this regard:

- **Delay in release of funds:** ECRP guidelines provided that the State Government should transfer the funds, to the State Health Society, within seven working days from the date of release of the Central share. Audit noticed that the H&FW Department had transferred the funds (1st installment) to the State Health Society, after 40 days of the receipt from the GoI, with a delay of 33 days.
- **Less utilisation of funds:** Out of ₹861.97 crore, received under ECRP-II, the State could utilise only ₹551.50 crore *(64 per cent)*, as of March 2022. Audit examined the utilisation of funds for the activities, approved under ECRP-II (Financial Monitoring Report) and found that the

[132] Real time Polymerase Chain Reaction Test

expenditure in eight activities/ programmes was less than 50 *per cent*, as detailed in **Table 6.6**.

Table 6.6: Budget and Expenditure of funds, under ECRP-II (₹ in lakh)

Activity/ Item of Expenditure	Budget	Expenditure	Expenditure in *per cent*
For establishing dedicated Pediatric care units in DHHs	6,472.24	712.01	11
For establishing Pediatric Centre of Excellence at Medical Colleges/ State Hospitals/ Central Government Hospitals	377.27	6.97	2
For field Hospitals (50/ 100 bedded)	27,845.08	11,701.42	42
For Medical PG Interns	50.00	19.61	39
For Final Year GNM Nursing students	100.00	22.50	22
For Final Year B.Sc. Nursing students	50.00	23.58	47
For Strengthening the Telemedicine/ Tele-consultation Hubs	1,659.50	375.40	23
For Capacity Building and Training for ECRP-II components	117.02	40.92	35
Total	**36,671.11**	**12,902.41**	**35.18**

(Source: Data furnished by NHM, Odisha)

- The expenditure on establishment of dedicated pediatric wards in DHHs and a Pediatric Centre of Excellence, in MCH/ State Hospital, was minimum, as only ₹7.19 crore (10.5 *per cent*) was spent, against the budgeted amount of ₹68.49 crore, even though the entire amount was to be utilised by March 2022. The intended infrastructure under the scheme, was yet to be created.
- In the six test-checked DHHs, there was an unspent balance of ₹14.08 crore, under ECRP-II, (DHH, Sundargarh, had no unspent amount), indicating that the funds, sanctioned to the DHHs, had not been utilised for the purpose for which they had been sanctioned and the unutilised amounts had been lying in bank accounts, *i.e.* outside the Government Account.
- Funds amounting to ₹274.24 crore, released to the State Project Management Unit, had been shown as expenditure by the NHM, Odisha without ensuring actual expenditure.

The H&FW Department stated (February 2023) that the expenditure against low performing activities had been improved and the budget was likely to be exhausted by March 2023.

6.3.2 Management of Dedicated Covid Care hospitals

Government of Odisha, in response to the Covid-19 pandemic, had established Dedicated Covid Hospitals (DCHs), across the districts in the State and issued (April 2020) Guidelines for operations of the DCHs. As per the Guidelines, the DCHs, managed by private hospitals, had to provide the necessary treatment, to the Covid patients who had been referred for admission by the District Collector/ Municipal authorities concerned. The private DCHs were to prepare bills for the expenditure incurred towards the treatment of patients admitted in

their hospitals, and submit the same, with supporting documents[133], to the Authorised Medical Officer (AMO) and the Authorised Person[134] (AP), designated by the State. After scrutiny and countersignature of the bills, by the AMO and the AP, they were forwarded to the District Collector/ Municipal Authority, for approval, who, in turn, released the payment, or sent the same to the funding agencies for payment.

In order to derive assurance that the expenditure had been incurred for the purpose for which the funds were intended, and no undue and excess payments had been made, Audit examined the related records/ documents of 18 DCHs, located in the districts of Khurda and Cuttack. It was noticed that 51,967 Covid patients had been treated in these 18 DCHs in the first two waves of the Covid-19 pandemic, and ₹724.50 crore had been incurred for the purpose. Audit observed the following in this regard:

6.3.2.1 Irregularities in payment of ₹144.88 crore to DCHs

The bills submitted by the eight DCHs, out of the 18 test-checked DCHs, had not been properly scrutinised by the AMO, for ensuring that the claims of the DCHs, for expenditure incurred towards the treatment of Covid-19 patients, were in order and, as per the Guidelines. The irregularities, noticed in passing the bills for payment, without proper check/ verification of documents, are discussed in **Table 6.7.**

Table 6.7: Irregularities in the bills claimed by the DCHs (₹ in crore)

Sl. No.	DCH	Period of claiming bill	Amount paid (in ₹ crore)	Irregularities observed
1	Sum Hospital, Bhubaneswar	1 April 2021 to 31 January 2022	78.67	The DCH had submitted an abstract of the bills to the Bhubaneswar Municipal Corporation (BMC), without verification and countersignature by the AMO and Authorised Person. The BMC has approved the claims for payment without verifying the actual number of patients admitted, type of beds availed by the patients, and patient-wise claims, *etc*. Payment was made to the DCH, based on the abstract of the bills.
2	Hi-Tech Hospital, Bhubaneswar	24 August 2020 to 28 February 2022	15.69	The DCHs had not submitted the required patient-wise documents, along with the consolidated bills, to the AMO. The AMO had signed the bills without verification of patient-wise data, like the type of beds, number of days stayed, in each bed, *etc*. The bills had then been submitted to BMC, without the countersignature of the Authorised
3	Blue Wheel Hospital, Bhubaneswar	23 September 2020 to 31 July 2021	7.75	
4	KIIDS, Bhubaneswar	14 September 2020 to 15 July 2021	7.36	

[133] (i) Copy of case sheets, mentioning the name, age, sex, address, contact number; referral slips, if applicable, (ii) Approval letter of the AMO, for admission of the patients, (iii) Discharge summary, indicating the clinical findings, (iv) Detailed procedure followed during hospitalisation, (v) Reports of all investigations and (vi) Final bills, indicating the details of claims

[134] The term 'Authorised Person' refers to an OAS Officer, who was to verify and countersign the bills, after scrutiny by the Authorised Medical Officer

Sl. No.	DCH	Period of claiming bill	Amount paid (in ₹ crore)	Irregularities observed
5	Sanjeevini Hospital, Bhubaneswar	26 May 2021 to 15 July 2021	0.93	Person and BMC passed the bills for payments.
6	Aditya Ashwani Hospital, Bhubaneswar	27 July 2020 to 27 February 2022	29.27	
7	Sparsh Hospital, Kantabada, Bhubaneswar	28 April 2021 to 21 July 2021	4.91	
8	Sun Hospital, Cuttack	08 September 2020 to 22 September 2020	0.30	The category of beds *i.e*. General, High Dependency Unit, ICU, ICU with ventilator had not been mentioned in the bills. Individual case records of patients were not available. The bills had been paid in the absence of these essential/basic details, which determine the quantum of consumable charges to be claimed.
	Total		**144.88**	

(Source: Bills submitted by the eight test-checked DCHs)

No reasons or justification had been recorded, as to how the officials processing the bills, had satisfied themselves of the veracity of charges claimed, in the absence of the required documents. Thus, payment of ₹144.88 crore to the DCHs, without verification of basic documents/ records, was irregular.

The H&FW Department assured (February 2023) to take steps to inquire into the matter to establish the factuality and to take appropriate action.

6.3.2.2 Non-deduction of the cost of PPE kits: ₹2.73 crore

Government of Odisha had standardised (August 2020) the rates for disbursement of different consumable/ variable charges [135] in the DCHs, according to the categories[136] of beds.

Audit noticed that the OSMCL had supplied PPE[137] kits to 10 private DCHs, in the Khurda and Cuttack districts, costing ₹2.73 crores, as detailed in **Table 6.8**.

Table 6.8: Non-deduction of cost of PPE kits distributed to DCHs

Sl. No.	DCH	District	Number of PPE Kits supplied	Rate per PPE Kit	Cost of PPE kits supplied (in ₹)
1	Srusti Hospital	Cuttack	4,100	798.54	32,74,046.00
2	Ashwini Hospital	Cuttack	6,856	987.87	67,72,861.00
3	South Point Hospital	Cuttack	496	1,037.86	5,14,778.00
4	Sun Hospital	Cuttack	410	1,000.66	4,10,272.00

[135] 'Consumable charges' included the cost of medicines; toiletries, diet, investigations, dead body transportation and disposal, PPE kits, *etc*. The rates of consumable charges per day per bed, were General bed: ₹1,750; HDU: ₹10,000; ICU bed: ₹12,000; ICU with ventilator: ₹13,000

[136] General, HDU, ICU, ICU with Ventilators

[137] PPE- Personal Protective Equipment

Sl. No.	DCH	District	Number of PPE Kits supplied	Rate per PPE Kit	Cost of PPE kits supplied (in ₹)
5	Blue Wheel	Khurda	100	1,087.47	1,08,747.00
6	KIDS Hospital	Khurda	100	1,037.86	1,03,786.00
7	KIMS Hospital	Khurda	500	1,087.00	5,43,500.00
8	SUM Hospital	Khurda	1,450	1,058.66	15,35,057.00
9	Aditya Ashwini	Khurda	11,760	1,087.47	1,27,88,647.00
10	Neelachal Hospital	Khurda	1,200	1,037.00	12,44,400.00
	Total		**26,972**		**2,72,96,094.00**

(Source: Data provided by the test-checked DCHs)

Despite the fact that PPE kits had been supplied free of cost, to the DCHs, by OSMCL, the DCHs had not deducted the cost of the PPE kits from their bills, which had been submitted to the Collectors/ Municipal authorities, for payment. These irregular claims of consumable charges, against the PPE kits, had not been reduced from the bill amounts by the AMOs/ Authorised Persons, while forwarding the claims. Resultantly, there had been excess payment of ₹2.73 crore, to the DCHs.

While the BMC did not respond to the audit observation, the Cuttack Municipal Corporation stated that the cost of the PPE kits would be deducted from the pending bills.

6.3.2.3 Inadmissible payments of ₹2.62 crore to M/s Ashwini Hospital

Audit examined the bills, submitted by M/s Ashwini Hospital, Cuttack, for the period from April 2020 to December 2020, and noticed the following irregularities:

- In 315 cases, the hospital had submitted bill, in which the same bed numbers and periods of treatment, had been repeated across multiple patients.
- The patients' individual documents, submitted along with the bills, also specified that some of them had been assigned the same bed numbers, for the same periods of treatment.
- Such duplication had been overlooked by the AMO, AP, the Office of the District Collector and the Odisha Mining Corporation (the funding agency), while examining the claims, resulting in irregular payment of ₹2.62 crore.

The District Collector, Cuttack, had endorsed the response of the concerned DCH, which stated that:

- The bed numbers, referenced in the documents, accompanying the bills, had been duplicated, since new beds had been added, to increase the bed strength of the DCH.
- A particular bed number could also refer to a new bed, adjacent to an existing numbered bed, which had not existed earlier.

The response of the DCH was not tenable as the DCH was unable to produce any document in support of the above assertion. Further, the existence of duplicate bed numbers, due to such constraints, had neither been reported, nor

disclosed, previously, to any authority, prior to the receipt of the Audit observation.

6.3.2.4 Irregular payment of ₹ 93.87 lakh to M/s Neelachal Hospital

According to GoO instructions (July 2021), the District Collector, Khurda, had intimated (6 July 2021) M/s Neelachal Hospital, to close its DCH, by 15 July 2021, and had categorically instructed it not to admit any new patients, from 6 July 2021 onwards, as also to shift its patients, who were under treatment, to the nearest Government Covid hospitals.

M/s Neelachal Hospital, however, requested (13 July 2021) the Collector for extension of its operations as a DCH, till 31 July 2021. The Collector, Khurda, accorded it further extension, up to 31 July 2021, with instructions to transfer its patients, who were in general beds, to the nearby hospitals, immediately.

Audit noticed that:

- The DCH had not taken any steps for transfer of its 12 patients in general beds, to the nearby hospitals. Instead, the DCH had claimed occupancy of HDU beds, for 10 of these patients, for the entire period of their stay, ranging from 25 to 48 days. Similarly, the DCH had also claimed ICU beds, for the other two patients, for periods of 30 days and 46 days.
- The DCH had also claimed occupancy of seven patients, in ICU beds, for the entire periods of their stay, ranging from 27 to 46 days. The same patients had earlier been reported to be in HDU beds.

In this light, *prima facie*, the DCH had irregularly claimed payments amounting to ₹93,86,500 (***Appendix 6.1)***. The concerned authorities (AMO, Authorised Persons, *etc*.) had also not noticed such irregularities, while examining the claims, which had led to irregular payment of ₹93,86,500, to M/s Neelachal Hospital.

The H&FW Department assured (February 2023) to take steps to inquire into the matter to establish the factuality and to take appropriate action.

6.3.2.5 Excess payments of ₹55.20 lakh to M/s Hi-Tech Hospital

Due to decline in the number of patients at the end of the first wave of Covid-19, BMC reduced (November 2020) the general bed strength, from 110 to 70, in case of the DCH, operated by M/s Hi-Tech Hospital. The reduced bed strength, was to be effective from 16 November 2020, for claims towards fixed charges[138].

Audit, however, noticed that the DCH had continued to claim fixed charges for 110 beds, instead of the reduced bed strength (70 beds), against the orders of the BMC. Thus, the DCH had claimed fixed charges for 40 beds (110-70) more, at ₹3,000 per bed per day, from 16 November 2020 to 31 December 2020. This irregularity had not been noticed/highlighted by the AMO, Authorised Person and the BMC, while examining these claims. Resultantly, there was excess payment of ₹55.20 lakh, to M/s Hi-tech Hospital, as detailed in **Table 6.9**.

[138] Fixed bed charges per bed per day**:** General bed: ₹3,000; HDU bed: ₹ 3,500; ICU bed: ₹ 5,000; Neonatal ICU bed:₹ 4,500; Dialysis ICU bed: ₹ 5,000; Maternity bed: ₹ 3,000

Table 6.9: Excess payment to M/s Hi- Tech Hospital

Period	Bed charges paid		Bed charges due		Excess amount Paid (in ₹)
	Number of beds	Amount paid(in ₹)	Number of beds	Amount due (in ₹)	
16-30 November 2020 (15 days)	110	49,50,000	70	31,50,000	18,00,000
1-31 December 2020 (31 days)	110	1,02,30,000	70	65,10,000	37,20,000
Total		**1,51,80,000**		**96,60,000**	**55,20,000**

(Source: Records of the DCH)

The H&FW Department assured (February 2023) to take steps to inquire into the matter to establish the factuality and to take appropriate action.

6.3.2.6 Excess payment of ₹85.27 lakh for claim of fixed charges

In view of the decline in Covid-19 cases, at the end of the second wave (July 2021), BMC instructed two DCHs, *i.e.*, M/s Hi-Tech Hospital, Bhubaneswar and Sanjeevani Hospital, Bhubaneswar, to reduce their bed strengths from 1 July 2021.

Audit, however, noticed that the DCHs had misinterpreted the "reduction by" clause in the BMC communication, as "reduction to" and had claimed fixed charges for more number of beds, during the period from 1July to 15 July 2021, resulting in excess payment of ₹85.27 lakh, as detailed in **Table 6.10**.

Table 6.10: Excess payments made to the DCHs

Hospital	Bed category	Number of beds					Excess payment[139] (in ₹)
		Existing	Reduced by	For which claims to be made	For which claims made	Excess claimed	
Hi-Tech Hospital	General	110	87	23	87	64	28,80,000
	Neonatal ICU (NICU)	6	5	1	5	4	2,70,000
	Dialysis	10	9	1	9	8	6,00,000
	Maternity	50	50	0	50	50	22,50,000
	Total						**60,00,022**
Sanjeevani Hospital	General	43	38	5	38	33	14,85,000
	HDU	33	25	8	25	17	8,92,500
	ICU	24	13	11	13	2	1,50,000
	Total						**25,27,500**
Grand Total							**85,27,522**

(Source: Records of BMC)

This irregularity had not been noticed/highlighted by the Authorised Medical Officers, Authorised Persons and the BMC, while examining the claims, submitted by M/s High Tech Hospital and M/s Sanjeevani Hospital, and the bills had been paid.

The H&FW Department assured (February 2023) to take steps to inquire into the matter to establish the factuality and to take appropriate action.

6.3.2.7 Excess payment of ₹86.49 lakh due to non-reduction of bed capacity

The DCH of M/s Blue Wheel Hospital, Bhubaneswar, was functional from 23 September 2020, with 60 General beds, as per its agreement, drawn up (September 2020) with the BMC. Similarly, the DCH of M/s Neelachal Hospital

[139] Calculated on the basis of excess number of beds claimed* fixed bed charges (as given in footnote 13) x 15 days (1 July 2021 to 15 July 2021)

was running with 126 General beds, as per the agreement entered into (July 2020) with the Collector, Khurda.

In view of the decline in Covid-19 cases, at the end of the first wave (October 2020), Government of Odisha decided (15 October 2020) to rationalise the use of General beds, by reducing 50 *per cent* of the approved capacity, in the DCHs which had a bed occupancy of less than 50 *per cent,* during the previous two weeks.

As on 15 October 2020, M/s Blue Wheel Hospital had bed occupancy for 676 bed-days for General beds, against the approved capacity of 1,380 bed days, during the previous two weeks; while the bed occupancy of the DCH, operated by M/s Neelachal Hospital, had been 920 bed-days, against 1,890 approved bed-days, during the previous two weeks.

Since the two DCHs of M/S Blue Wheel Hospital and Neelachal Hospital, had less than 50 *per cent* bed occupancy in General beds, as on 15 October 2020, the bed capacity, of both the hospitals, was to be reduced to 30 and 63 respectively, with effect from 16 October 2020.

Audit, however, noticed that, the bed capacity had not been reduced in either case, as evidenced from the succeeding two bills, submitted by these DCHs, leading to excess payment of ₹86.49 lakh towards fixed charges (₹3,000 per bed per day), as per details given in **Table 6.11.**

Table 6.11: Excess payment of fixed charges (Amount in ₹)

Hospital	Period	Amount paid for 60 beds	Amount due for 30 beds	Excess paid (in ₹)
Blue Wheel Hospital	16 -31 October 2020	28,80,000	14,40,000	14,40,000
	1-15 November 2020	27,00,000	13,50,000	13,50,000
		Amount paid for 126 beds	**Amount due for 63 beds**	
Neelachal Hospital	16 -31 October 2020	60,48,000	30,24,000	30,24,000
	1-15 November 2020	56,70,000	28,35,000	28,35,000
Total		**1,72,98,000**	**86,49,000**	**86,49,000**

(Source: Bills claimed by the DCHs)

This irregularity had not been noticed/ highlighted by the AMO/ Authorised Persons and the concerned authorities, prior to passing the claimed bills.

The H&FW Department assured (February 2023) to take steps to inquire into the matter to establish the factuality and to take appropriate action.

6.3.2.8 Excess payment of ₹23.34 lakh to M/s Aditya Ashwini Hospital

The Bhubaneswar Municipal Corporation signed (July 2020) an agreement, with M/s Aditya Ashwini Hospital, for operating a DCH with 99 General beds, 21 HDU beds and 30 ICU beds.

The H&FW Department standardised (August 2020) the rate of consumable charges for General beds as ₹1,750 per day and for ICU beds as ₹12,000 per day (no rate was specified for HDU beds). Government of Odisha also clarified (August 2020) that, if the payments towards consumable charges had already been made, on the basis of the actual expenditure incurred, then the same would be applicable and these standardised rates would not be applicable for the prior period.

M/s Aditya Ashwini Hospital submitted (21 August to 2 September 2020) claim bills towards consumable charges, for HDU beds, for the period from 27 July 2020 to 31 August 2020, at the rates fixed for General beds, *i.e*. at ₹1,750 per day, which was certified by the AMO.

Subsequently, the Government of Odisha fixed (October 2020) the per day consumable charges for HDU beds, at ₹10,000 per bed.

M/s Aditya Ashwini Hospital, then submitted (September 2020) the arrear claims, for consumable charges, for HDU beds, as per details in **Table 6.12**.

Table 6.12: Excess payment to M/s Aditya Ashwini Hospital

Period	Number of HDU bed-days	Consumable charges previously claimed (₹1,750 per day)	Differential amount claimed, as arrears (₹ 8,250 per day)
27 July-15 August 2020	40	70,000	3,30,000
16-31 August 2020	243	4,25,250	20,04,750
Total	**283**	**4,95,250**	**23,34,750**

(Source: Claim bills of the DCH)

Thus, the DCH had claimed arrears for the previous period, which had already been settled at ₹1,750 per HDU bed per day, as certified by the AMO. Since the expenditure itself was lower than or equal to ₹1,750 per day, as certified previously, submission of arrear claims, for the same period, with higher consumable charges, on *post-facto* basis, was irregular, resulting in excess payment of ₹23.34 lakh, to M/s Aditya Ashwini Hospital.

The Bhubaneswar Municipal Corporation did not respond to the Audit observation.

6.3.2.9 Inadmissible payment of ₹36.72 lakh, by showing more bed occupancy

Government of Odisha had standardised the consumable charges per bed per day, which were to be paid to the hospitals on the basis of occupancy of bed-days, as approved by the Government.

It was noticed that M/s SUM Hospital had claimed 3,911 bed-days, against 3,750 bed-days approved for the month of September 2020. Similarly, M/s Aditya Ashwini Hospital had claimed 2,455 bed days, against 2,310 bed-days approved for the period from August 2020 to October 2020. Thus, there was excess claim for 306 bed days, involving an extra payment of ₹36.72 lakh, as detailed in ***Appendix 6.2***.

This irregularity had not been noticed/ highlighted, by the AMO/ Authorised Person, examining the claims. As a result, excess amount of ₹36.72 lakh had been paid for 306 bed days (₹12,000 per bed, per day), with the hospitals having claimed 6,366 bed days, against the prescribed limit of 6,060 bed days.

The H&FW Department assured (February 2023) to take steps to inquire into the matter to establish the factuality and to take appropriate action.

6.3.2.10 Irregular payment to non-NABH accredited hospitals

The H&FW Department, had issued (April 2021) an advisory for provisioning at least 50 *per cent* of the beds, in private hospitals having 30 or more beds, for treatment of Covid-19 patients. In the said advisory, the rates had been fixed for

both, NABH (₹3,000 for general bed and ₹5,000 for ICU bed) and non-NABH (₹1,200 for general bed and ₹2,000 for ICU bed) accredited hospitals. In Cuttack District, the CMC activated four DCHs (April 2021), in private hospitals, for the treatment of Covid-19 patients. The dates of activation and the number of beds, for which fixed costs were paid, are detailed in **Table 6.13.**

Table 6.13: DCHs with sanctioned beds in Cuttack

Hospital	Date of activation	Number of beds	Fixed cost paid (in ₹)
Unique Hospital	1 May 2021	20 ICU,18 HDU and 5 General Beds	1,77,56,000
Om Subham Hospital	5 May 2021	20 ICU, 28 HDU and 12 General beds	3,28,57,000
Mediera Hospital	4 June 2021	25 ICU beds, 60 HDU beds, 40 General beds and 2 dialysis bed	2,20,80,000
Rudra Hospital	5 May 2021	30 ICU, 30 HDU and 2 OT beds	3,36,37,500
Total			**10,63,30,500**

(Source: Records of the test-checked DCHs)

Audit noticed that:

- No formal agreements or MoUs had been signed with these four Hospitals, in compliance with the H&FW Department letter (April 2020), even on *post-facto* basis.
- No Technical Committee, under the District Collector, for finalising the fixed cost charges, had been constituted, although this was required under the Guidelines for operations of the DCHs, issued by the State Government.
- The basis on which the number and types of beds had been made operational, as well as the rates for fixed expenses to be claimed, were not found available on record.

These four DCHs, had, however, claimed the fixed expenses at the maximum rate *i.e.,* ₹3,000 for general beds and ₹5,000 for ICU beds, even though these hospitals were not NABH accredited.

Accepting the claims at higher rates, in the absence of: (i) a formal MoU, (ii) report of the Technical Committee and (iii) NABH accreditation, led to irregular payments to the DCHs.

The H&FW Department assured (February 2023) to take steps to inquire into the matter to establish the factuality and to take appropriate action.

6.3.2.11 Excess payment of ₹2.85 crore towards Diet Allowance

The H&FW Department, fixed (July 2020) the rates for daily diet allowance, for doctors and paramedical staff, engaged in the DCHs, at ₹240 per day. Audit observed the following in this regard:

(i) Eight DCHs

During Joint Physical Inspection, conducted (during May 2022 and September 2022) by Audit, with the BMC/ CMC and DCH staff, it was noticed that the number of doctors and paramedical staff actually deployed, was less, as compared to the claims submitted by the DCHs. The percentage of doctors and paramedical staff actually deployed ranged between 43 to 81 *per cent* of the

number of doctors and paramedical staff, against which payments had been claimed, as detailed in **Table 6.14.**

Table 6.14: Irregular payments made towards diet allowance (Amount in ₹)

DCH	Period of claim	Number of doctors/ paramedics		Actual amount due	Amount paid	Excess amount paid
		for whom claimed	actually available (*per cent*)			
Sadguru	24 August to 31 December 2020	214	105 (*49*)	32,76,000	66,72,979	33,96,979
	4 May to 31 July 2021	257	143 (*56*)	30,54,480	54,79,920	24,25,440
Srusti	12 September to 31 December 2020; and 21 April to 19 August 2021	154	86 (*56*)	47,88,480	85,72,800	37,84,320
Unique	1 May to 31 July 2021	73	59 (*81*)	13,02,720	16,13,520	3,10,800
Mediera	4 June to 10 August 2021	177	97 (*55*)	15,83,040	28,86,480	13,03,440
Om Subham	5 May to 31 July 2021	152	82 (*54*)	17,31,840	32,12,640	14,80,800
South Point	26 April to 6 August 2021	316	170 (*54*)	42,02,400	78,06,240	36,03,840
Rudra	7 May to 4 August 2021	173	84 (*49*)	18,14,400	37,31,280	19,16,880
Neelachal	26 July to 22 December 2020	210	99 (*47*)	35,64,000	75,71,520	40,07,520
	20 April to 31 July 2021	287	124 (*43*)	30,65,280	71,06,400	40,41,120
	Total					**2,62,71,139**

(Source: Bills of the eight DCHs)

As a result, there was excess payment of ₹2.63 crore, which had not been noticed/ highlighted by the AMO, Authorised Person and other concerned authorities, prior to their having passed the claims.

The Cuttack Municipal Corporation stated that the bills had been paid as per the proposal of its Health Officer. The response was not tenable, since there was excess payment of Diet Allowance, which was intended for the doctors and paramedical staff who were actually on duty, during the period of the Covid-19 outbreak.

The H&FW Department assured (February 2023) to take steps to inquire into the matter to establish the factuality and to take appropriate action.

(ii) Ashwini Hospital

Further, M/s Ashwini Hospital, Cuttack, submitted a bill of ₹74,72,556, to Odisha Mining Corporation Limited, through the Collector, Cuttack, on 1 February 2021, towards Diet Allowance of the doctors and paramedical staff engaged in its DCH, for the period April-December 2020. The hospital received its payment, on 6 June 2021. The bill included payment of Diet Allowance, at the fixed rate of ₹240 per day, for the period from April 2020 to 12 July 2020, *i.e.* prior to the H&FW Department's order. In the order, it was clearly mentioned that the rates were applicable with prospective effect. However, the hospital had claimed the Diet Allowance of Doctors and Paramedics,

retrospectively. As such, there were irregular claims and payment of ₹22.04 lakh, for the above period, as detailed in **Table 6.15.**

Table 6.15: Irregular diet allowance paid to Ashwini Hospital

Sl. No.	Month	Total Number of staff	Rate per day	Amount (in ₹)
1	April 2020	2,008	240	4,81,920
2	May 2020	2,492	240	5,98,080
3	June 2020	3,336	240	8,00,640
4	1-12 July 2020	1,351	240	3,24,240
Total				**22,04,880**

(Source: Bills furnished by Ashwini hospital, Cuttack)

The District Collector, Cuttack, endorsed the response of the Ashwini Hospital, which stated that the claim had been submitted as per the H&FW Department's Order (13 July 2020). The response was not tenable, since the order was not effective retrospectively and, in this light, the bill claimed by M/s Ashwini Hospital was irregular.

The H&FW Department assured (February 2023) to take steps to inquire into the matter to establish the factuality and to take appropriate action.

6.3.2.12 Irregular payment of ₹4.73 crore to M/s Neelachal Hospital

As per the SOP issued (2018) by the H&FW Department, for the management of patients in Intensive Care Units, in Government and Private hospitals, patients were to be shifted to Wards, once they became normal, and priority was to be given to new emergency patients. Patients, who had become stable were not to be kept in the ICU, to reduce unnecessary psychological and financial burden, to patients and families.

Audit noticed that the patients at Neelachal Hospital had been discharged from ICU/ HDU beds directly, without their having been transferred to General wards. As the charges for ICU beds per day were higher than the charges for the General beds, the possibility of higher rates, as fixed for ICU or HDU beds, having been claimed cannot be ruled out.

Scrutiny of the bills submitted by M/s Neelachal Hospital, for the period from 26 July 2020 to 15 August 2021, indicated that, in 332 cases, patients had been discharged directly from ICU beds/ ICU with Ventilator beds, without having been stepped down to HDU/ General beds, even for a day. This fact had not been noticed/highlighted by the AMO, Authorised Person and the concerned authorities, while examining the claims.

In none of these 332 cases, the patients had been referred to any other hospitals. During its visit (1 September 2022) to the DCH, with the hospital staff, Audit test-checked 50 individual case files of such patients and found that the categories of beds, for these patients, had not been indicated in the individual case files, and the exact dates of discharge of these test-checked cases had also not been maintained.

Thus, Audit was unable to derive assurance that these patients had, in fact, occupied ICU/ ICU with ventilator beds and was unable to find any supporting document or reasonable explanation, for reporting the direct discharge of patients, from ICU/ ICU with ventilator beds, from the DCH.

Therefore, the claim made by M/s Neelachal Hospital, in these 332 cases, involving payment of ₹4.73 crore, was untenable and irregular.

The H&FW Department assured (February 2023) to take steps to inquire into the matter to establish the factuality and to take appropriate action.

Chapter 7

Implementation of Central and State sector health schemes

CHAPTER 7

Implementation of Central and State Sector Health Schemes

Implementation of the disease control programmes under NHM, in the State, suffered from inadequate manpower, low spending efficiency, etc., impacting programme outcomes adversely. The State suffered from shortage of human resources, in critical positions, at the district level, affecting successful implementation of the programmes. The activities approved in Programme Implementation Plans for implementation of various disease control programmes, were not carried out fully to achieve the desired goals/ targets set in the National Health Policy/ SDGs.

7.1 National Health Mission

The National Health Mission (NHM) is a flagship programme of the Government of India. The programme aims at 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 realizing 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 and management of health services, including maternal and child healthcare, in the State, has been discussed in the previous chapters, implementation of some disease control programmes under NHM, is discussed in this Chapter.

7.1.1 National Mental Health Programme

The National Mental Health Programme (NMHP) aims to provide minimum mental healthcare for all and to reduce the stigma and discrimination attached towards mentally ill persons. The NHM Framework, 2012-17, envisaged that the district hospitals should, *inter alia*, provide outpatient services, inpatient services, child mental health services, specialist and counseling services, *etc*. Promotion of mental health is also one of the targets under SDG -3.

Audit observed deficiencies in the implementation of the mental health programme, in the State, as discussed below:

7.1.1.1 Mental Health Rules, not framed

As per Section 121 (2) of the Mental Healthcare Act, 2019, the State Government, by notification, may make rules for carrying out the provisions of the Act with the approval of the Central Government.

Audit noticed that the State had framed the draft 'Odisha Mental Health Rules, 2019' and sent (August 2019) the same to the GoI, for approval. The draft Rules had not been approved by the GoI till date (November 2022). Due to want of approval from the GoI, the State Rules for mental health services have not come out so far.

The State, had, however, prepared the Operational Guidelines for NMHP 2019-20, with the objectives of promoting mental wellbeing; preventing mental disorders; and reducing mortality, morbidity and disability of persons with mental disorders, *etc*.

7.1.1.2 Availability of human resources under NMHP, in the State

Guidelines for the NMHP and the NHM Framework, 2012-17, envisage the provision of required manpower, such as Psychiatrists, Clinical Psychologists, Psychiatric Nurses, Counselors, *etc*. Audit observed that availability of human resources in the State, for implementation of the programme, was quite inadequate, as shown in **Table 7.1**. The full strength of required staff, was not available in any of the categories, except for the 'Programme Officer' category.

Table 7.1: Manpower position under NMHP

Name of the Post	Requirement	Available
Psychiatrist	30	14
Programme Officer	3	3
Clinical Psychologist	30	18
Psychiatric social worker	30	20
Psychiatric Nurse	30	4
Community Nurse	30	25
Record keeper	30	20

(Source: Data provided by the Director of Public Health, Odisha)

Most of the posts under NMHP were also found vacant in the test-checked districts. There was acute shortage of Psychiatrists and Psychiatric Nurses in the DHHs, as detailed in **Table 7.2**.

Table 7.2: Availability of manpower under NMHP in the test-checked DHHs, as of March 2022

DHH	Psychiatrist	Clinical Psychologist	Psychiatric Social Worker	Psychiatric Nurse	Community Nurse	Record Keeper
Bhadrak	No	Yes	Yes	No	Yes	No
Dhenkanal	No	Yes	No	No	Yes	No
Kandhamal	Yes	Yes	Yes	No	Yes	Yes
Nabarangpur	No	No	Yes	Yes	Yes	No
Nuapada	No	Yes	Yes	No	No	No
Puri	Yes	Yes	Yes	No	Yes	No
Sundargarh	No	No	Yes	No	Yes	No

(Source: Data obtained from the test-checked DHHs)

Due to scarcity of skilled mental health professionals, the quality of mental healthcare provided in the State, was compromised.

The Director of Public Health, Odisha, attributed (March 2022) the shortage of manpower to delay in recruitment at the district level. The fact, however, remained that the posts had been lying vacant for years together, and even the Psychiatrists had not been posted in many districts, though they were to be recruited at State level by the H&FW Department/ NHM, Odisha.

7.1.1.3 Patient care services for persons with mental illness

Audit noticed that:

- Psychiatric OPD services were available in all the test-checked DHHs. The services were, however, provided partially on the basis of fixed day approach, by deputing psychiatric specialists from other hospitals for four days in a month.
- IPD services for persons with mental illness were not available in four (Bhadrak, Dhenkanal, Kandhamal and Nabarangpur) of the seven test-checked DHHs, though 5,181 patients were under treatment during 2021-22. IPD services were, however, available in three DHHs (Nuapada, Puri and Sundargarh).
- Dedicated psychiatric wards were not available in any of the seven test-checked DHHs, as of March 2022, although NMHP had envisaged the establishment of a 10-bedded ward in each district hospital. Subsequently, one 10-bedded psychiatric ward was established in DHH, Sundargarh, only in June 2022. In the absence of separate wards, psychiatric patients were treated in general wards, which was neither appropriate, nor envisaged under the NMHP.

7.1.1.4 Low spending efficiency

Audit noticed that NHM had received ₹6.17 crore during 2016-22, against the demand of ₹26.82 crore made by the State Government, for implementation of the NMHP in the State. The total funds available with the NHM during 2016-22, were ₹17.96 crore, including unspent balance of ₹9.84 crore, pertaining to previous years and an interest amount of ₹1.95 crore. Out of this available amount, ₹11.02 crore (61 *per cent*) was spent, leaving a closing balance of ₹6.94 crore, as of March 2022.

The year-wise details of funds received during the period from FYs 2016-17 to 2021-22, are shown in **Table 7.3.**

Table 7.3: Receipt and Expenditure under NMHP, during FYs 2016-17 to 2021-22

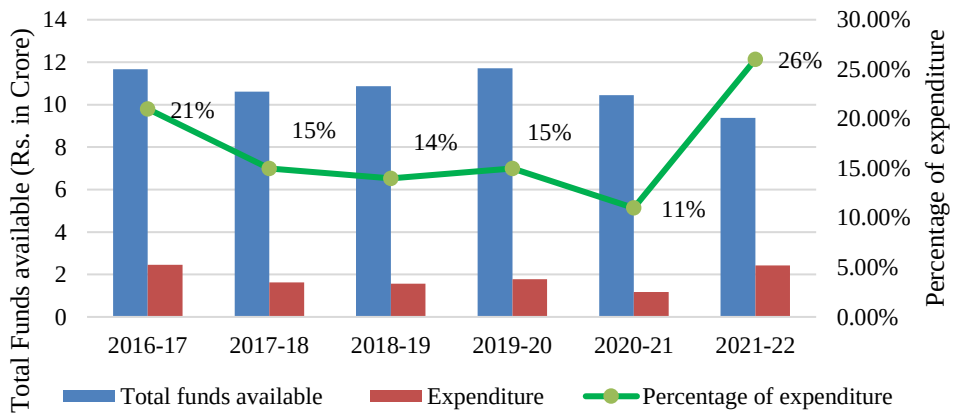
(₹ in crore)

Financial Year	Opening Balance	Funds received	Interest	Total funds available	Expenditure	Closing Balance
2016-17	9.84	1.50	0.33	11.67	2.45	9.22
2017-18	9.22	1.14	0.26	10.62	1.63	8.99
2018-19	8.99	1.50	0.38	10.87	1.56	9.31
2019-20	9.31	2.03	0.37	11.71	1.78	9.93
2020-21	9.93	0	0.52	10.45	1.17	9.28
2021-22	9.28	0	0.09	9.37	2.43	6.94
TOTAL		**6.17**	**1.95**	**17.96**	**11.02**	

(Source: Data furnished by the NHM, Odisha)

The year-wise expenditure during this period, ranged between 11 and 26 *per cent* of the available funds as shown in **Chart 7.1**.

Chart 7.1: Percentage expenditure of available funds under NMHP during 2016-22



(Source: Date furnished by NHM, Odisha)

This indicated poor spending efficiency on part of the State. The low expenditure was due to non-deployment of required staff by the districts and non-execution of the activities approved in the PIP.

DPH, Odisha, attributed the low expenditure to non-completion of approved activities, such as training of ASHAs, Paramedics, *etc*., due to want of skilled mental health professionals in the district.

Thus, implementation of NMHP in the State was deficient in terms of manpower, infrastructure and utilisation of funds for approved activities, impacting programme outcomes. The number of PwMIs under treatment had increased from 15,608 in 2016-17 to 48,640 in 2021-22, with no change in the cure rate of patients, which remained at seven to nine *per cent*, during the period from FYs 2016-17 to 2021-22.

The H&FW Department stated (February 2023) that low spending was due to lack of skilled mental health professionals. It further added that orders had been issued to deploy psychiatric specialist and clinical psychologists from nearby MCHs, to provide mental health service at district level, till finalisation of the recruitment process.

Recommendation 7.1:

State Government may review the manpower position relating to mental health professionals and fill up the vacancies there against, with a view to ensuring quality mental healthcare services to patients, under the programme.

7.1.2 National Programme for the Health Care of the Elderly

The National Programme for Health Care of the Elderly (NPHCE) was launched to provide separate and specialised comprehensive healthcare to senior citizens. A 10-bedded Geriatric ward was to be set up in each DHH for this purpose. Dedicated and specialised Geriatric Clinics were to be formed at the DHH/ CHC/ PHC levels, with availability of equipment, drugs, laboratory services, *etc*.

Scrutiny of records showed that implementation of NPHCE in the State was poor, due to lack of manpower, infrastructure, etc., for providing committed geriatric services, as discussed below:

- Against the requirement of 60 consultants (Medicine) in the State, only 33 (55 *per cent*) were in position. Similarly, 48 *per cent* of the Nurses required under the programme, were not available. DPH, Odisha, stated (June 2022) that the shortage of manpower was being managed by the hospital staff, in an integrated manner. The fact, however, remained that no dedicated staff, as envisaged in the guidelines, was deployed to provide appropriate healthcare services to elderly people, even though there were no specific fund constraints under the programme.
- Dedicated Geriatric clinics, for OPD services, were not available in the test-checked hospitals.
- As per data provided by DPH, Odisha, dedicated geriatric wards were available in all the 32 DHHs of the State. Audit, however, found that dedicated geriatric wards were not available in five
- [140] out of the seven test-checked DHHs. Instances of utilisation of geriatric wards, for other purposes, were also noticed. The following were noted in this regard:
    - The Geriatric ward, constructed at DHH, Bhadrak, at a cost of ₹34.97 lakh, was being used as the Nutritional Rehabilitation Centre, since November 2019.
    - The Geriatric wards, constructed at DHH, Nabarangpur and Kandhamal, had been converted to ICUs, for these hospitals.
    - An amount of ₹40.54 lakh, allotted to DHH, Puri, for construction of Geriatric ward, had been refunded to NHM, Odisha, without establishing the ward.
- NHM, Odisha, had received ₹13.33 crore, during 2016-22, for implementation of the NPHCE programme, and had spent ₹10.02 crore (53 *per cent*), leaving ₹8.77 crore as closing balance, as on 31 March 2022. The year-wise receipt and expenditure under the programme during FYs 2016-17 to 2021-22 is given in **Table 7.4**.

Table 7.4: Receipt and Expenditure under NPHCE, during FYs 2016-17 to 2021-22

(₹ in crore)

Financial Year	Opening Balance	Funds received	Interest	Total funds available	Expenditure	Closing Balance	Percentage of expenditure
2016-17	4.02	2.07	0.20	6.29	0.70	5.59	11
2017-18	5.59	4.62	0.23	10.44	0.96	9.48	9
2018-19	9.48	2.09	0.38	11.95	2.20	9.75	18
2019-20	9.75	4.55	0.30	14.60	2.03	12.57	14
2020-21	12.57	0.00	0.29	12.86	1.89	10.97	15
2021-22	10.97	0.00	0.04	11.01	2.24	8.77	20
TOTAL		**13.33**	**1.44**	**18.79**	**10.02**		**53**

[140] Bhadrak; Nabarangpur; Puri; Dhenkanal; Kandhamal

(Source: Data provided by the NHM, Odisha)

It would be seen from above that the percentage expenditure under the programmes was between 9 and 20 *per cent*, as compared to the available funds, Thus, funds provided under the programme were not optimally utilised, indicating non-completion/ non-execution of the approved activities, by the implementing agencies.

- Equipment like examination tables, foot-steps, wheel chairs, adjustable walkers, partisan screens, patient stretchers on trollies and non-invasive ventilators (cost: ₹1.42 lakh), purchased during March 2022, by DHH, Bhadrak, were lying idle in the sub-store of the hospital, due to non-functioning of the Geriatric ward.

Thus, implementation of the NPHCE programme, for providing dedicated comprehensive healthcare to the elderly people of the State, was not adequate and efficient, despite availability of funds, indicating poor monitoring and supervision of the programme by the State and district authorities.

The H&FW Department stated (February 2023) that instructions would be issued for smooth implementation of the programme.

7.1.3 National Tuberculosis Elimination Programme

The major objective of the National Tuberculosis Elimination Programme (NTEP) is to attain the vision of a TB-free India, in line with the Global End TB targets and Sustainable Development Goals. The National Health Policy, 2017, aims to achieve and maintain a cure rate of more than 85 *per cent,* in new sputum positive patients for TB and to reduce the incidence of new cases, to reach elimination status by 2025.

On scrutiny of records, Audit noticed shortage in the availability of human resources for implementation of the programme in the State, as compared to the sanctioned strength. The shortage of manpower in various cadres, as of February 2022, is shown in **Table 7.5**.

- The maximum shortage was in the cadre of TB specialists (26 *per cent*), followed by TB Lab Supervisors (23 *per cent*). The posts of TB specialists had been lying vacant for more than three years, in the Koraput and Malkangiri districts.

- District TB Officers were not available in five [141] districts, for two to three years. Vacancy in key posts, for years together, hampers effective implementation of the programme.

Table 7.5: Manpower position under NTEP

Name of the post	Sanctioned strength	Availability	Percentage shortage
District TB Officer	31	26	16
TB specialist	27	20	26
TB Lab Supervisor	109	84	23
Treatment Supervisor	322	301	7
TB Health Visitor	64	60	6

(Source: Data obtained from the DPH, Odisha)

[141] Angul; Dhenkanal; Koraput; Malkangiri; Sundargarh

(ii) Receipt and Expenditure: During 2016-22, an amount of ₹235.35 crore was expended, out of the total available funds of ₹247.91 crore. The year-wise expenditure remained between 39 and 83 *per cent* of the total available funds during the year, indicating that approved programmes/ activities in the Programme Implementation Plans had not been optimally implemented/ executed, resulting in savings of the allocated funds. Low expenditure for the programme implies low intensity of NTEP activity implementation in the district.

(iii) Notification by Clinical Establishments: The National Strategic Plan (2017-25) emphasized effective engagement of the private sector, for achieving universal access to TB Care. As per GoI notification (March 2018), it is mandatory for the Clinical Establishments, Pharmacies, Chemists and Druggists, dispensing anti-tubercular medicine, to notify every tuberculosis patient to the local public health authority[142].

Audit noticed that only 9.4 *per cent* of the total 5,518 medical practitioners/ Clinics/ Hospitals/ Nursing Homes and 30.5 *per cent* of 583 laboratories in the State, had notified TB cases in 2021. Non-notification by the private sector, would result in under-reporting of TB cases in the State, thereby affecting proper planning, for achieving the goal of making India TB free, by the timelines set in the NHP/ SDGs.

(iv) Programme outcome: Supervision, monitoring and evaluation are crucial for successful implementation of the programme, to achieve progressive targets, set for making India, TB free. The status of the targets, and achievements in the State, are discussed below:

- The National Health Policy, 2017, aims to achieve and maintain a cure rate of more than 85 *per cent*, in new sputum positive patients for TB, and reduce the incidence of new cases, to reach elimination status by 2025. The cure rate in the State, during the period 2016-20, however, remained between 72 and 77 *per cent* of the new positive cases.
- Achievement in TB notification[143], during 2017-21, remained between 64 (2019) and 83 (2017) *per cent* of the targets fixed, with 80.7 *per cent* achievement in 2021. In the seven test-checked districts, Bhadrak was a poor performer, with 49 *per cent* of targeted notifications (1,660), while Kandhamal had 107 *per cent* achievement of the target (1,170).

  The treatment success rate, during 2017-2020, however, remained around 88.8 *per cent* of all diagnosed TB patients.
- All children below six years, diagnosed with TB, should be given chemoprophylaxis[144]. It was, however, noticed that only 48.7 *per cent* of the diagnosed children, had been given chemoprophylaxis in 2021.
- All TB patients, notified on or after 1 April 2018, including all existing TB patients registered/ notified on the *NIKSHAY*[145] portal, who are under

[142] Chief District Medical Officer/ Health Officer of the urban local bodies
[143] Process of reporting diagnosed TB cases to the health authorities. It is measured as the number of TB cases notified per 1,00,000 population
[144] Preventive treatment for children coming in contact with pulmonary TB patients
[145] Web based TB patient management portal of GoI

treatment, are eligible to receive incentives. It was found that, out of 2,01,223 TB patients, eligible for financial incentive during 2018-2021, 1,80,633 (90 *per cent*) patients had availed the financial benefit. Thus, 20,590 patients were left out of the scheme.

DPH, Odisha, assured (June 2022) that payments to the left-out beneficiaries would be made in the coming years.

Thus, implementation of the programme was deficient, with shortages of manpower and low expenditure, as well as inadequate monitoring and surveillance.

The H&FW Department stated (February 2023) that the concerned districts would be instructed to take early action for deployment of TB laboratory supervisors and the ADPHOs in the districts would be instructed to implement the programme smoothly. It further added that all the districts were reminded to execute all the approved programmes/ activities as per the PIP.

Recommendation 7.2:

State 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, as per NHP and SDG.

7.1.4 National Leprosy Eradication Programme

As per the NHM framework for 2012-17, the Leprosy Prevalence Rate was to be reduced to less than one, per 10,000 populations, and the incidence to zero, in all districts, by 2017. The said framework envisages complete elimination of the disease, as envisaged in SDG 2030, as also that, as an interim target, the Grade II disability (visible disability/ deformity) rate should be less than 2.

It was noticed that the State had not achieved these targets/ goals and the prevalence rate[146] had remained above one, over the years covered in this report.

Audit observed the following deficiencies in the implementation of the programme:

- There was acute shortage of manpower, in the State, for implementation of the programme. The availability of manpower, in the State, against the sanctioned strength, is given in **Table 7.6**.

Table 7.6: Manpower position under NLEP

Name of the post	Sanctioned strength	Available	Vacancy
District Leprosy Officer	31	14	17
Non-medical Supervisor	86	2	84
Para medical worker	405	54	351
District Leprosy Consultant	22	17	5

(Source: Data provided by the DPH, Odisha)
(Red colour denotes maximum vacancies; Green colour denotes less vacancies)

  - District Leprosy Officers (DLO), who are the key persons for monitoring various activities under the programme, were not

[146] Number of balance cases under treatment per 10,000 population

available in 16 districts, including six[147] high endemic districts with prevalence rates of more than one.

- In Boudh district, only one District Leprosy Consultant had been posted and no other staff were available, even though the district had the second highest prevalence rate (3.3) in the State.

Absence of required manpower, at the field level, impacted various activities, like screening and surveillance, case detection campaigns, treatment and rehabilitation activities, follow-up of patients for completion of treatment, etc.

DPH, Odisha, stated (March 2022) that proposal for filling up the vacant posts of DLO and DLC, had been sent (September 2021/ February 2022) to the Government and NHM, Odisha, respectively. It was further added that the posts of Non-Medical Supervisor and Paramedical worker, had been abolished, as the programme had been integrated with the general healthcare system.

- The Grade II disability (visible disability/ deformity) rate remained at 1.98 in 2019-20. It rose to 2.90 in 2020-21 and 2.99 in 2021-22. The increase in Grade II cases indicated low / poor screening of cases, during these years.
- Out of the available funds of ₹68.90 crore, ₹59.22 crore was utilised during 2016-22, with an unspent balance of ₹9.68 crore. The year-wise expenditure was between 39 and 62 *per cent* of the available funds, during 2017-22 and 93 *per cent* during 2016-17. Low spending of available funds indicated that programmes/ activities, approved in the PIP, had not been executed/ implemented optimally, resulting in savings of the allocated budget.

Thus, the activities/ programmes undertaken were not adequate for eradicating leprosy from the State.

The H&FW Department stated (February 2023) that necessary steps were being taken to achieve the targets of prevalence rate and decrease in Grade II disability cases.

Recommendation 7.3:

State Government may take effective steps for filling up the vacancies and implementing the activities under NLEP more efficiently, with focus on high-endemic districts to eliminate the disease from the State.

7.1.5 Implementation of the National Vector Borne Disease Control Programme

The National Vector Borne Disease Control Programme (NVBDCP) is the umbrella programme for prevention and control of vector borne diseases, *viz.* Malaria, Filariasis, Kala-azar, Japanese Encephalitis, Dengue and Chikungunya. The Directorate of NVBDCP had also developed National Strategic Plan (2017-22) with the strategy for phased elimination of malaria in

[147] Bargarh; Boudh; Dhenkanal; Kalahandi; Subarnapur; Sundargarh

the country. The total number of cases for vector borne diseases, in the State, during 2017-21, is given in **Table 7.7**.

Audit observed that the Annual Parasite Incidence (API) of malaria had reduced, from 7.76 in 2017, to 0.56 in 2021. During 2021, though the API was less than 1 at the State level, it had remained more than 1 in six[148] districts. Of these six districts, Boudh and Koraput were in the pre-elimination stage (API between 1 and 2), and four other districts were still in the intensified control category, with API more than 2. The goal set in the National Strategy Plan, to bring all districts under the elimination and pre-elimination stage (API less than one) by 2022, are yet to be achieved. Similarly, Dengue cases in the State had also increased, from 4,158 in 2017 to 7,548 in 2021.

Table 7.7: Number of cases during 2017-2021

Name of the disease	No. of cases	No. of deaths
Malaria	5,20,991	58
Filaria	4,25,072	NA
Japanese Encephalitis	450	2
Dengue	21,158	15
Chikungunya	53	0

(Source: Data provided by DPH, Odisha)

Audit also noticed shortage of manpower under the programme, as compared to the sanctioned strength. There were 32 *per cent* vacancies in the cadre of Multi-purpose health worker, 26 *per cent* vacancies in the cadre of Multi-purpose health supervisor and 42 *per cent* vacancies in the cadre of Filaria Inspector. Shortage of manpower, at the field level, was likely to have an adverse impact on the implementation of the programme.

DPH, Odisha, stated (July 2022) that the recruitment procedure was going on, adding that various strategies, like surveillance, early diagnosis, inter-sectoral collaboration, etc., had been adopted, to achieve the targets under the National Strategic Plan.

The H&FW Department stated (February 2023) that all the required interventions were being undertaken to increase surveillance and to decrease the morbidity and mortality cases.

Recommendation 7.4:

State Government may intensify the programme related activities in high burden districts, with continuous monitoring and critical evaluation, for eliminating malaria from the State.

7.1.6 National Programme for prevention and control of Cancer, Diabetes, Cardiovascular diseases and Stroke

The National Programme for Prevention and Control of Cancer, Diabetes, Cardiovascular diseases and Stroke (NPCDCS), aims to prevent and control common non-communicable diseases (NCDs) through behavior and life style changes, provide early diagnosis and management of common NCDs and build capacity, at various levels of healthcare, for prevention, diagnosis and treatment of common NCDs, *etc*.

[148] Boudh: 1.44; Kalahandi: 2.90; Kandhamal: 4.99; Koraput: 1.62; Malkangiri: 7.65; Rayagada: 2.50

Audit observed that NCD services for comprehensive examination of patients, referred by the lower health facilities or reporting directly, in the test-checked districts, lacked basic facilities as below:

- DHH, Bhadrak, had no NCD cell and also no dedicated staff for NPCDCS activities.
- DHH, Nuapada, was running its NCD clinic, without any dedicated staff.
- No cardiac care unit, for early diagnosis of cardiovascular diseases, had been provided in the NCD clinics of the test-checked DHHs of Bhadrak, Dhenkanal and Sundargarh.
- District Programme Officers were not available in six districts (Bhadrak, Kandhamal, Nabarangpur, Nuapada, Sundargarh and Puri), for supervision/ monitoring of the programme, whereas five districts had no District Programme Assistants, for implementation of the programme.

Thus, implementation of the NPCDCS programme for prevention and control of communicable diseases, was deficient.

The H&FW Department stated (February 2023) that the concerned authorities would be instructed for taking necessary steps for smooth implementation of NPCDCS programme.

7.1.7 Rashtriya Bal Swasthya Karyakram

The Rashtriya Bal Swasthya Karyakram (RBSK), under NHM, aims to deliver child health screening and early intervention, for detection, free treatment and management of 4-Ds[149] prevalent in children, through dedicated mobile health teams (MHTs). At least three MHTs were to be formed in each block, for screening of children. Screening was to be done, at least twice a year, in AWCs, for the children of the age 0-6 years and once a year for school children.

Audit noticed that there were shortfalls in the screening of children by the MHTs, for early detection and management of the conditions. Against the target of 122.08 lakh children, for the period FYs 2016-17 to 2021-22, 81.32 lakh had been screened and 40.76 lakh (33 *per cent*) children had been left out of the reach of the programme. The shortfall in screening was attributed to the absence of children in schools/ Anganwadi Centres, insufficient staff and the Covid-19 pandemic. It was noted that delay in screening/ non-screening of children was likely to result in the deterioration of these conditions into more severe and debilitating disease, thereby increasing the possibility of hospitalisation.

Table 7.8: Target and achievement for screening

Year	Target	Achievement	Shortfall
2016-17	22,36,235	18,62,088	3,74,147
2017-18	21,67,536	18,93,961	2,73,575
2018-19	19,64,207	17,25,253	2,38,954
2019-20	20,11,350	18,35,232	1,76,118
2020-21	19,03,036	2,09,031	16,94,005
2021-22	19,26,101	6,06,352	13,19,749
Total	**122,08,465**	**81,31,917**	**40,76,548**

(Source: Records of DPH, Odisha)

[149] Defects at birth; Diseases in children; Deficiency conditions and developmental delays, including disabilities

Audit further observed that there was shortage of MHTs, coupled with inadequate manpower, for successful implementation of the programme. In seven test-checked districts, only 142 MHTs were operational, against the requirement of 213 teams. Thus, there was shortage of 71 MHTs, which hindered screening and management of the conditions of the entire targeted child population. This was aggravated by inadequate manpower. Availability of manpower, as shown in **Table 7.9,** was not in consonance with the requirements, prescribed in the scheme guidelines. For instance, two MHTs in CHC, Basudevpur, were running without any ANM/ Staff nurse, while two MHTs, under CHC, Chandahandi, in Nabarangpur district, had no female MOs.

Table 7.9 : Availability of manpower for MHTs

Name of the Post	Requirement	Available
MO (Ayush) Male	142	123
MO (Ayush) Female	142	107
ANM/Staff Nurse	142	117
Pharmacist	142	104

(***Source: Records of the DPH, Odisha)***

Thus, shortage of MHTs, coupled with inadequate manpower, impacted the implementation of the programme adversely, as the targeted children were not screened fully, for early detection and management of conditions, which were likely to contribute to child mortality in the State.

District Early Intervention Centres

The RBSK envisages setting up of District Early Intervention Centres (DEIC) at the district level, to provide referral support to children detected with health conditions during screening, and serves as the hub of all activities and also provides referral linkages.

Scrutiny of records and Joint Physical inspection, showed the following deficiencies in the DEICs of the test-checked districts:

- The DEIC at DHH, Bhadrak, was running without any Pediatrician, Medical Officer and Dental Technician. Due to want of space, the dentist posted in the DEIC was working at the dental OPD of the DHH.
- Out of 14[150] core services to be provided in the DEIC, two to seven services were not available in the test-checked DHHs.
- Out of 13 essential medical equipment, two to ten equipment, such as pediatric stethoscope, direct ophthalmoscope, pediatric auroscope, etc. were not available in the DEICs of the test-checked DHHs. Also, laboratory equipment such as automated blood cell counter, microscope, semi-automated analyser, *etc*., were not found available in the DEICs.

Thus, the DEICs in the test-checked DHHs, were not adequately equipped to provide committed services to children diagnosed with various illnesses, under RBSK. Consequently, the referral of children in these DEICs, to higher health facilities, rose from 1.39 *per cent* in 2016-17 to 4.39 *per cent* in FY 2021-22.

[150] Medicine; Dental; Occupational therapy; Physical therapy; Psychological services; Audiology; Speech language therapy; vision services; health services; lab services; Retinopathy of prematurity; Nutrition; social works; Referral services

The H&FW Department stated (February 2023) that birth defects not manageable at district level, were referred to higher facilities for appropriate treatment and steps had been taken for empanelment of different Government and private hospitals, for early treatment of birth defect conditions.

Recommendation 7.5:

State Government may strengthen the monitoring mechanism for achieving the targets for screening of various diseases, so that effective and timely treatment can be provided.

7.1.8 Nutrition Rehabilitation Centre

The Nutrition Rehabilitation Centre (NRC) is the unit in a health facility where severely acute malnourished children are admitted and managed for better medical and nutritional therapeutic care.

On scrutiny of records and Joint Physical Inspection of NRCs, Audit observed deficient manpower, along with inadequate infrastructure and equipment, *etc.*, as discussed below:

- **Manpower:** Against the requirement of four Staff nurses, three NRCs at DHH, Bhadrak, Dhenkanal and Puri, were running with a shortage of one staff nurse/ ANM, each.
- **Infrastructure:** The NRC building (1st Floor of Geriatric Ward) at DHH, Bhadrak, administratively approved (February 2020) and constructed at a cost of ₹ 32.70 lakh, was lying idle. The NRC was running in the ground floor of the two-storied building, which was meant for the Geriatric ward. There was no dedicated space for a nursing station, which was accommodated in the office area. The NRC at DHH, Dhenkanal, had no provision for a counselling area, play area and toilet/ bathroom attached with the ward.
- **Equipment:** One suction machine meant for aspirating fluids, secretions of other foreign material, from a patient's airway, by means of suction, was lying idle at NRC, Bhadrak, due to non-posting of dedicated Medical Officer. In case of requirement, children were being referred to the paediatric ward of the DHH.

  The television and washing machine, received in the NRC in March-April 2022, were lying idle, without installation (as of May 2022).

Thus, the NRCs in the State, were not sufficiently equipped to provide the intended services of better medical and nutritional therapeutic care.

The H&FW Department stated (February 2023) that instructions would be issued to the concerned authorities for taking appropriate steps to provide equipment/ instrument and manpower for smooth functioning of NRCs.

7.2 Implementation of Ayushman Bharat

Ayushman Bharat, a flagship scheme of Government of India, was launched in 2018, to achieve the vision of universal health coverage. The scheme has two components, *viz*. (i) Ayushman Bharat - Health & Wellness Centres (AB-HWCs) and (ii) Ayushman Bharat Pradhan Mantri Jan Arogya Yojana (AB PM-JAY). While AB-HWC programme was implemented by the Government of

Odisha, AB PM-JAY programme had not been implemented in the State (March 2022).

7.2.1 Establishment of Health & Wellness Centres

Under Ayushman Bharat scheme, Health and Wellness Centres (HWCs) were to be established by transforming the existing Sub-Centres and Primary Health Centres, for ensuring universal access to comprehensive primary healthcare services[151]. Government of Odisha had allocated ₹337.51 crore during FYs 2018-19 to 2021-22, including Central share of ₹277.69 crore, for establishment of HWCs. Out of this, an amount of ₹331.51 crore had been utilised, as of March 2022, for establishment of HWCs.

Against the target of establishing 5,028 HWCs by March 2022, the State had created 4,483 HWCs by converting the existing SCs and PHCs as detailed in ***Appendix 7.1***. 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 ***Paragraph 2.1.3*** and ***Appendix 2.5***.

7.3 Implementation of Biju Swasthya Kalyan Yojana

Biju Swasthya Kalyan Yojana (BSKY) is the flagship scheme, implemented (2018) by the Government of Odisha, to provide universal health coverage, with special focus on the health protection of vulnerable families and women. The scheme has the following two components:

(i) **Cashless healthcare in State Government hospitals**: The State Government bears the full cost of all health services, delivered to all patients in the Government healthcare facilities, starting from Sub-centre level to Government MCHs. All treatment is cashless and no document is required.

Audit examined the adequacy of infrastructure and healthcare services delivered to patients in public health facilities, observations of deficiencies noticed on these aspects have been discussed in the preceding Chapters.

(ii) **Cashless healthcare in empaneled private hospitals**: The State Government bears the cost of healthcare services provided in empaneled private hospitals, for identified economically vulnerable families in the State, for an annual health coverage of ₹ five lakh per family (₹10 lakh for the women members). Under the scheme, 2,24,030 beneficiaries had been benefitted during FYs 2018-19 to 2021-22, for which the State had incurred ₹387.89 crore towards treatment of patients, in private empaneled hospitals.

[151] Maternal and child health care services, care for non -communicable diseases, palliative and rehabilitative care, *etc*.

Chapter 8

Adequacy and Effectiveness of the Regulatory Mechanism

CHAPTER 8

Adequacy and Effectiveness of the Regulatory Mechanism

Bio-medical waste management in the healthcare facilities was inadequate. Many of the healthcare facilities (HCFs) functioning in the State had no authorisation from the SPCB. There were shortfalls in the submission of annual reports. The District Level Monitoring Committees did not meet regularly, to monitor bio-medical waste management in the HCFs. Bio-medical equipment were lying idle, as they had been procured without provisioning ancillary infrastructure.

Administration of the Odisha Clinical Establishment (Control and Regulation) Act and Rules made thereunder, was deficient and the Rules and provisions of the Act, were not being complied with, allowing Clinical Establishments to function unauthorisedly, escaping the mandatory conditions and prescribed standards of the Act/ Rules.

8.1 Implementation of Bio-Medical Waste Management Rules

Bio-Medical Waste (BMW), being hazardous, toxic, infectious and even lethal, should not be allowed to get mixed with other municipal waste and needs proper handling. As per the BMW Management Rules, 2016, issued by Government of India, hospitals should ensure that BMW is handled without any adverse effect to human health and the environment. 'Handling' includes collection, segregation, treatment, storage, packaging, transportation, disposal, etc. The State Pollution Control Board (SPCB) is the authority for enforcement of the provisions of the BMW Management Rules. IPHS guidelines and the BMW Management Rules, 2016, stipulate standards for the management of BMW.

Audit observed the following deficiencies, in adherence to the BMW Management Rules, by the healthcare facilities:

8.1.1 Authorisation for generating bio-medical waste and annual reporting

The BMW Management Rules, 2016, require hospitals generating bio-medical waste, to obtain authorisation from the SPCB. Every occupier or operator of a common BMW treatment facility is required to submit an annual report to the SPCB, in the prescribed format, by 30 June every year.

The details of health care facilities (HCFs) functioning in the State and their authorisation, by the SPCB, for generating BMW, along with the status of submission of annual reports, during the period from FYs 2016-17 to 2021-22, are given in **Table 8.1**.

Table 8.1: HCFs functioning in the State

Financial Year	Number of HCFs			
	Functioning in the State	Having authorisation from SPCB	Functioning without authorisation	Submitted annual reports
2016-17	1,766	878	888	716
2017-18	1,775	1,026	749	751
2018-19	1,801	1,228	573	902
2019-20	1,808	1,616	192	1,044
2020-21	1,812	1,669	143	1,069
2021-22	1,819	1,636	183	855

(Source: Data obtained from the Director of Public Health, Odisha)

Audit observed that about 8 to 50 *per cent* of the HCFs, running in the State, had no authorisation from the SPCB, during the period from FYs 2016-17 to 2021-22. Also, many of the authorised HCFs had not submitted their annual reports to the SPCB regularly. During FY 2021-22, 53 *per cent* of the HCFs functioning in the State, had defaulted in submission of annual reports.

In the test-checked hospitals, Audit found that four HCFs

[152] had no valid authorisation from the SPCB, as of March 2022, to generate and handle BMW. Authorisation of the SPCB for DHH, Dhenkanal, had expired in March 2022 and had not been renewed further. The application for renewal was pending with the SPCB, Odisha.

Functioning of HCFs without authorisation and non-submission of annual reports to the competent authority, was not in compliance with the provisions of the BMW Management Rules, 2016, which were intended to assure proper treatment and disposal of hazardous/ toxic/ lethal waste, generated from the hospitals.

The H&FW Department stated (February 2023) that the DPH(O) had requested all the districts for doing the needful to get the authorisation in time and to submit the annual reports timely.

8.1.2 Segregation, collection and disposal of BMW

The BMW Management Rules, 2016, require hospitals to segregate different categories of BMW in separate coloured bins, at the source of generation. The waste is to be stored in appropriate colour coded bags, at the point of generation and collected by the Common Bio-Medical Waste Treatment Facilitator (CBWTF), for treatment and disposal, without any adverse effect to the human health and the environment, in accordance with the BMW Rules, 2016, and guidelines issued by Government. The Ministry of H&FW, GoI had also issued Guidelines for management of healthcare wastes, as per the BMW Management Rules, 2016.

Audit observed that:

- Guidelines (Paragraphs 2.3.4 and 2.5) for management of healthcare wastes provided that BMW units were to be established away from the public/ visitors' access, and wastes should not be stored in patient care areas and procedures areas. Contrary to this, the BMW Management unit at DHH, Bhadrak, was located near the Surgery ward and residential

[152] PHC, Ertal; PHC, Indragarh; PHC, Ranjabrodi; PRM MCH

quarters. At CHC, Khariar Road, it was situated near the residential quarters.

There was no dedicated space for BMW management at CHC, Khariar Road and no autoclave[153] had been provided to the waste handler[154]. Bio-medical wastes were treated manually and the treated wastes were dumped in an open nearby space in a residential area. Treated wastes at DHHs of Kandhamal and Nuapada were found dumped without being disposed of.

- Waste generated from disposable items, such as plastic vials, plasters/ rods, glass material, urine containers, sputum containers, testing kits, *etc.*, was being dropped into a deep burial pit, meant for human anatomical wastes, at CHC, Tikabali, in departure from the provisions of Schedule-I of BMW Management Rules. This was due to refusal by the outsourcing agency for collecting these solid wastes, for further recycling.
- The BMW workers involved in the handling of BMW at DHH, Sundargarh, had no adequate personal protective equipment, like heavy duty gloves, gum boots/ safety shoes, head caps and splash proof gowns/aprons, for ensuring occupational safety, as required under the Guidelines (Paragraph 5.4).

All the test checked hospitals had coloured bins for segregation and collection of bio-medical wastes.

- BMW management registers, as required under BMW Management Rules, 2016 (Rule 4), were not being maintained in two (Dhenkanal and Nuapada) out of the seven test-checked DHHs.
- In the test-checked MCHs, segregation of BMW, at the point of generation, was not being done properly. Black and red polythene bags, for black and red coloured bins/ containers, were not available at different unit[155], in the test-checked MCHs, as envisaged in the Guidelines (Paragraph 2.2) for BMW management.

[153] An equipment to treat bio-medical wastes

[154] Persons handling Bio-medical wastes at hospitals

[155] Cytology; Central Laboratory; Emergency (Casualty); Labour room in PRM MCH 23 May 2022 and Maternity Wards III, VI and IV in MKCG MCH, on 13 July 2022

Treated waste dumped in open air inside treatment plant premises at DHH, Nuapada, without being disposed off (1 July 2022)

Treated waste dumped in open air inside treatment plant premises at DHH, Kandhamal, without being disposed off (20 May 2022)

Treated waste stored at CHC, Khariar Road, in open space (23 June 2022)

Recyclable plastic/ solid wastes put into the deep burial pit meant for human anatomical wastes at CHC, Tikabali (6 May 2022)

Thus, BMW management in the test-checked hospitals, was not in conformity with the provisions of BMW Management Rules, 2016.

The H&FW Department stated (February 2023) that video conference had been done to review the status and involve all the health-related staff, involved in waste management, and funds had been provisioned for outsourcing BMW services up to PHC level.

8.1.3 Bio-medical equipment procured and supplied without creating infrastructure

As per the decision of the State Advisory Committee and requisition placed (April 2019) by the Director of Public Health, Odisha, OSMCL had procured (FY 2019-20) 1,753 autoclaves and 1,487 shredder machines, at a cost of ₹52.64 crore, for bio-medical waste management. These equipment were supplied to

healthcare facilities, for treatment of biomedical wastes, generated from the hospitals.

Audit observed that BMW management equipment was supplied to healthcare facilities like DHHs, SDHs, CHCs and PHCs, without provisioning for civil structures and three-phase electricity connections, which were required to make these items of machinery operational. Consequently, these items of equipment were lying idle in the health facilities. During Joint Physical Inspection of the test-checked hospitals, Audit found these autoclaves and shredders lying without installation, due to want of civil structures and three-phase connectivity, even though they had been reported as having been installed by the OSMCL. In MCH, Baripada, also, the shredder and autoclave were lying idle, for want of three-phase connectivity.

These items of equipment were also found lying in the open space, in the premises of some hospitals.

Shredder in broken condition, lying idle in open space, at PHC, Ertal (29 April 2022)

90 Autoclaves lying idle, at DHH, Sundargarh (16 July 2022)

Shredder, at CHC, Khajuriakata, lying in open space (21 April 2022)

Idle shredder, at PHC, Andalijambahal (29 June 2022)

This indicated lack of planning and non-assessment of the operational capability of the healthcare facilities, at the level of Government/ Directorate/ OSMCL, before procurement of the equipment. Non-provisioning of the ancillary infrastructure, required for functioning of the procured autoclaves and

shredders, had led to idling of these items of equipment, acquired at a cost of ₹52.64 crore, for the last two years, at the cost of the State exchequer, as of July 2022, rendering the entire expenditure, unfruitful.

To the Audit query, regarding status of the bio-medical equipment, the Director of Public Health stated (July 2022) that the installation process of the equipment had got delayed due to Covid-19 restrictions, and, to expedite the process of installation, the H&FW Department had transferred ₹103.76 crore, to the Panchayati Raj and Drinking Water Department, for construction of buildings, at PHCs and provisioning of three-phase electricity supply.

The H&FW Department stated (February 2023) that due steps were being taken to instal and functionalise the equipment, along with construction of storage-cum-equipment room. The reply was not tenable, as provisioning of ancillary infrastructure had not been considered before procurement. The Department should fix responsibility on the officials, responsible for such lapses, which had led to unfruitful expenditure, due to idling of equipment.

8.1.4 Disposal of liquid waste

As per the instructions (September 2014) of SPCB, all healthcare establishments, having 100 beds or more, should install an Effluent Treatment Plant (ETP). The ETP was to treat waste water generated from the hospitals.

Audit observed that an ETP/ sewage treatment plant, for treatment of waste water generated from the hospitals, had been established only in the DHH, Sundargarh.

Liquid waste deposit/ treatment tank, using bleaching powder at DHH, Dhenkanal (9 May 2022)

ETPs had not been established in the other six test-checked DHHs and MCH, Baripada. These hospitals had to depend on low cost treatment of liquid bio-medical waste, through chlorination in small tanks, to release the effluent to the common sewerage system/ drains. Thus, the effluents were being released into the drains/ sewerage system, after low cost treatment, which was fraught with the risk of contamination of air/ water and spread of diseases to patients and general public.

The H&FW Department stated (February 2023) that establishment of ETPs would be set up in the HCFs during the period from FYs 2022-23 to 2027-28, in phased manner.

8.1.5 Working of District Level Monitoring Committees

The Bio-Medical Waste Management Rules, 2016, provide that the State Government should constitute District Level Monitoring Committees (DLMC), to monitor the compliance of the provisions of these Rules, in the HCFs. The committees were to meet on a six monthly basis and submit their reports to the State Advisory Committee, with copies to the SPCB, for taking further necessary action.

Audit observed that the DLMCs, though constituted at the district level, were not meeting regularly, to oversee the bio-medical waste management in HCFs. The DLMC meetings were held intermittently. It was noticed that no DLMC meetings had been held in four[156] districts, whereas only one DLMC meeting had been conducted in eight[157] districts, during the period from FYs 2016-17 to 2021-22.

Thus, compliance of the provisions of BMW Rules, 2016, was not monitored in the HCFs, leading to deficient bio-medical waste management, as discussed in the preceding paragraphs.

While attributing the reasons for non-conduct of DLMC meetings to the Covid-19 situation, the Director of Public Health, Odisha, stated (March 2022) that all the districts had been sensitised to conduct DLMC meeting regularly.

The H&FW Department stated (February 2023) that all the districts had been sensitised to conduct DLMCs at their level in time.

Recommendation 8.1:

State Government may ensure strict adherence to the BMW Management Rules, in order to provide an infection-free environment in the hospitals.

Recommendation 8.2:

State Government may ensure construction of effluent treatment plants in all DHHs.

Recommendation 8.3:

State Government may ensure creation of the required infrastructure, before procurement of biomedical equipment, so that the procured equipment is made functional, for treatment of bio-waste.

8.2 Clinical Establishment Act

Government of Odisha enacted The Odisha Clinical Establishment (Control and Regulation) Act, 1991 (OCE Act), and framed The Odisha Clinical Establishment (Control and Regulation) Rules, 2018 (OCE Rules), in April 2018, for regulating the establishment and functioningof clinical establishments (CEs) in the State. CEs include nursing homes, physical therapy establishments, clinical laboratories, maternity homes, blood banks, private hospitals, dispensaries, X-Ray institutions or establishments and such other institutions or establishments, as the Director of Health Services may, with the approval of the State Government, specify.

Audit, however, observed the following deficiencies, in the regulation of clinical establishments, by the State:

8.2.1 Grant of registration and renewal of certificate

Section 3(1) of the OCE Act and Rules framed thereunder, requires that persons desirous of establishing a CE are to apply for registration to thesupervising authority (DMET), who, after making enquiry and being satisfied about

[156] Cuttack; Deogarh; Ganjam; Malkangiri
[157] Boudh; Dhenkanal; Gajapati; Jharsuguda; Khurda; Koraput; Rayagada; Subarnapur

availability of required facilities, may issue a certificate of registration, valid for two years. Application for renewal of registration is to besubmitted before one month of the due expiry date, along with the required fees and such renewal of registration is to be granted after adopting procedure, similar to that of registration.

As per Notification (November 2020) of H&FW department, the DMET, Odisha is the State Level Supervising Authority/ Registering Authority, in regard to clinical establishments, having more than 30 beds, whereas the CDM&PHOs of each district are the supervising/ registering authorities of the concerned districts, for CEs with 30 beds or less.

The OCE Act, 1990 and the OCE Amendment Act, 2016 stipulates that any person who establishes or maintains a clinical establishment in contravention to the provisions of the Act, shall be punishable with fine or imprisonment, or both.

On scrutiny of records and data made available to Audit, it was noticed that, out of 313 CEs, functioning in the test-checked districts, 289 had valid registration, as of March 2022. The remaining 24 CEs were running without valid registration, as shown in **Table 8.2.**

Table 8.2: CEs functioning with valid registration in the test-checked districts

District	Number of CEs registered	Number of CEs having valid registration	Number of CEs without valid registration
Bhadrak	35	32	3
Dhenkanal	48	40	8
Kandhamal	14	14	0
Nabarangpur	17	15	2
Nuapada	8	7	1
Puri	50	40	10
Sundargarh	141	141	0
Total	**313**	**289**	**24**

(Source: Records of the test-checked DHHs)

Audit observed the following in this regard:

- The registration validity of two[158] CEs in the Nabarangpur district had lapsed since March 2021 and October 2021, reminders had been issued to these CEs, by the CDM&PHO, Nabarangpur, for renewal.
- In Nabarangpur district, 21 CEs were functional, without being registered under the Act. Only one CE (Urban Care Home Clinic, Nabarangpur) had applied for registration, which was cancelled by the CDM&PHO, due to deficient manpower. The CDM&PHO, Nabarangpur, had issued show-cause notices to other 20 CEs, repeatedly, during February 2017 to March 2022, for not registering the establishments, under the Act. The action of the authority was, thus, limited to issue of show cause notice only, without taking any stringent action as provided in the Act. Resultantly, these CEs had continued to operate without registration, for years together.
- The Bhadrak Municipality had issued trade licenses to 17 CEs, for running pathology clinics, ultrasound clinics, X-ray clinics, Nursing

[158] Modern Pathological Clinic: Nabarangpur and General Clinic: Panija street, Nabarangpur

homes, *etc.*, without their having been registered under the OCE Act, as per the list, furnished by the DHH. Thus, these CEs had remained outside the purview of the Act.

- Five[159] CEs in the Bhadrak district had no valid registration certificates, due to expiry of the validity period of their existing registrations during October 2016 to November 2021. These hospitals were, however, empaneled under the BSKY, *i.e.* the flagship programme of the State Government to provide cashless treatment to patients. Even after empanelment, the MoUs of these hospitals had been renewed from time to time, even though the CEs had no valid certificate of registration. This indicates the indifference of the concerned registering authorities, in taking action in this regard.
- Applications for renewal of 10 CEs in Puri district, had been returned, as they had not been submitted in the online mode. These CEs were operating, without possessing valid registrations.

Thus, the unregistered CEs had escaped the mandatory conditions/ minimum standards applicable under the OCE Act and Rules.

The H&FW Department stated (February 2023) that the matter would be enquired for checking further irregularities.

8.2.2 Inspection of Clinical Establishments

Rule 6 of the Clinical Establishment Rules, 2018, provides that the Supervising Authority or the Inspecting Authority, shall inspect the CEs, by entering into the premises, as and when required, in the presence of the In-charge of a CE or, in his absence, any other person looking after the affairs and management of the establishment, so as to satisfy himself that the provisions of the Act and the rules, have been duly complied.

Audit observed that the Supervising or Inspecting Officers did not conduct regular inspections, of the CEs, in six out of the seven test-checked districts. Inspection of CEs, was only made at the time of registration/ renewal/ shifting of CEs, or at the time, complaints were received.

In Puri district, 22 inspections were conducted, in addition to the inspections conducted at the time of registration/ renewal.

Further, the State Level Inspection Team, constituted (January 2019) by the department, to inspect CEs once in every three months, had not conducted any inspections, during the period from FY 2019-20 to 2021-22. Details of inspections conducted by the district authorities, were also not available with the DMET.

Thus, inspection of CEs, for ensuring running of CEs, as per the provisions of the OCE Act, was either absent or inadequate, both at the district and State levels. Consequently, compliance to the provisions of the Act/ Rules, by the CEs functioning in the State, could not be assured. Many CEs continued to

[159] Subham hospital (valid up to 31 May 2016); Umashankar Healthcare (valid up to 7 November 2021); Panigrahi Healthcare (valid up to 27 August 2016); Padhi Healthcare (valid up to 15 November 2015); Binayak Nursing Home Private Limited (valid up to 7 October 2015)

function without registration, for years together, as discussed in ***Paragraph 8.2.1*** above.

The OCE Rules, 2018 provide that the CEs should maintain registers and records[160] and display certificates of registration and renewal thereof, including fire safety certificate, rate charts, *etc.* at conspicuous place for public information.

During JPI conducted by Audit with the staff of the test-checked hospitals, shortcomings, such as non-maintenance of prescribed registers (Medico-legal case register, staff register, *etc.*), non-display of registration certificates/ PCPNDT, rate charts, *etc.*, were noticed in 15 out of the 35 CEs, as detailed in ***Appendix 8.1.***

The H&FW Department assured (February 2023) that the concerned authorities would be instructed to inspect the running CEs, as per the provisions of the OCE Act.

Recommendation 8.4:

The Health and Family Welfare Department may strengthen the enforcement mechanism and ensure regular inspections, so that all the clinical establishments, functioning in the State, comply with the provisions of the Odisha Clinical Establishment (Control and Regulation) Act and Rules.

Recommendation 8.5:

The Department may initiate disciplinary action against the officials responsible for the laxity, whereby the clinical establishments, which were not registered under the Odisha Clinical Establishment (Control and Regulation) Act, were issued trade licenses.

[160] OPD/IPD patient register; Medico legal register; Register of staff engaged, acquaintance ledgers, *etc*.

Chapter 9

Sustainable Development Goal 3

CHAPTER 9

Sustainable Development Goal 3

The Odisha SDG Indicator Framework was not fully aligned with the National Indicator Framework, for monitoring progress on Sustainable Development Goal 3 (SDG 3). Mapping of the schemes and the department, with the targets in the OSIF, was inadequate. Instances of non-provision of funds or low expenditure for schemes mapped to the goals, were also noticed. The dashboard for monitoring of SDG indicators, at the district and State levels, was yet to be developed by the State, for better visualisation of data on SDG (OSIF).

The Sustainable Development Goals (SDG) were adopted by the UN General Assembly in September 2015. ***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.

Government of Odisha constituted a High Powered Committee, under the chairmanship of the Chief Secretary and Secretaries of key departments, as members. The Planning and Convergence Department was declared as the Nodal Department for implementation and monitoring of SDGs. A dedicated cell was also established in the Directorate of Economics and Statistics, for data flow on SDG indicators.

The State Government has taken a number of measures[161] for strengthening the delivery of healthcare services, in line with the SDGs.

Audit examined the steps taken at the State level with regard to Goal 3 and observed the following:

9.1 Adoption of national indicators

The guidelines for 'Development of SDG State Indicator Framework (July 2019)' stipulated that States develop their own State Indicator Framework (SIF), based on their individual critical development priorities, data requirements, available infrastructure and resources.

In the National Indicator Framework (NIF), GoI included 41 indicators under Goal 3. Government of Odisha developed the 'Odisha SDG Indicator Framework (OSIF)' in 2019, for monitoring SDGs at State level and included 46 indicators. These 46 indicators comprised 29 indicators from NIF and 17 Odisha specific indicators.

It was noticed that some indicators, in which the performance of the State was poor in comparison to the national average, as per the National Family Health

[161] Preparation of State Indicator Framework, Mapping of the Departments and schemes, Formation of SDG Cell, SDG based budget, *etc*.

Survey (NFHS) report (2019-21), had not been included in the OSIF, as shown in **Table 9.1.**

Table 9.1: Comparison of some Indicators with the national average

Target	Indicators	Odisha	India
3.5	Women aged 15 years and above, who consume alcohol (*per cent*)	4.3	1.3
	Men aged 15 years and above, who consume alcohol (*per cent*)	28.8	18.8
3.8	Women aged 15 years and above with elevated blood pressure or taking medicine to control blood pressure (*per cent*)	22.4	21.3
	Men aged 15 years and above with elevated blood pressure or taking medicine to control blood pressure (*per cent*)	25.6	24
3.8	Women aged 15 years and above with high blood sugar level or taking medicine to control blood sugar level (*per cent*)	14	13.5
	Men aged 15 years and above with high blood sugar or taking medicine to control blood sugar level (*per cent*)	17	15.6

(Source: NFHS Report: 2019-21, SRS: 2017-19)

Reasons for exclusion of indicators such as 3.5 and 3.8 above, were not found on record. As a result of the exclusion, the OSIF was not fully synchronised with the NIF, for monitoring the progress on SDG 3.

9.2 Mapping of Schemes and Departments with SDG 3

As per the Guidelines for Development of SDG State Indicator Framework (July 2019), the first step for developing the SIF is to map the relevant SDGs and targets with the Departments of the State Government. Various schemes and programmes implemented by the State and Central Government are also to be linked with the SDGs and targets.

Audit, however, observed that some State and Central schemes, and also the H&FW Department, had not been mapped with the targets/ indicators under the OSIF, as discussed below:

- 'Suicide mortality rate' is an indicator under Target 3.4 of SDG 3 in the OSIF, which was mapped to the Home Department only. The H&FW Department was, however, not linked to the indicator, even though the Department is required to provide care, treatment and rehabilitation to a person having severe stress and attempted to commit suicide.
- Reducing the number of deaths and injuries from road traffic accidents is one of the goals/ indicators in the OSIF. Though NHM and National Ayush Mission were mapped to the indicators in the NIF, the H&FW Department had not been mapped to the OSIF.
- Prevalence of cancer is one of the three indicators under Target 3.4. This indicator was mapped to the H&FW department. However, neither was any scheme mapped to this indicator, nor was any budget allocated in this regard during 2021-22.
- Mapping of Government schemes of the Department, with the SDGs and targets, is the second step for developing the State framework. However, State schemes like Digital Health, Odisha Cardiac Care Programme, *etc*. and Central schemes like National Programme for Control of Blindness

and Visual Impairment and National Mental Health Programme, were not mapped with the respective indicators of Goal 3 under OSIF.

Non-mapping of schemes and departments, with the goals and indicators in the OSIF, carried the risk that monitoring of the implementation and performance of the related programmes and activities, would not be adequate or effective.

9.3 SDG budgeting

On the basis of OSIF, Odisha prepared an SDG based budget, for the years 2021-22 and 2022-23. The SDG Budget was intended to act as a guiding principle for the State Government, to prudently and optimally allocate budget resources, which would help in the timely achievement of SDG targets and indicators.

The total outlay for the first SDG budget of the State, for the year 2021-22, had a provision of ₹1,34,225 crore, which included ₹11,071.10 crores for SDG-3, *i.e.*, 8.25 *per cent* of the total SDG Budget.

Audit, however, noticed that some of the schemes, though mapped to the SDG indicators, had not been allocated funds in the budget and, even in cases where budget provisions had been made, expenditure on such schemes was not material, as discussed below:

- As per the OSIF, the SAMMPURNA scheme[162] was mapped to four targets (3.1, 3.2, 3.7 and 3.8) under Goal 3. However, no budget provision was made for the scheme, except a token amount of ₹1,000 only, during 2021-22.
- The de-addiction scheme was mapped to Target 3.5, under Goal 3, in the H&FW Department. However, no budget provision was available for implementation of the scheme, during 2021-22.
- Programmes regarding: (i) Sickle cell and Thalasemia and (ii) liver transplant unit, were linked to Target 3.3, and budget provisions of ₹572.10 lakh and ₹25 lakh, respectively, were made for these schemes, during 2021-22. It was however, noticed that there was no expenditure under these schemes and the entire amounts allocated under these two schemes, were re-appropriated/ surrendered.
- The 'Sunetra' scheme, for universal eye care, was linked to Target 3.8. An amount of ₹32 crore was budgeted for the scheme during 2021-22. However, the budgeted amount was reduced to ₹20.75 crore, after re-appropriation. Out of ₹20.75 crore, only ₹8 crore (39 *per cent*) had been spent under the programme.

Non-provision of funds or less expenditure on the mapped schemes, indicated low priority towards implementation of the programmes, which had an adverse effect on the efforts to achieve the SDGs.

[162] A scheme launched by the State Government to reduce the infant mortality rate and maternal mortality rate

9.4 Implementation and monitoring of SDGs

The State had the primary responsibility of following-up and reviewing the progress achieved at the district and local government levels, with regard to achievement of the SDG goals.

Audit observed the following:

- The Department had neither set the targets for the health indicators for the districts, nor had it prepared any road map, including incremental targets, for the districts, to achieve the SDG goals.

  NHM, Odisha, stated (October 2022) that targets for various activities were fixed in the PIPs and progress was reviewed and feedback shared with the districts, by different programme sections, at the State level. However, review reports/ feedback details, shared with districts, were not provided to Audit. Moreover, the PIPs approved by NHM, did not fix targets relating to achievement of SDG indicators.

- The SDG dashboard, for monitoring of SDG indicators at the district and State levels, had not been developed by the State (as of March 2022). NHM, Odisha, stated (October 2022) that the development of a dashboard, for data entry and monitoring, was under process.

- Action points like: (i) preparation of Odisha SDG baseline report, containing Analytics, Metadata and Data Tables, (ii) preparation of Odisha SDG Index, to measure the achievement of SDGs in the State and (iii) developing an IT Framework to rank districts and further, to rank Blocks within Districts/ GPs within Blocks, for targeting critical interventions, *etc*., as envisaged in the OSIF, for improving the performance of the State, were yet to be taken up.

Thus, the State Government is yet to implement the action points on the basis of the OSIF, in order to improve its performance in achievement of SDGs.

9.5 Progress towards SDGs

The position of the State, in regard to a few health indicators, is given in ***Table 9.2***:

Table 9.2: Status of health indicators of Odisha, as compared to the National average

Sl. No.	Indicators	Target 2030	Interim Target 2020	Odisha (NFHS 5)	India (NFHS 5)
1	Maternal Mortality Ratio	70	117	136	103
2	Neonatal Mortality Rate	12	23	27	24.9
3	Infant Mortality Rate	NA[163]	30	36.3	35.2
4	Under 5 years mortality rate	25	38	41.1	41.9
5	Institutional delivery	100	NA	92.2	88.60
6	Total Fertility Rate	2	2.1	1.8	2.00
7	Full immunisation	100	NA	90.5	76.4
8	Births attended by skilled health personnel	100	NA	91.8	89.40
9	TB notification per one lakh population (2021)	NA	140	112	NA

[163] Not available

Sl. No.	Indicators	Target 2030	Interim Target 2020	Odisha (NFHS 5)	India (NFHS 5)
10	Proportion of Grade II cases among new cases of leprosy (2020-21)	NA	< 2	2.89	2.48

(Source: National Family Health Survey 5 (2019-21), Sample Registration System (2017-19) and Odisha State Strategy for accelerated reduction of MMR & IMR)

Audit noticed that performance of the State was poor in respect of most of the health indicators like, 'Maternal Mortality Ratio' 'Neonatal Mortality Rate', 'Infant Mortality Rate', *etc*.

The H&FW Department stated (February 2023) that necessary gaps had been identified, which would be addressed by SDG Cell through a coordinating meeting with the Planning and Convergence Department.

Recommendation 9.1:

State Government may take early steps to implement the action points, outlined in the OSIF, such as the development of a dashboard, Odisha SDG Index, baseline report, etc., and strengthen the monitoring mechanism, at all levels, for achieving the SDG goals and targets.

Bhubaneswar
The 6 NOV 2024

(RAJ KUMAR)

Pr. Accountant General (Audit-I)
Odisha

Countersigned

New Delhi
The 11 NOV 2024

(GIRISH CHANDRA MURMU)

Comptroller and Auditor General of India

Appendices

Appendix 1.1

(Refer Paragraph 1.1)

Medical Colleges and Hospitals in the State at the end of 2022-23

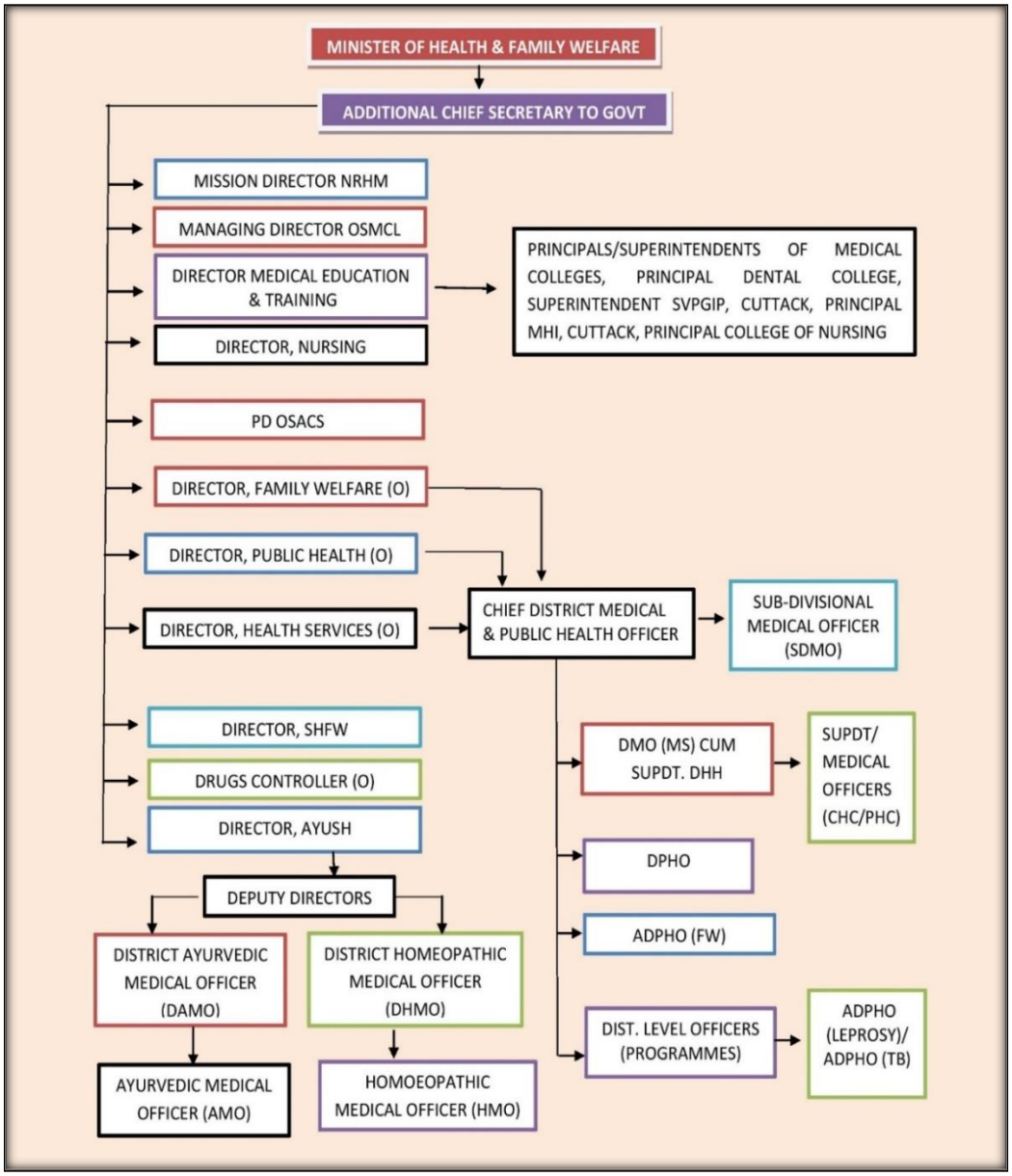
Sl. No.	Name of the medical college & hospitals	Year of establishment	Type of institute
1.	Srirama Chandra Bhanja Medical College and Hospital, Cuttack	1944	State Government
2.	Maharaja Krishna Chandra Gajapati Medical College & Hospital, Berhampur	1962	State Government
3.	Veer Surendra Sai Institute of Medical Sciences and Research (VIMSAR), Burla	1959	State Government
4.	Pandit Raghunath Murmu Medical College, Baripada	2017	State Government
5.	Saheed Laxman Nayak Medical College and Hospital, Koraput	2017	State Government
6.	Fakir Mohan Medical College and Hospital, Balasore	2018	State Government
7.	Bhima Bhoi Medical College and Hospital, Bolangir	2018	State Government
8.	Shri Jagannath Medical College and Hospital, Puri	2021	State Government
9.	Dharanidhar Medical College and Hospital, Keonjhar	2022	State Government
10.	Government Medical College and Hospital, Sundargarh	2022	State Government
11.	Government Medical College and Hospital, Kalahandi	2023	State Government
12.	Institute of Medical Science, Bhubaneswar	2007	Private
13.	Kalinga Institute of Medical Science, Bhubaneswar	2007	Private
14.	Hi-Tech Medical College and Hospital, Bhubaneswar	2005	Private
15.	Hi-Tech Medical College and Hospital, Rourkela	2012	Private
16	All India Institute of Medical Science, Bhubaneswar	2012	Central Government

(Source: Data obtained from DMET, Odisha)

Appendix 1.2

(Refer Paragraph 1.2)

Organisational structure of the Health and Family Welfare Department



Appendix 1.3

(Refer Paragraph 1.6)

Sampling of units for the Performance Audit

Level of Offices	Total Units	Units selected	Name of the auditee units selected	Remarks
State level offices (Department, Directorates and Controlling offices)	9	9	H&FW Department, Director of Health Services, Director of Family Welfare, Director of Public Health, Director of Medical Education and Training, Director of Nursing, Odisha State Medical Corporation Limited, Drug Controller, Odisha; National Health Mission	All the State level offices selected
Government Medical College Hospitals	7	2	1. MKCG Medical College and Hospital, Berhampur 2. PRM Medical College and Hospital, Baripada (Mayurbhanj)	One out of three Old MCHs and one out of four new MCHs selected, using random sampling method.
Districts (for District Headquarter Hospitals	30	7	**Central Division**: (1) Bhadrak, (2) Puri **Northern Division**: (3) Dhenkanal, (4) Sundargarh **Southern Division**: (5) Kandhamal, (6) Nabarangpur (7) Nuapada	2 Districts out of 10 selected, each from Central and Northern Division Districts, and 3 Districts out of 10 selected from Southern Division Districts, using random sampling method
Block Level (CHCs)	374	14	**Bhadrak**: (1) Basudevpur, (2) Barapada; P**uri:** (3) Nimapara, (4) Bangurigaon; **Dhenkanal:** (5) Khajuriakata, (6) Sriramchandrapur, **Sundargarh**: (7) Lahuniapara, (8) Kuarmunda; **Kandhamal**: (9) Raikia, (10) Tikabali, **Nabarangpur**: (11) Kosagumuda, (12) Papadahandi**,** **Nuapada**: (13) Khariar Road, (14) Komana	Two CHCs under each sampled DHH selected using random sampling method.
Primary Health Centres	1375	14	Selected at field level	One, under each sampled CHC selected on judgmental basis.

Appendix 2.1
(Refer Paragraph 2.1)
District-wise sanctioned strength and persons-in-position of doctors, nurses and paramedics

Sl. No.	Districts	Specialist Doctors				Doctors				Staff Nurses/ Nursing officers				Paramedics			
		Sanctioned Strength	Persons-in-position	Shortage	percentage of shortage	Sanctioned Strength	Persons-in-position	Shortage	percentage of shortage	Sanctioned Strength	Persons-in-position	Shortage	percentage of shortage	Sanctioned Strength	Persons-in-position	Shortage	percentage of shortage
1	Angul	86	48	38	44	242	128	114	47	398	283	115	29	158	104	54	34
2	Balasore	108	60	48	44	373	239	134	36	772	563	209	27	309	230	79	26
3	Bargarh	86	37	49	57	301	144	157	52	393	300	93	24	168	103	65	39
4	Bhadrak	57	43	14	25	215	133	82	38	337	245	92	27	129	95	34	26
5	Bolangir	104	50	54	52	338	204	134	40	516	396	120	23	309	185	124	40
6	Boudh	43	19	24	56	120	68	52	43	253	95	158	62	59	39	20	34
7	Cuttack	125	81	44	35	411	334	77	19	1973	1567	406	21	581	443	138	24
8	Deogarh	39	13	26	67	106	35	71	67	134	76	58	43	53	26	27	51
9	Dhenkanal	81	41	40	49	244	116	128	52	346	205	141	41	152	95	57	38
10	Gajapati	56	37	19	34	177	155	22	12	229	159	70	31	92	50	42	46
11	Ganjam	161	90	71	44	567	322	245	43	1541	1134	407	26	481	293	188	39
12	Jagatsinghpur	58	36	22	38	220	150	70	32	499	159	340	68	125	80	45	36
13	Jajpur	74	41	33	45	264	196	68	26	472	344	128	27	170	115	55	32
14	Jharsuguda	45	32	13	29	143	97	46	32	290	141	149	51	80	61	19	24
15	Kalahandi	106	42	64	60	339	199	140	41	452	362	90	20	185	124	61	33
16	Kandhamal	95	30	65	68	285	222	63	22	478	376	102	21	168	96	72	43
17	Kendrapara	57	28	29	51	224	147	77	34	306	200	106	35	147	111	36	24
18	Keonjhar	112	64	48	43	359	187	172	48	587	418	169	29	224	162	62	28
19	Khurda	157	133	24	15	422	372	50	12	649	516	133	20	274	210	64	23
20	Koraput	106	23	83	78	338	227	111	33	1110	496	614	55	288	178	110	38
21	Malkangiri	55	19	36	65	197	120	77	39	294	207	87	30	119	86	33	28
22	Mayurbhanj	175	61	114	65	549	281	268	49	1087	782	305	28	419	296	123	29
23	Nabarangpur	58	22	36	62	253	89	164	65	330	243	87	26	135	85	50	37

Sl. No.	Districts	Specialist Doctors				Doctors				Staff Nurses/ Nursing officers				Paramedics			
		Sanctioned Strength	Persons-in-position	Shortage	percentage of shortage	Sanctioned Strength	Persons-in-position	Shortage	percentage of shortage	Sanctioned Strength	Persons-in-position	Shortage	percentage of shortage	Sanctioned Strength	Persons-in-position	Shortage	percentage of shortage
24	Nayagarh	79	32	47	59	248	102	146	59	323	227	96	30	145	86	59	41
25	Nuapada	48	28	20	42	154	82	72	47	219	185	34	16	83	55	28	34
26	Puri	98	50	48	49	320	209	111	35	456	333	123	27	189	139	50	26
27	Rayagada	77	24	53	69	249	175	74	30	368	254	114	31	153	88	65	42
28	Sambalpur	85	54	31	36	257	136	121	47	1268	1066	202	16	309	238	71	23
29	Subarnapur	53	45	8	15	152	78	74	49	211	146	65	31	89	50	39	44
30	Sundargarh	155	67	88	57	471	209	262	56	636	455	181	28	272	206	66	24
31.	State Headquarter	-	-	-	-	191	62	129	68	-	-	-	-	-	-	-	-
32.	Other sectors	-	-	-	-	21	17	4	19	-	-	-	-	-	-	-	-
Total		**2,639**	**1,350**	**1,289**	**49**	**8,750**	**5,235**	**3,515**	**40**	**16,927**	**11,933**	**4,994**	**30**	**6,065**	**4,129**	**1,936**	**32**

(Source: Data furnished by DHS, Odisha)

Appendix 2.2

(Refer Paragraph 2.1.1, Paragraph 2.1.3 and Paragraph 2.1.4.1)

Manpower availability in the DHHs of the State, as on 31 March 2022

Sl. No.	DHHs	Specialists		Excess (+)/ Shortages (-)	Doctors		Excess (+)/ Shortages (-)	Nurse		Excess (+)/ Shortages (-)	Paramedics*		Excess (+)/ Shortages (-)
		SS	PIP		SS	PIP		SS	PIP		SS	PIP	
1	Angul	20	16	-4	50	32	-18	246	106	-140	30	46	16
2	Balasore	30	22	-8	88	56	-32	61	61	0	11	11	0
3	Bargarh	20	10	-10	63	44	-19	91	88	-3	26	21	-5
4	Bhadrak	27	21	-6	76	46	-30	107	58	-49	20	16	-4
5	Bolangir	25	14	-11	61	37	-24	90	57	-33	26	14	-12
6	Boudh	23	13	-10	47	22	-25	97	16	-81	18	13	-5
7	Cuttack	20	19	-1	59	58	-1	49	35	-14	30	21	-9
8	Deogarh	23	9	-14	48	17	-31	31	29	-2	0	0	0
9	Dhenkanal	22	16	-6	51	28	-23	94	80	-14	32	21	-11
10	Gajapati	24	14	-10	60	25	-35	160	81	-79	24	17	-7
11	Ganjam	20	13	-7	77	42	-35	56	53	-3	30	20	-10
12	Jagatsinghpur	20	16	-4	58	42	-16	80	43	-37	25	21	-4
13	Jajpur	24	18	-6	69	44	-25	182	131	-51	31	22	-9
14	Jharsuguda	21	18	-3	51	43	-8	123	67	-56	29	37	8
15	Kalahandi	23	14	-9	75	37	-38	141	116	-25	31	29	-2
16	Kandhamal	31	17	-14	61	28	-33	165	161	-4	30	16	-14
17	Kendrapara	22	10	-12	62	34	-28	59	30	-29	33	24	-9
18	Keonjhar	24	18	-6	65	46	-19	112	88	-24	38	23	-15
19	Khurda	27	22	-5	73	51	-22	189	95	-94	34	30	-4
20	Koraput	31	10	-21	83	29	-54	115	61	-54	37	29	-8
21	Malkangiri	23	8	-15	59	32	-27	148	100	-48	28	16	-12
22	Mayurbhanj	21	16	-5	80	45	-35	85	58	-27	35	26	-9
23	Nabarangpur	23	11	-12	71	21	-50	95	95	0	17	14	-3
24	Nayagarh	30	17	-13	52	27	-25	65	16	-49	22	15	-7
25	Nuapada	23	11	-12	56	23	-33	90	90	0	22	19	-3
26	Puri	20	15	-5	81	55	-26	149	99	-50	37	35	-2
27	Rayagada	23	13	-10	49	30	-19	142	77	-65	24	18	-6
28	Sambalpur	21	15	-6	50	35	-15	154	129	-25	28	24	-4
29	Subarnapur	22	10	-12	50	24	-26	81	59	-22	26	16	-10
30	Sundargarh	22	14	-8	64	36	-28	139	103	-36	37	20	-17
31	Capital Hospital	69	57	-12	123	104	-19	158	138	-20	66	48	-18
32	RGH Rourkela	50	26	-24	89	41	-48	123	153	30	29	49	20
	TOTAL	**824**	**523**	**-301**	**2,101**	**1,234**	**-867**	**3,677**	**2,573**	**-1,104**	**906**	**731**	**-175**

(Source: Data obtained from DHS & DHHs)

****Paramedics include Pharmacists, Lab Technicians and Radiographers***

Appendix 2.3
(Refer Paragraph 2.1.2)
Department-wise availability of specialists in the DHHs of the State, as on 31 March 2022

Sl. No.	DHHs	Medicine		Surgery		O&G		Paediatric		Anaesthesia		Ophthalmology		Orthopaedic		Radiology		Pathology		ENT		TB&CD		Dermatology		Psychiatric		Others	
		SS	PIP	SS	PIP	SS	PIP	SS	PIP	SS	PIP	SS	PIP	SS	PIP	SS	PIP	SS	PIP	SS	PIP	SS	PIP	SS	PIP	SS	PIP	SS	PIP
1	Angul	2	2	2	2	2	1	3	2	2	2	2	2	1	1	1	0	1	0	1	1	1	1	1	1	1	1	0	0
2	Balasore	2	2	5	3	3	2	4	4	5	4	2	1	2	1	1	0	1	1	1	0	1	1	1	1	1	1	1	1
3	Bolangir	2	1	2	2	5	3	4	1	2	1	2	1	1	0	1	1	2	1	1	1	1	1	1	0	1	1	0	0
4	Bargarh	2	1	2	2	2	1	3	2	2	0	2	0	1	1	1	1	1	0	1	1	1	0	1	0	1	1	0	0
5	Bhadrak	2	1	5	5	3	3	3	2	4	1	2	2	2	2	1	1	1	1	1	1	1	1	1	0	1	1	0	0
6	Boudh	2	2	2	2	5	2	3	1	2	1	2	1	1	0	1	1	1	0	1	1	1	1	1	0	1	1	0	0
7	Cuttack	2	2	2	2	3	3	2	2	2	2	2	2	1	0	1	1	1	1	1	1	1	1	1	1	1	1	0	0
8	Deogarh	2	2	2	1	5	3	3	0	2	1	2	0	1	0	1	1	1	1	1	0	1	0	1	0	1	0	0	0
9	Dhenkanal	2	1	2	1	3	2	3	2	2	2	2	2	1	1	1	1	2	1	1	1	1	0	1	1	1	1	0	0
10	Gajapati	2	1	2	2	5	3	4	2	2	1	2	0	1	1	1	1	1	0	1	1	1	1	1	0	1	1	0	0
11	Ganjam	2	1	2	2	3	1	2	1	2	2	2	1	1	1	1	0	1	0	1	1	1	1	1	1	1	1	0	0
12	Jagatsinghpur	2	2	2	2	3	2	3	2	2	2	2	2	1	0	1	1	1	1	1	1	1	0	0	0	1	1	0	0
13	Jajpur	2	2	2	0	3	2	3	3	2	2	3	2	1	0	1	1	1	1	1	1	1	1	1	1	1	0	2	2
14	Jharsuguda	2	2	2	2	3	3	3	3	2	0	2	2	1	1	1	1	1	0	1	1	1	1	1	1	1	1	0	0
15	Kalahandi	2	1	2	2	3	1	4	3	2	0	2	1	1	1	1	1	1	0	1	1	1	1	1	1	1	0	1	1
16	Kandhamal	3	2	3	3	5	2	8	2	2	2	2	1	1	0	1	0	2	1	1	1	1	1	1	1	1	1	0	0
17	Kendrapara	2	1	2	0	3	3	3	1	2	2	2	0	1	1	1	0	2	1	1	1	1	0	1	0	1	0	0	0
18	Keonjhar	2	2	2	2	5	3	4	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	0	1	1	0	0
19	Khurda	2	0	5	4	3	3	3	3	4	4	2	2	2	1	1	1	1	1	1	1	1	1	1	0	1	1	0	0
20	Koraput	2	1	2	1	5	3	9	3	2	0	2	1	1	0	1	0	1	0	1	0	1	0	1	1	1	0	2	0
21	Malkangiri	2	1	2	2	5	3	3	0	2	0	2	0	1	1	1	0	1	0	1	0	1	0	1	0	1	1	0	0
22	Mayurbhanj	2	2	2	2	3	3	5	1	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	0	0
23	Nabarangpur	2	1	2	1	5	2	3	2	2	0	2	2	1	1	1	1	1	0	1	0	1	0	1	0	1	1	0	0
24	Nayagarh	3	3	3	3	4	2	3	3	3	2	3	2	2	0	2	1	2	0	1	1	2	0	1	0	1	0	0	0
25	Nuapada	2	1	2	1	5	1	3	2	2	0	2	2	1	1	1	1	1	1	1	1	1	0	1	0	1	0	0	0
26	Puri	2	2	2	2	3	2	2	1	2	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0
27	Rayagada	2	2	2	2	5	2	3	1	2	2	2	2	1	0	1	0	1	0	1	0	1	1	1	0	1	1	0	0
28	Sambalpur	2	2	2	2	3	3	3	2	2	1	2	2	1	0	1	1	1	1	1	0	1	0	1	0	1	1	0	0
29	Subarnapur	2	1	2	2	5	1	2	0	2	1	2	1	1	0	1	1	1	0	1	1	1	1	1	0	1	1	0	0

Sl. No.	DHHs	Medicine		Surgery		O&G		Paediatric		Anaesthesia		Ophthalmology		Orthopaedic		Radiology		Pathology		ENT		TB&CD		Dermatology		Psychiatric		Others	
		SS	PIP	SS	PIP	SS	PIP	SS	PIP	SS	PIP	SS	PIP	SS	PIP	SS	PIP	SS	PIP	SS	PIP	SS	PIP	SS	PIP	SS	PIP	SS	PIP
30	Sundargarh	2	2	2	2	5	3	2	1	2	2	2	1	1	0	1	1	1	0	1	1	1	1	1	0	1	0	0	0
31	Capital Hospital, BBSR	7	6	5	5	8	8	14	4	5	5	4	4	3	3	3	3	3	3	2	2	3	3	3	3	2	2	7	6
32	RGH, Rourkela	4	2	6	1	7	6	12	5	8	5	3	2	2	1	1	1	1	1	2	1	1	0	1	0	1	1	1	0
Total		**73**	**54**	**82**	**65**	**130**	**82**	**129**	**63**	**80**	**51**	**68**	**44**	**39**	**22**	**35**	**26**	**39**	**19**	**34**	**26**	**35**	**22**	**33**	**15**	**33**	**24**	**14**	**10**

(Source: Data furnished by DHS, Odisha)

SS: Sanctioned Strength and PIP: Persons-in-position

Appendix 2.4
(Refer Paragraph 2.1.3)
Availability of Manpower in the CHCs of the State, as on 31 March 2022

Sl. No.	Districts	Number of CHCs	Medicine		Surgery		Paediatric		O&G		GDMO		Doctors		Dental		Ayush doctors		Emergency doctors		Nurses		Paramedics	
			SS	PIP	SS	PIP	SS	PIP	SS	PIP	SS	PIP	SS	PIP	SS	PIP	SS	PIP	SS	M PIP IP	SS	PIP	SS	PIP
1	Angul	9	9	1	9	1	9	2	9	5	19	1	44	21	9	9	8	8	0	0	144	84	51	39
2	Bolangir	15	15	2	15	0	15	1	15	4	4	3	75	26	15	9	15	15	0	0	158	110	86	58
3	Balasore	17	17	2	17	1	17	4	17	11	2	0	85	55	17	14	13	13	0	0	131	97	83	55
4	Baragarh	16	14	2	15	3	15	0	15	1	0	0	85	44	15	10	15	11	0	0	112	97	66	35
5	Bhadrak	7	7	1	7	2	7	2	7	3	0	0	35	20	7	7	7	7	0	0	25	25	38	29
6	Boudh	5	5	1	5	2	5	2	5	2	0	0	25	16	5	2	5	5	0	0	30	16	25	15
7	Cuttack	21	20	2	20	3	20	3	20	10	3	1	0	40	18	18	14	13	0	0	153	97	84	66
8	Deogarh	4	4	0	4	0	4	0	4	0	0	0	0	0	3	1	3	3	0	0	24	12	20	6
9	Dhenkanal	10	8	0	8	0	8	0	8	2	0	0	40	35	8	8	8	8	0	0	117	44	46	21
10	Gajapati	8	8	0	8	0	8	0	8	0	0	0	73	57	8	5	25	12	0	0	60	31	44	25
11	Ganjam	28	28	1	28	6	28	4	28	4	140	77	0	0	28	19	23	21	0	0	201	171	143	92
12	Jagatsinghpur	11	9	1	9	1	9	3	9	2	65	30	14	9	9	8	11	11	0	0	178	126	93	55
13	Jajpur	12	12	5	12	5	12	4	12	6	1	1	60	47	12	10	10	10	0	0	102	89	61	38
14	Jharsuguda	6	6	4	6	4	6	4	6	3	0	0	30	11	6	4	5	4	0	0	54	28	23	22
15	Kalahandi	17	16	2	17	7	16	2	16	4	0	0	119	69	16	7	17	5	0	0	132	120	66	41
16	Kandhamal	14	14	0	14	0	14	0	14	0	0	0	96	67	14	6	0	0	0	0	149	129	90	56
17	Kendrapara	8	8	0	8	2	8	4	8	2	0	0	95	63	8	8	8	8	0	0	198	133	73	51
18	Keonjhar	17	17	12	17	9	17	7	17	8	0	0	85	26	17	10	13	13	0	0	202	149	95	56
19	Khurda	16	15	6	15	3	15	4	16	9	1	1	64	58	14	14	14	14	0	0	128	118	82	49
20	Koraput	16	16	2	16	1	16	1	16	2	80	74	0	0	16	7	16	4	0	0	133	96	96	62
21	Malkangiri	6	6	0	6	0	6	0	6	0	0	0	30	27	6	2	0	0	0	0	44	27	34	20
22	Mayurbhanj	28	28	2	28	3	28	7	28	8	0	0	140	82	28	15	24	23	0	0	196	110	123	104
23	Nabarangpur	10	10	0	10	0	10	0	10	1	0	0	70	37	10	5	10	10	0	0	120	6	32	21
24	Nayagarh	12	12	1	12	3	12	0	12	3	2	2	60	34	12	12	0	8	0	0	74	55	45	34
25	Nuapada	5	5	3	5	3	5	2	5	3	0	0	34	10	5	2	1	1	0	0	53	47	25	17
26	Puri	16	16	6	16	8	16	9	16	8	13	7	11	2	15	14	14	10	0	0	121	62	65	44
27	Rayagada	11	11	0	11	0	11	0	11	0	1	0	55	49	11	3	11	7	0	0	69	62	52	26
28	Sambalpur	11	11	0	11	0	11	2	11	0	0	0	55	31	11	6	9	6	11	11	78	60	28	25
29	Subarnapur	5	5	1	5	0	5	1	5	2	0	0	25	11	5	0	5	5	0	0	89	58	26	17
30	Sundargarh	21	21	2	21	1	23	6	23	5	104	52	0	0	22	21	17	17	0	0	222	108	114	65
	TOTAL	**382**	**373**	**59**	**375**	**68**	**376**	**74**	**377**	**108**	**435**	**249**	**1,505**	**947**	**370**	**256**	**321**	**272**	**11**	**11**	**3,497**	**2,367**	**1,909**	**1,244**

(Source: Data obtained from the DHHs) (SS of GDMOs and Doctors may be seen together for the purpose of comparison across districts, as their duties are broadly the same)

Appendix 2.5

(Refer Paragraph 2.1.3 and Paragraph 7.2.1)

Availability of Manpower in the PHCs of the State, as on 31 March 2022

Sl. No.	District	Number of PHCs	Sanctioned				In-position			
			Doctors	Nurses	Paramedics	Others	Doctors	Nurses	Paramedics	Others
1	Angul	32	32	9	48	77	18	16	46	105
2	Bolangir	46	46	136	110	93	33	14	96	56
3	Balasore	74	73	174	179	50	49	13	119	91
4	Bargarh	49	49	5	72	50	29	2	52	37
5	Bhadrak	53	53	15	87	49	25	8	71	46
6	Boudh	12	11	6	22	15	9	1	12	11
7	Cuttack	70	70	140	140	140	63	66	108	99
8	Deogarh	7	7	21	7	13	3	3	5	12
9	Dhenkanal	34	34	102	66	86	18	21	46	87
10	Gajapati	21	23	60	60	38	19	47	57	31
11	Ganjam	101	101	289	260	0	34	136	175	0
12	Jagatsinghpur	36	36	4	84	95	15	2	63	88
13	Jajpur	59	59	177	102	90	53	29	60	65
14	Jharsuguda	20	20	58	39	42	11	25	47	42
15	Kalahandi	44	44	36	71	51	39	20	83	62
16	Kandhamal	37	43	152	116	97	39	46	83	53
17	Kendrapara	46	46	25	46	45	44	8	33	41
18	Keonjhar	63	63	63	126	126	39	62	126	126
19	Khurda	67	67	115	121	91	59	65	108	278
20	Koraput	52	54	58	169	52	45	28	107	8
21	Malkangiri	25	25	33	31	29	23	17	31	29
22	Mayurbhanj	85	87	118	164	159	55	16	140	258
23	Nabarangpur	41	40	68	70	49	27	8	77	38
24	Nayagarh	38	38	8	72	62	53	3	59	54
25	Nuapada	17	20	23	40	12	18	18	30	15
26	Puri	49	56	27	147	104	37	15	115	89
27	Rayagada	39	37	108	68	57	24	0	48	31
28	Sambalpur	37	37	0	37	70	26	19	74	118
29	Subarnapur	18	18	54	18	18	14	0	24	18
30	Sundargarh	68	68	72	143	76	57	45	125	63
	TOTAL	**1,340**	**1,357**	**2,156**	**2,715**	**1,936**	**978**	**753**	**2,220**	**2,051**

(Source: Data obtained from H&FW Department)

Appendix 2.6
(Refer Paragraph 2.1.5)
Availability of Doctors in the test-checked CHCs

Sl. No.	Posts	Bhadrak						Sundargarh					
		CHC, Basudevpur			CHC, Barapada			CHC, Lahunipara			CHC, Kuarmunda		
		Sanctioned position	Persons-in-position	Vacant Position	Sanctioned position	Persons-in-position	Vacant Position	Sanctioned position	Persons-in-position	Vacant Position	Sanctioned position	Persons-in-position	Vacant Position
1	Medical Officer/ Superintendent	1	0	1	1	1	0	1	0	1	1	1	0
2	Public Health Specialist	0	0	0	0	0	0	0	0	0	0	0	0
3	Gen. Surgeon	1	1	0	0	0	0	0	0	0	0	0	0
4	Physician/ Medicine specialist	0	0	0	0	0	0	0	0	0	0	0	0
5	O&G specialist	1	1	0	1	0	1	1	1	0	1	0	1
6	Paediatrician	1	1	0	1	0	1	1	0	1	1	1	0
7	Anaesthetist	0	0	0	0	0	0	0	0	0	0	0	0
8	GDMO	0	0	0	1	1	0	5	4	1	2	2	0
9	MO (Ayush)	1	1	0	1	1	0	1	1	0	1	1	0
10	Dental Surgeon	1	1	0	1	0	1	1	1	0	1	1	0
	Total	**6**	**5**	**1**	**6**	**3**	**3**	**10**	**7**	**3**	**7**	**6**	**1**

Sl. No.	Posts	Dhenkanal						Kandhamal					
		CHC, Khajuriakata			CHC, Sriramchandrapur			CHC, Raikia			CHC, Tikabali		
		Sanctioned strength	Persons-in-position	Vacant Position	Sanctioned strength	Persons-in-position	Vacant Position	Sanctioned strength	Persons-in-position	Vacant Position	Sanctioned strength	Sanctioned strength	Vacant Position
1	Medical Officer/ Superintendent	1	0	1	1	0	1	1	0	1	1	1	0
2	Public Health Specialist	0	0	0	0	0	0	1	1	0	1	1	0
3	Gen. Surgeon	0	0	0	0	0	0	1	0	1	1	0	1
4	Physician/ Medicine Specialist	0	0	0	0	0	0	0	0	0	1	0	1
5	O&G specialist	1	0	1	1	0	1	1	0	1	1	0	1

Sl. No.	Posts	Dhenkanal						Kandhamal					
		CHC, Khajuriakata			CHC, Sriramchandrapur			CHC, Raikia			CHC, Tikabali		
		Sanctioned strength	Persons-in-position	Vacant Position	Sanctioned strength	Persons-in-position	Vacant Position	Sanctioned strength	Persons-in-position	Vacant Position	Sanctioned strength	Sanctioned strength	Vacant Position
6	Paediatrician	1	0	1	1	0	1	1	0	1	1	0	1
7	Anaesthetist	0	0	0	0	0	0	1	0	1	0	0	0
8	GDMO	3	2	1	2	1	1	7	7	0	7	7	0
9	MO (Ayush)	1	1	0	1	1	0	0	0	0	0	0	0
10	Dental Surgeon	1	1	0	1	1	0	1	1	0	0	0	0
	Total	**8**	**4**	**4**	**7**	**3**	**4**	**14**	**9**	**5**	**13**	**9**	**4**

Sl. No.	Posts	Nuapada						Nabarangpur					
		CHC, Khariar Road			CHC, Komna			CHC, Kosagumuda			CHC, Papadahandi		
		Sanctioned strength	Persons-in-position	Vacant Position	Sanctioned strength	Persons-in-position	Vacant Position	Sanctioned strength	Persons-in-position	Vacant Position	Sanctioned strength	Persons-in-position	Vacant Position
1	Medical Officer/ Superintendent	1	1	0	1	0	1	2	0	2	8	7	1
2	Public Health Specialist	1	0	1	1	0	1	0	0	0	0	0	0
3	Gen. Surgeon	1	0	1	1	1	0	1	0	1	0	0	0
4	Physician/ Medicine Specialist	1	0	1	1	1	0	0	0	0	0	0	0
5	O&G specialist	1	1	0	1	0	1	1	0	1	1	1	0
6	Paediatrician	1	1	0	1	1	0	1	0	1	1	1	0
7	Anaesthetist	0	0	0	0	0	0	0	0	0	0	0	0
8	GDMO	8	5	3	5	1	4	5	1	4	0	0	0
9	MO (Ayush)	NA	0	0	NA	0	0	1	0	1	1	1	0
10	Dental Surgeon	1	1	0	1	1	0	1	1	0	1	1	0
	Total	**15**	**9**	**6**	**12**	**5**	**7**	**12**	**2**	**10**	**12**	**11**	**1**

Sl. No.	Posts	Puri					
		CHC, Nimapara			CHC, Bangurigaon		
		Sanctioned strength	Persons-in-position	Vacant Position	Sanctioned strength	Persons-in-position	Vacant Position
1	Medical Officer/ Superintendent	2	2	0	11	6	5
2	Public Health Specialist	0	0	0	0	0	0
3	Gen. Surgeon	2	2	0	0	0	0
4	Physician	0	0	0	1	0	1
5	O&G specialist	1	1	0	1	0	1
6	Paediatrician	1	1	0	1	0	1
7	Anaesthetist	0	0	0	0	0	0
8	GDMO	0	0	0	0	0	0
9	MO (Ayush)	0	0	0	0	0	0
10	Dental Surgeon	1	1	0	1	1	0
	Total	**7**	**7**	**0**	**15**	**7**	**8**

(Source: Data supplied by the test-checked CHCs)

Appendix 2.7
(Refer Paragraph 2.1.7)
Availability of Manpower in the SCs of the State, as on 31 March 2022

Sl. No.	Districts	Number of SCs sanctioned for the district	Sanctioned strength		Persons-in-Position	
			ANM (Health worker Female)	Health worker (Male)	ANM (Health worker Female)	Health worker (Male)
1	Angul	166	254	115	236	100
2	Balasore	275	275	214	262	85
3	Bargarh	204	204	153	204	91
4	Bhadrak	178	178	163	146	116
5	Bolangir	226	333	176	322	165
6	Boudh	67	67	47	67	35
7	Cuttack	332	326	285	314	205
8	Deogarh	42	65	35	47	27
9	Dhenkanal	167	198	129	177	97
10	Gajapati	133	196	122	184	90
11	Ganjam	460	460	349	430	131
12	Jagatsinghpur	199	199	142	166	93
13	Jajpur	260	260	209	227	145
14	Jharsuguda	66	66	52	63	51
15	Kalahandi	241	335	185	334	172
16	Kandhamal	172	172	141	161	99
17	Kendrapara	227	227	180	191	156
18	Keonjhar	351	419	245	397	233
19	Khurda	202	202	190	185	160
20	Koraput	307	375	214	375	158
21	Malkangiri	158	158	99	158	85
22	Mayurbhanj	589	602	309	502	199
23	Nabarangpur	289	289	167	304	114
24	Nayagarh	166	166	145	166	127
25	Nuapada	96	96	96	112	90
26	Puri	241	241	208	193	112
27	Rayagada	235	235	153	217	108
28	Sambalpur	160	160	120	133	8
29	Subarnapur	89	89	69	81	46
30	Sundargarh	390	390	241	362	201
	TOTAL	**6688**	**7237**	**4953**	**6716**	**3499**

(Source: Data furnished by NHM, Odisha and the DHHs)

Appendix 2.8
(Refer Paragraph 2.1.8)
Availability of human resources under AYUSH (Ayurvedic)

Sl. No.	Districts	Number of Government Ayurvedic Dispensaries	Ayurvedic Medical Officer				Ayurvedic Assistant			
			Sanctioned Strength	Persons- in-position	Shortage	%age of shortage	Sanctioned Strength	Persons-in-position	Shortage	% age of shortage
1	Angul	16	16	14	2	13	16	13	3	19
2	Balasore	23	23	21	2	9	23	20	3	13
3	Bargarh	22	22	18	4	18	22	14	8	36
4	Bhadrak	21	21	17	4	19	21	15	6	29
5	Bolangir	33	33	28	5	15	33	17	16	48
6	Boudh	10	10	8	2	20	10	5	5	50
7	Cuttack	21	21	20	1	5	21	15	6	29
8	Deogarh	8	8	6	2	25	8	5	3	38
9	Dhenkanal	22	22	18	4	18	22	17	5	23
10	Gajapati	7	7	4	3	43	7	5	2	29
11	Ganjam	48	48	37	11	23	48	38	10	21
12	Jagatsinghpur	11	11	10	1	9	11	9	2	18
13	Jajpur	25	25	22	3	12	25	18	7	28
14	Jharsuguda	9	9	7	2	22	9	7	2	22
15	Kalahandi	20	20	19	1	5	20	8	12	60
16	Kandhamal	17	17	13	4	24	17	8	9	53
17	Kendrapara	15	15	13	2	13	15	11	4	27
18	Keonjhar	48	48	42	6	13	48	35	13	27
19	Khurda	22	22	20	2	9	22	15	7	32
20	Koraput	18	18	13	5	28	18	7	11	61
21	Malkangiri	7	7	6	1	14	7	4	3	43
22	Mayurbhanj	45	45	37	8	18	45	30	15	33
23	Nabarangpur	22	22	16	6	27	22	8	14	64
24	Nayagarh	15	15	12	3	20	15	13	2	13
25	Nuapada	10	10	9	1	10	10	3	7	70

Sl. No.	Districts	Number of Government Ayurvedic Dispensaries	Ayurvedic Medical Officer				Ayurvedic Assistant			
			Sanctioned Strength	Persons- in-position	Shortage	%age of shortage	Sanctioned Strength	Persons-in-position	Shortage	% age of shortage
26	Puri	23	23	19	4	17	23	14	9	39
27	Rayagada	20	20	17	3	15	20	5	15	75
28	Sambalpur	15	15	13	2	13	15	8	7	47
29	Subarnapur	14	14	12	2	14	14	6	8	57
30	Sundargarh	33	33	25	8	24	33	20	13	39
Total		**620**	**620**	**516**	**104**	**17**	**620**	**393**	**227**	**37**

(Source: Data obtained from Directorate of AYUSH)

Appendix 2.9
(Refer Paragraph 2.1.8)
Availability of human resources under AYUSH (Homeopathy)

Sl. No.	Districts	Number of Government Homeopathy Dispensaries	Homoeopathic Medical Officer				Homeopathic Assistant			
			Sanctioned Strength	Persons-in-position	Shortage	%age of shortage	Sanctioned Strength	Persons-in-position	Shortage	%age of shortage
1	Angul	19	19	19	0	0	19	11	8	42
2	Balasore	32	32	31	1	3	32	22	10	31
3	Bargarh	17	17	15	2	12	17	12	5	29
4	Bhadrak	25	25	21	4	16	25	16	9	36
5	Bolangir	18	18	16	2	11	18	12	6	33
6	Boudh	4	4	3	1	25	4	1	3	75
7	Cuttack	29	29	25	4	14	29	21	8	28
8	Deogarh	2	2	1	1	50	2	2	0	0
9	Dhenkanal	19	19	19	0	0	19	11	8	42
10	Gajapati	6	6	4	2	33	6	1	5	83
11	Ganjam	43	43	39	4	9	43	28	15	35
12	Jagatsinghpur	17	17	15	2	12	17	12	5	29
13	Jajpur	21	21	18	3	14	21	12	9	43
14	Jharsuguda	8	8	7	1	13	8	5	3	38
15	Kalahandi	18	18	11	7	39	18	10	8	44
16	Kandhamal	19	19	11	8	42	19	3	16	84
17	Kendrapara	19	19	15	4	21	19	14	5	26
18	Keonjhar	34	34	29	5	15	34	25	9	26
19	Khurda	26	26	26	0	0	27	17	10	37
20	Koraput	18	18	8	10	56	18	7	11	61
21	Malkangiri	8	8	5	3	38	8	3	5	63
22	Mayurbhanj	44	44	33	11	25	43	34	9	21
23	Nabarangpur	16	16	6	10	63	16	6	10	63
24	Nayagarh	20	20	18	2	10	21	14	7	33
25	Nuapada	5	5	3	2	40	5	1	4	80

Sl. No.	Districts	Number of Government Homeopathy Dispensaries	Homoeopathic Medical Officer				Homeopathic Assistant			
			Sanctioned Strength	Persons-in-position	Shortage	%age of shortage	Sanctioned Strength	Persons-in-position	Shortage	%age of shortage
26	Puri	16	16	15	1	6	16	9	7	44
27	Rayagada	14	14	10	4	29	14	5	9	64
28	Sambalpur	16	16	14	2	13	15	10	5	33
29	Subarnapur	5	5	4	1	20	5	4	1	20
30	Sundargarh	24	24	20	4	17	24	18	6	25
Total		**562**	**562**	**461**	**101**	**18**	**562**	**346**	**216**	**38**

(Source: Data obtained from Directorate of AYUSH)

Appendix 2.10
(Refer Paragraph 2.1.8)
Availability of human resources under AYUSH (UNANI)

Sl. No.	Districts	Number of Government UNANI Dispensaries	Unani Medical Officer				Unani Assistant			
			Sanctioned Strength	Persons-in-position	Shortage	%age of shortage	Sanctioned Strength	Persons-in-position	Shortage	%age of shortage
1	Angul	0	0	0	0	0	0	0	0	0
2	Balasore	2	2	1	1	50	2	0	2	100
3	Bargarh	0	0	0	0	0	0	0	0	0
4	Bhadrak	2	2	1	1	50	2	2	0	0
5	Bolangir	0	0	0	0	0	0	0	0	0
6	Boudh	0	0	0	0	0	0	0	0	0
7	Cuttack	2	2	1	1	50	2	0	2	100
8	Deogarh	0	0	0	0	0	0	0	0	0
9	Dhenkanal	0	0	0	0	0	0	0	0	0
10	Gajapati	0	0	0	0	0	0	0	0	0
11	Ganjam	0	0	0	0	0	0	0	0	0
12	Jagatsinghpur	0	0	0	0	0	0	0	0	0
13	Jajpur	0	0	0	0	0	0	0	0	0
14	Jharsuguda	0	0	0	0	0	0	0	0	0
15	Kalahandi	0	0	0	0	0	0	0	0	0
16	Kandhamal	0	0	0	0	0	0	0	0	0
17	Kendrapara	1	1	0	1	100	1	0	1	100
18	Keonjhar	1	1	0	1	100	1	0	1	100
19	Khurda	0	0	0	0	0	0	0	0	0
20	Koraput	0	0	0	0	0	0	0	0	0
21	Malkangiri	0	0	0	0	0	0	0	0	0
22	Mayurbhanj	0	0	0	0	0	0	0	0	0
23	Nabarangpur	0	0	0	0	0	0	0	0	0
24	Nayagarh	0	0	0	0	0	0	0	0	0
25	Nuapada	0	0	0	0	0	0	0	0	0

Sl. No.	Districts	Number of Government UNANI Dispensaries	Unani Medical Officer				Unani Assistant			
			Sanctioned Strength	Persons-in-position	Shortage	%age of shortage	Sanctioned Strength	Persons-in-position	Shortage	%age of shortage
26	Puri	1	1	0	1	100	1	0	1	100
27	Rayagada	0	0	0	0	0	0	0	0	0
28	Sambalpur	0	0	0	0	0	0	0	0	0
29	Subarnapur	0	0	0	0	0	0	0	0	0
30	Sundargarh	0	0	0	0	0	0	0	0	0
Total		**9**	**9**	**3**	**6**	**67**	**9**	**2**	**7**	**78**

(Source: Data obtained from Directorate of AYUSH)

Appendix 2.11
(Refer Paragraph 2.2)
Manpower availability (Teaching) in the Medical College & hospitals of the State as on 31 March 2022

Sl. No.	Medical College & Hospitals	Faculty									Resident doctors						Tutors		
		Professor		Excess(+)/ Shortages (-)	Associate Professor		Excess(+)/ Shortages (-)	Assistant Professor		Excess(+)/ Shortages (-)	Senior Resident		Excess(+)/ Shortages (-)	Junior Resident		Excess(+)/ Shortages (-)			
		SS	PIP		SS	PIP		SS	PIP		SS	PIP		SS	PIP		SS	PIP	Excess(+)/ Shortages (-)
1	SCB MCH, Cuttack	63	46	-17	106	69	-37	232	204	-28	176	131	-45	0	0	0	43	30	-13
2	MKCG MCH, Berhampur	39	36	-3	81	63	-18	162	147	-15	84	53	-31	17	8	-9	40	24	-16
3	VIMSAR, Burla	41	29	-12	76	46	-30	149	118	-31	200	29	-171	0	0	0	47	8	-39
4	PRM MCH, Baripada	21	15	-6	29	23	-6	47	42	-5	39	21	-18	38	24	-14	27	9	-18
5	SLN MCH, Koraput	21	16	-5	29	17	-12	47	45	-2	39	13	-26	38	16	-22	27	19	-8
6	FM MCH, Balasore	21	11	-10	29	19	-10	47	44	-3	39	21	-18	38	18	-20	27	15	-12
7	B.B MCH, Bolangir	21	15	-6	29	19	-10	47	44	-3	39	23	-16	38	26	-12	27	26	-1
8	S.J MCH, Puri	21	12	-9	29	18	-11	45	35	-10	39	19	-20	38	32	-6	27	19	-8
	TOTAL	**248**	**180**	**-68**	**408**	**274**	**-134**	**776**	**679**	**-97**	**655**	**310**	**-345**	**207**	**124**	**-83**	**265**	**150**	**-115**

(Source: Data obtained from Directorate of Medical Education & Training, Odisha)
SS: Sanctioned strength; PIP: Persons-in-position

Appendix 2.12
(Refer Paragraph 2.2)
Availability of Manpower (Non-Teaching Clinical) in the Medical College & hospitals of the State, as on 31 March 2022

Sl. No.	Medical College & Hospitals	Nursing Officers/Nurse*			Paramedics**		
		Sanctioned strength	Persons-in-position	Excess(+)/ Shortages (-)	Sanctioned strength	Persons-in-position	Excess(+)/ Shortages (-)
1	SCB MCH, Cuttack	1333	992	-341	411	272	-139
2	MKCG MCH, Berhampur	1020	700	-320	147	93	-54
3	VIMSAR, Burla	974	819	-155	200	153	-47
4	PRM MCH, Baripada	337	220	-117	70	53	-17
5	SLN MCH, Koraput	338	189	-149	98	63	-35
6	FM MCH, Balasore	332	206	-126	96	64	-32
7	B.B MCH, Bolangir	695	116	-579	131	62	-69
8	S.J MCH, Puri	0	0	0	50	0	-50
	TOTAL	**5,029**	**3242**	**-1,787**	**1,203**	**760**	**-443**

***Source*: Data obtained from DMET, Odisha**

***Nursing Superintendent, Asst. Nursing Superintendent, Dy. Nursing Superintendent,** Nurse, Nursing Officer, Nursing Sister, O.T. Nurse, OT Sister, Psy. Nurse, Public Health Nurse, Staff Nurse, Staff Nurse (ICU)*

****Paramedics includes Lab Technicians, Lab assistant/attendant, Pharmacists, radiographer**

Appendix 3.1

(Refer Paragraph 3.1)

District-wise shortage of CHCs, PHCs and SCs

Sl. No.	District	Population	CHCs			PHCs			SCs		
			Requirement	Functional	Shortages	Requirement	Functional	Shortages	Requirement	Functional	Shortages
1	Angul	1396000	12	9	3	46	32	14	279	166	113
2	Balasore	2574000	21	17	4	84	74	10	515	275	240
3	Bargarh	1545000	13	16	0	54	49	5	309	204	105
4	Bhadrak	1674000	14	7	7	54	53	1	335	178	157
5	Bolangir	1762000	15	15	0	60	46	14	352	226	126
6	Boudh	489000	4	5	0	16	12	4	98	67	31
7	Cuttack	2802000	24	21	3	95	70	25	560	332	228
8	Deogarh	343000	3	4	0	11	7	4	69	42	27
9	Dhenkanal	1261000	11	10	1	43	34	9	252	167	85
10	Gajapati	616000	8	8	0	31	21	10	123	136	0
11	Ganjam	3829000	32	28	4	128	101	27	766	460	306
12	Jagatsinghpur	1190000	10	11	0	41	36	5	238	189	49
13	Jajpur	1990000	17	12	5	66	61	5	398	260	138
14	Jharsuguda	628000	5	6	0	21	20	1	126	66	60
15	Kalahandi	1753000	14	17	0	57	44	13	351	242	109
16	Kandhamal	807000	10	14	0	40	37	3	161	172	0
17	Kendrapara	1523000	13	8	5	52	46	6	305	227	78
18	Keonjhar	1976000	24	17	7	98	62	36	395	351	44
19	Khurda	2600000	20	16	4	81	68	13	520	202	318
20	Koraput	1501000	19	16	3	75	52	23	300	307	0
21	Malkangiri	692000	8	6	2	33	24	9	138	158	0
22	Mayurbhanj	2764000	34	28	6	137	85	52	553	589	0
23	Nabarangpur	1382000	17	10	7	66	41	25	276	289	0
24	Nayagarh	1002000	9	12	0	35	38	0	200	166	34
25	Nuapada	654000	6	5	1	22	17	5	131	95	36
26	Puri	1833000	15	16	0	61	49	12	367	241	126
27	Rayagada	1062000	13	11	2	53	39	14	212	235	0
28	Sambalpur	1115000	9	11	0	38	36	2	223	167	56
29	Subarnapur	651000	6	5	1	22	18	4	130	89	41
30	Sundargarh	2281000	28	21	7	114	68	46	456	390	66
	State	**4,56,95,000**	**434**	**382**	**72**	**1,734**	**1,340**	**397**	**9,138**	**6,688**	**2,573**

(Source: Data furnished by DHS, NHM Odisha; Requirement of SCs computed, as per population norms)

Appendix 3.2
(Refer Paragraph 3.1.1)
District-wise sanctioned and available HCIs under AYUSH

Sl. No.	District	Ayurvedic						Homeopathic				Unani	
		Sanctioned			Available			Sanctioned		Available		Sanctioned	Available
		MCHs	Dispensaries	Hospital	MCHs	Dispensaries	Hospital	MCHs	Dispensaries	MCHs	Dispensaries	Dispensaries	Dispensaries
1	Angul	0	16	0	0	16	0	0	19	0	19	0	0
2	Balasore	0	23	0	0	23	0	0	32	0	32	2	2
3	Bargarh	0	22	1	0	22	1	0	17	0	17	0	0
4	Bhadrak	0	21	0	0	21	0	0	25	0	25	2	2
5	Bolangir	1	33	0	1	33	0	0	18	0	18	0	0
6	Boudh	0	10	0	0	10	0	0	4	0	4	0	0
7	Cuttack	0	21	0	0	21	0	0	29	0	29	2	2
8	Deogarh	0	8	0	0	8	0	0	2	0	2	0	0
9	Dhenkanal	0	22	0	0	22	0	0	19	0	19	0	0
10	Gajapati	0	7	0	0	7	0	0	6	0	6	0	0
11	Ganjam	1	48	0	1	48	0	1	43	1	43	0	0
12	Jagatsinghpur	0	11	0	0	11	0	0	17	0	17	0	0
13	Jajpur	0	25	0	0	25	0	0	21	0	21	0	0
14	Jharsuguda	0	9	0	0	9	0	0	8	0	8	0	0
15	Kalahandi	0	20	0	0	20	0	0	18	0	18	0	0
16	Kandhamal	0	17	0	0	17	0	0	19	0	19	0	0
17	Kendrapara	0	15	0	0	15	0	0	19	0	19	1	1
18	Keonjhar	0	48	0	0	48	0	0	34	0	34	1	1
19	Khurda	0	22	1	0	22	1	1	26	1	26	0	0
20	Koraput	0	18	0	0	18	0	0	18	0	18	0	0
21	Malkangiri	0	7	0	0	7	0	0	8	0	8	0	0
22	Mayurbhanj	0	45	0	0	45	0	0	44	0	44	0	0
23	Nabarangpur	0	22	0	0	22	0	0	16	0	16	0	0
24	Nayagarh	0	15	0	0	15	0	0	20	0	20	0	0
25	Nuapada	0	10	0	0	10	0	0	5	0	5	0	0
26	Puri	1	23	0	1	23	0	0	16	0	16	1	1
27	Rayagada	0	20	0	0	20	0	0	14	0	14	0	0
28	Sambalpur	0	15	0	0	15	0	1	16	1	16	0	0
29	Subarnapur	0	14	0	0	14	0	0	5	0	5	0	0
30	Sundargarh	0	33	0	0	33	0	1	24	1	24	0	0
	TOTAL	**3**	**620**	**2**	**3**	**620**	**2**	**4**	**562**	**4**	**562**	**9**	**9**

(Source: Data obtained from Directorate of AYUSH, Odisha)

Appendix 3.3

(Refer Paragraph 3.2.1.1)

Availability of OPD Services at DHHs of the State, as on 31 March 2022

Sl. No.	DHH/ Name of OPD Services	General Medicine	General Surgery	Obstetrics & Gynaecology	Paediatrics	Eye	ENT	Skin and VD	Psychiatry	Orthopedics	Dentistry
1	Angul	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
2	Balasore	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
3	Bargarh	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
4	Bhadrak	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
5	Bolangir	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
6	Boudh	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes
7	Cuttack	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
8	Deogarh	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes
9	Dhenkanal	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes
10	Gajapati	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes
11	Ganjam	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
12	Jagatsinghpur	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
13	Jajpur	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
14	Jharsuguda	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
15	Kalahandi	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes
16	Kandhamal	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
17	Kendrapara	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
18	Keonjhar	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
19	Khurda	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
20	Koraput	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes
21	Malkangiri	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
22	Mayurbhanj	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
23	Nabarangpur	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes
24	Nayagarh	Yes	Yes	Yes	Yes	Yes	No	No	No	Yes	Yes
25	Nuapada	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes
26	Puri	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
27	Rayagada	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes
28	Sambalpur	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
29	Subarnapur	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	No	Yes
30	Sundargarh	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
31	Capital Hospital	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
32	RGH, Rourkela	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes

(Source: Data furnished by the DHHs)

Appendix 3.4
(Refer Paragraph 3.2.2)
Department-wise OPD patients in the test-checked DHHs

DHHs	Name of the Department	Number of OPD patients					
		2016-17	2017-18	2018-19	2019-20	2020-21	2021-22
Kandhamal	ENT	NA	2440	544	645	658	1177
	General Medicine	NA	3688	4574	6276	6480	6456
	Pediatrics	NA	11844	8839	27555	11496	18690
	General Surgery	NA	2356	2784	1897	1860	1572
	Ophthalmology	NA	11891	12409	36436	24475	24642
	Dental	NA	1337	1036	1334	2640	2040
	Obstetric & Gynaecology	NA	13764	14789	14236	11616	16572
	Psychiatry	NA	1437	1544	1860	1237	1282
	Orthopedics	NA	1156	1320	1252	1320	2196
	Dermatology & venereology	NA	0	0	4032	1140	3084
	Other if any maybe mentioned (General OPD, Emergency)	NA	129384	180571	206462	99248	125542
	Total		**1,79,297**	**2,28,410**	**3,01,985**	**1,62,170**	**2,03,253**
Nuapada	ENT	1721	1703	2052	2293	2209	2197
	General Medicine	3215	3331	4676	6506	4945	5461
	Pediatrics	6053	4290	5572	8063	7410	8101
	General Surgery	2198	3273	5321	6211	1041	656
	Ophthalmology	3713	4200	6283	7931	5727	5547
	Dental	1524	2263	1921	2623	1776	2294
	Obstetrics & Gynaecology	5197	5421	6013	6600	5735	5616
	Psychiatry	0	0	0	0	0	0
	Orthopedics	0	0	0	0	2753	3181
	Dermatology & venereology	0	0	0	0	0	0
	Other if any maybe mentioned (General OPD, Emergency)	46791	62397	85685	96355	54759	44209
	Total	**70,412**	**86,878**	**1,17,523**	**1,36,582**	**86,355**	**77,262**
Bhadrak	ENT	1467	3752	808	1117	706	5210
	General Medicine	175556	136290	151973	224127	115254	129260
	Pediatrics	24976	26021	34121	35991	17117	18222
	General Surgery	9272	10164	38550	31891	10463	14837
	Ophthalmology	45446	42598	44291	51886	37426	39174
	Dental	8141	13758	10456	10454	6030	8101
	Obstetrics & Gynaecology	10661	11594	14931	12878	6647	7552
	Psychiatry	0	0	359	323	618	1202
	Orthopedics	10016	9470	11090	5959	6251	10595
	Dermatology & venereology	29404	28643	30934	22678	4761	15758
	Other if any maybe mentioned	0	0	0	0	0	0

DHHs	Name of the Department	Number of OPD patients					
		2016-17	2017-18	2018-19	2019-20	2020-21	2021-22
	Total	**3,14,939**	**2,82,290**	**3,37,513**	**3,97,304**	**2,05,273**	**2,49,911**
Puri	ENT	602	1202	2136	2865	3127	2873
	General Medicine	98118	154802	219399	292389	191022	171578
	Pediatrics	11964	16850	22322	53571	42021	38066
	General Surgery	6523	8542	8768	8974	45004	41561
	Ophthalmology	28875	30255	29959	36968	25844	18675
	Dental	15986	16120	16754	36968	12401	11203
	Obstetrics & Gynaecology	9918	12215	12521	11907	12655	11662
	Psychiatry	402	705	593	827	185	713
	Orthopedics	4253	6120	9880	12390	14111	11457
	Dermatology & venereology	3678	4325	4320	4998	5741	5324
	Other if any maybe mentioned	71396	92875	123956	177794	138071	162380
	Total	**2,51,715**	**3,44,011**	**4,50,608**	**6,39,651**	**4,90,182**	**4,75,492**
Dhenkanal	ENT	NA	NA	2864	3197	1369	2046
	General Medicine	NA	NA	NA	2763	2056	2726
	Pediatrics	NA	NA	5015	15743	7408	11796
	General Surgery	NA	NA	826	875	1863	2946
	Ophthalmology	14204	15181	14262	12595	6747	8335
	Dental	NA	NA	6717	5882	4408	4619
	Obstetrics & Gynaecology	7473	5573	4554	4119	4571	4320
	Psychiatry	2459	3078	2931	3230	3315	4318
	Orthopedics	5095	4015	5883	4795	4959	7171
	Dermatology & venereology	NA	NA	NA	NA	NA	NA
	Other if any maybe mentioned	NA	NA	NA	NA	NA	NA
	Total	**29,231**	**27,847**	**43,052**	**53,199**	**36,696**	**48,277**
Nabarangpur	ENT	0	0	18	22	22	0
	General Medicine	15569	18697	22650	24698	30650	9560
	Pediatrics	15098	16259	18236	20256	22560	2650
	General Surgery	2620	2856	598	896	920	12
	Ophthalmology	18	20	20	130	152	0
	Dental	3560	3859	3999	4200	3966	156
	Obstetrics & Gynaecology	7348	7748	9015	10091	11830	7517
	Psychiatry	0	0	0	0	0	0
	Orthopedics	265	290	302	420	452	56
	Dermatology & venereology	0	0	0	0	0	12
	Other if any maybe mentioned	26478	35236	54827	82355	8782	2261
	Total	**70,956**	**84,965**	**1,09,665**	**1,43,068**	**79,334**	**22,224**
Sundargarh	ENT	1719	3561	3607	3424	3374	4141
	General Medicine	161265	171920	189777	172422	143322	143289
	Pediatrics	38769	41384	5005	56820	42150	44910

DHHs	Name of the Department	Number of OPD patients					
		2016-17	**2017-18**	**2018-19**	**2019-20**	**2020-21**	**2021-22**
	General Surgery	0	0	0	0	0	0
	Ophthalmology	5035	11106	15471	16155	12055	14982
	Dental	2398	5555	5860	4986	5333	7544
	Obstetrics & Gynaecology	3104	3415	3639	5313	7985	8500
	Psychiatry	0	0	0	0	0	0
	Orthopedics	0	0	0	0	0	0
	Dermatology & venereology	3521	9052	12394	11826	9434	9435
	Other if any maybe mentioned	33547	67927	32239	41570	69342	86324
	Total	**2,49,358**	**3,13,920**	**2,67,992**	**3,12,516**	**2,92,995**	**3,19,125**

(Source: Data furnished by the test-checked DHHs)

Appendix 3.5

(Refer Paragraph 3.2.2.1)

OPD cases per doctor per annum in the test-checked DHHs

Year	District Headquarter Hospitals													
	Bhadrak		Dhenkanal		Kandhamal		Nabarangpur		Nuapada		Puri		Sundargarh	
	OPD patients	OPD cases per doctor per annum	OPD patients	OPD cases per doctor per annum	OPD patients	OPD cases per doctor per annum	OPD patients	OPD cases per doctor per annum	OPD patients	OPD cases per doctor per annum	OPD patients	OPD cases per doctor per annum	OPD patients	OPD cases per doctor per annum
2016-17	314939	24226	29231	1218	NA	NA	70691	7855	70412	5029	251715	17980	249358	7556
2017-18	282290	21715	27847	928	179297	14941	84965	7080	86878	6206	344011	24572	313920	10825
2018-19	337513	21095	43052	1133	228410	20765	109665	4387	117523	6913	450608	32186	267992	10720
2019-20	397304	20911	53199	2217	301985	30199	143068	4471	136582	7189	639651	45689	312516	13022
2020-21	205273	10804	36696	1835	162170	11584	79334	3173	86355	4318	490182	27232	292995	9156
2021-22	249911	13153	48277	1857	203253	15635	22224	889	77262	2759	475492	26416	319125	9118

(Source: Data obtained from the test-checked DHHs)

Appendix 3.6
(Refer Paragraph 3.3.1.1)
Availability of IPD Services in the DHHs, as on 31st March 2022

Sl. No.	DHHs	ENT	General Medicine	Pediatrics	General Surgery	Ophthalmology	Dental	Obstetrics & Gynaecology	Psychiatry	Orthopedics	Dermatology & venereology	SNCU
1	Angul	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes
2	Balasore	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
3	Bargarh	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes
4	Bhadrak	No	Yes	Yes	Yes	Yes	No	Yes	No	Yes	No	Yes
5	Bolangir	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
6	Boudh	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
7	Cuttack	No	Yes	Yes	Yes	Yes	No	Yes	No	No	No	No
8	Deogarh	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes
9	Dhenkanal	No	Yes	Yes	Yes	Yes	No	Yes	No	Yes	No	Yes
10	Gajapati	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	No	Yes
11	Ganjam	No	Yes	Yes	Yes	Yes	No	Yes	Yes	No	No	Yes
12	Jagatsinghpur	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
13	Jajpur	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
14	Jharsuguda	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
15	Kalahandi	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
16	Kandhamal	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	No	Yes
17	Kendrapara	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
18	Keonjhar	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
19	Khurda	No	Yes	Yes	Yes	Yes	No	Yes	Yes	No	No	Yes
20	Koraput	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
21	Malkangiri	Yes	Yes	Yes	Yes	Yes	No	Yes	No	Yes	No	Yes
22	Mayurbhanj	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
23	Nabarangpur	No	Yes	Yes	Yes	Yes	No	Yes	No	Yes	No	Yes
24	Nayagarh	No	Yes	Yes	Yes	Yes	No	Yes	No	No	No	Yes
25	Nuapada	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes
26	Puri	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
27	Rayagada	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes
28	Sambalpur	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
29	Subarnapur	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No
30	Sundargarh	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
31	Capital Hospital	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
32	RGH Rourkela	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes

(Source: Data obtained from the DHHs)

Appendix 3.7

(Refer Paragraph 3.3.1.2)

Availability of IPD Services in the test-checked CHCs, as on 31 March 2022

CHCs	General Medicine	General surgery	Obstetrics & Gynaecology	Paediatrics	Dental
Bangurigaon	Yes	Yes	Yes	Yes	No
Barapada	No	No	No	No	No
Basudevpur	Yes	Yes	Yes	Yes	Yes
Khajuriakata	Yes	No	Yes	No	No
Khariar road	Yes	No	Yes	No	Yes
Komna	Yes	No	Yes	No	Yes
Kosagmunda	Yes	Yes	Yes	Yes	No
Kuarmund	Yes	No	Yes	Yes	No
Lahunipada	Yes	Yes	Yes	Yes	No
Nimapara	Yes	Yes	Yes	Yes	No
Papdahandi	Yes	Yes	Yes	No	Yes
Raikia	Yes	No	Yes	No	No
Sriramchandrapur	Yes	Yes	Yes	No	No
Tikabali	Yes	Yes	Yes	Yes	No

(Source: Data furnished by the DHHs)

Appendix 3.8
(Refer Paragraph 3.4)
Availability of Line Services in the DHHs, as on 31 March 2022

Sl. No.	Name of the DHHs	Emergency Services	Accident and Trauma Care services	Imaging Services	Pathology Services	Ambulance Services	Blood Bank	Bio-Medical Waste Management	ICU	Oxygen Services (Plants)	Mortuary Services
1	Angul	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
2	Balasore	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
3	Bargarh	Yes	No	Yes	Yes	Yes	No	Yes	No	Yes	Yes
4	Bhadrak	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No	Yes
5	Bolangir	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
6	Boudh	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes
7	Cuttack	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	No
8	Deogarh	Yes	No	Yes	Yes	Yes	Yes	Yes	No	No	Yes
9	Dhenkanal	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No	Yes
10	Gajapati	Yes	No	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes
11	Ganjam	Yes	No	Yes	Yes	Yes	No	Yes	No	Yes	No
12	Jagatsinghpur	Yes	No	Yes	Yes	Yes	Yes	Yes	No	Yes	No
13	Jajpur	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
14	Jharsuguda	Yes	No	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes
15	Kalahandi	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
16	Kandhamal	Yes	No	Yes	Yes	Yes	Yes	Yes	No	No	Yes
17	Kendrapara	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
18	Keonjhar	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes
19	Khurda	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes
20	Koraput	Yes	No	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes
21	Malkangiri	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
22	Mayurbhanj	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
23	Nabarangpur	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes
24	Nayagarh	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
25	Nuapada	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
26	Puri	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Sl. No.	Name of the DHHs	Emergency Services	Accident and Trauma Care services	Imaging Services	Pathology Services	Ambulance Services	Blood Bank	Bio-Medical Waste Management	ICU	Oxygen Services (Plants)	Mortuary Services
27	Rayagada	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes
28	Sambalpur	Yes	No	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes
29	Subarnapur	Yes	No	Yes	Yes	No	Yes	Yes	No	No	Yes
30	Sundargarh	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes
31	Capital Hospital	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
32	RGH Rourkela	Yes	No	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes

(Source: Data furnished by the DHHs)

Appendix 3.9
(Refer Paragraph 3.4.1.1)
Shortage of equipment in the Central Casualty Departments of the test-checked MCHs

Sl. No.	Item	PRM MCH (100 admissions)			MKCG MCH (250 admissions)		
		No. of items required	No. of items available	Shortage	No. of items required	No. of items available	Shortage
1	Ventilators	3	2	1	4	4	0
2	ECG machines	3	1	2	4	4	0
3	Nebulizers	3	1	2	4	4	0
4	Fully equipped disaster trolleys (emergency trolleys).	3	2	1	4	1	3
5	Emergency X-ray (Fixed 300/500mA)	1	0	1	1	1	0
6	Emergency X-ray Mobile100mA	1	1	0	1	1	0
7	Sonography machines in the casualty	1	0	1	2	0	2
8	Pedestal lights	2	0	2	2	0	2
9	Electro-surgical cautery unit	2	2	0	2	1	1
10	Assorted surgical instrument sets	5	2	3	5	5	0
11	Pocket masks with oxygen port	1	1	0	1	0	1
12	Oropharyngeal airways, sizes 2, 3 and 4	1	1	0	1	0	1
13	Nasopharyngeal airways, sizes 6 and 7	1	0	1	1	1	0
14	Portable suction equipment	1	0	1	4	4	0
15	Laryngeal mask airways (sizes 4 and 5), or Pro Seal LMAs (sizes 4 and 5)	1	0	1	1	1	0
16	Seldinger central venous catheter kits	1	0	1	1	1	0
17	Arterial blood gas syringes	1	1	0	1	0	1
18	Tourniquets	1	1	0	1	0	1
	Total shortage	**32**	**15**	**17**	**40**	**28**	**12**

(Source: Information furnished by the test-checked MCHs)

Appendix 3.10
(Refer Paragraph 3.5)
Availability of Maternal and Child Care services and availability of Beds in DHHs, as on 31 March 2022

Sl. No.	DHHs	Availability of Maternal and Child care services (Yes/No)	Number of Sanctioned Beds	Number of Functional Beds
1	Angul	Yes	100	167
2	Balasore	Yes	100	250
3	Bargarh	Yes	125	125
4	Bhadrak	Yes	96	143
5	Bolangir	Yes	125	125
6	Boudh	Yes	28	36
7	Cuttack	Yes	40	40
8	Deogarh	Yes	71	71
9	Dhenkanal	Yes	72	72
10	Gajapati	Yes	101	101
11	Ganjam	Yes	20	20
12	Jagatsinghpur	Yes	60	102
13	Jajpur	Yes	100	100
14	Jharsuguda	Yes	30	56
15	Kalahandi	Yes	100	100
16	Kandhamal	Yes	100	100
17	Kendrapara	Yes	100	55
18	Keonjhar	Yes	50	95
19	Khurda	Yes	100	100
20	Koraput	Yes	50	50
21	Malkangiri	Yes	0	92
22	Mayurbhanj	Yes	124	214
23	Nabarangpur	Yes	50	50
24	Nayagarh	Yes	100	100
25	Nuapada	Yes	100	100
26	Puri	Yes	100	140
27	Rayagada	Yes	50	50
28	Sambalpur	Yes	50	50
29	Subarnapur	Yes	24	24
30	Sundargarh	Yes	80	85
31	Capital Hospital	Yes	100	150
32	RGH Rourkela	Yes	100	110
	TOTAL		**2446**	**3073**

(Source: Data obtained from the DHHs)

Appendix 3.11

(Refer Paragraph 3.6.1.2)

Surgeries per surgeon per annum in the test-checked DHHs, during FYs 2016-17 to 2021-22

DHHs	Year	Total Surgeries			Number of Surgeons			Surgeries per Surgeon		
		General Surgery	Orthopaedics	Eye	General Surgery	Orthopaedics	Eye	General Surgery	Orthopaedics	Eye
Bhadrak	2016-17	873	1638	577	3	2	1	291	819	577
	2017-18	1040	1482	496	3	2	2	347	741	248
	2018-19	6321	4344	193	3	2	2	2107	2172	97
	2019-20	4401	3500	96	3	2	2	1467	1750	48
	2020-21	685	1215	173	3	2	2	228	608	87
	2021-22	984	1157	124	3	2	2	328	579	62
Dhenkanal	2016-17	1868	89	514	2	1	1	934	89	514
	2017-18	2242	169	276	2	1	1	1121	169	276
	2018-19	2319	65	34	3	1	1	773	65	34
	2019-20	2903	96	224	3	1	1	968	96	224
	2020-21	2731	82	310	3	1	2	910	82	155
	2021-22	3670	9	398	3	1	2	1223	9	199
Kandhamal	2016-17	368	23	256	4	1	1	92	23	256
	2017-18	476	NA	38	3	0	2	159	NA	19
	2018-19	604	53	96	2	1	1	302	53	96
	2019-20	645	48	240	3	1	2	215	48	120
	2020-21	365	72	211	2	1	2	183	72	106
	2021-22	338	62	488	3	1	2	113	62	244
Nabarangpur	2016-17	1285	180	230	1	1	1	1285	180	230
	2017-18	1470	220	450	1	1	1	1470	220	450
	2018-19	1639	254	378	1	1	1	1639	254	378
	2019-20	1423	180	580	1	1	1	1423	180	580
	2020-21	1841	253	308	1	1	1	1841	253	308
	2021-22	893	347	50	1	1	1	893	347	50
Nuapada	2016-17	1104	0	0	1	0	0	1104	0	0
	2017-18	1494	0	145	1	0	2	1494	0	73
	2018-19	1286	0	245	1	0	2	1286	0	123
	2019-20	327	3	243	1	1	2	327	3	122
	2020-21	289	104	175	1	1	2	289	104	88
	2021-22	75	206	200	1	2	2	75	103	100

DHHs	Year	Total Surgeries			Number of Surgeons			Surgeries per Surgeon		
		General Surgery	Orthopaedics	Eye	General Surgery	Orthopaedics	Eye	General Surgery	Orthopaedics	Eye
Puri	2016-17	38447	583	981	3	2	1	12816	292	981
	2017-18	39309	647	1166	4	2	1	9827	324	1166
	2018-19	40317	921	1189	4	2	1	10079	461	1189
	2019-20	40636	1116	1288	4	2	1	10159	558	1288
	2020-21	41583	1173	1330	5	3	2	8317	391	665
	2021-22	41988	1294	1457	5	3	2	8398	431	729
Sundargarh	2016-17	308	0	825	4	0	1	77	0	825
	2017-18	353	0	391	4	0	1	88	0	391
	2018-19	642	0	1200	4	0	2	161	0	600
	2019-20	515	0	663	5	1	2	103	0	332
	2020-21	355	75	223	2	2	2	178	38	112
	2021-22	677	22	703	3	3	2	226	7	352

(Source: Data obtained from the test-checked DHHs)

Appendix 3.12
(Refer Paragraph 3.9.3.1)
Availability of 108-Ambulances in the State

Sl. No	Districts	ALS	BLS	TOTAL
1	Angul	4	16	20
2	Bolangir	4	19	23
3	Balasore	5	34	39
4	Bargarh	3	17	20
5	Boudh	2	8	10
6	Bhadrak	4	20	24
7	Cuttack	6	22	28
8	Deogarh	2	3	5
9	Dhenkanal	4	14	18
10	Gajapati	2	6	8
11	Ganjam	8	33	41
12	Jagatsinghpur	2	11	13
13	Jajpur	4	19	23
14	Jharsuguda	2	6	8
15	Kalahandi	4	20	24
16	Kandhamal	3	12	15
17	Kendrapara	4	14	18
18	Keonjhar	7	24	31
19	Khurda	4	27	31
20	Koraput	4	19	23
21	Malkangiri	2	10	12
22	Mayurbhanj	7	34	41
23	Nabarangpur	2	15	17
24	Nayagarh	2	13	15
25	Nuapada	2	9	11
26	Puri	3	24	27
27	Rayagada	4	16	20
28	Sambalpur	4	15	19
29	Subarnapur	2	8	10
30	Sundargarh	6	24	30
Total		**112**	**512**	**624**

(Source: Data obtained from NHM, Odisha)

Appendix 4.1
(Refer Paragraph 4.1.1)
Short and excess supply of essential medicines, compared to the approved/ indented quantities

Name of District	Financial Year	Short supply			Excess supply			No supply	
		Number of drugs	Quantity approved (in crore)	Quantity supplied (in crore) (%)	Number of drugs	Quantity approved (in crore)	Quantity supplied (in crore) (%)	Number of drugs	Quantity approved
Bhadrak	2019-20	387	11.99	6.51 (*54*)	47	0.46	0.86 (*187*)	145	3290344
	2020-21	395	18.11	7.56 (*42*)	54	0.41	1.34 (*327*)	156	11723614
	2021-22	564	25.79	7.00 (*27*)	31	0.2	0.28 (*140*)	248	37603912
Dhenkanal	2019-20	273	3.84	2.12(*55*)	123	1.58	4.34 (*275*)	103	1078693
	2020-21	326	9.82	5.33(*54*)	107	0.83	1.72 (*207*)	82	7650984
	2021-22	299	12.89	5.78(*45*)	72	0.59	0.89 (*151*)	221	33517464
Kandhamal	2019-20	205	3.54	2.49 (*70*)	118	1.13	1.64 (*145*)	88	1242320
	2020-21	287	8.16	3.32 (*41*)	61	0.76	0.97 (*128*)	408	5947877
	2021-22	353	11.09	4.27 (*39*)	54	0.22	0.36 (*164*)	504	25070107
Nuapada	2019-20	322	2.56	1.47 (*57*)	72	0.32	1.27 (*397*)	100	1033198
	2020-21	385	4.9	2.42 (*49*)	92	0.46	1.1 (*239*)	149	3573894
	2021-22	540	7.88	2.28 (29)	78	0.58	0.87 (*150*)	466	5134441
Puri	2019-20	206	6.34	4.19 (*66*)	47	1.5	1.88 (*125*)	94	1059752
	2020-21	267	11.63	7.9 (*68*)	42	4.13	4.66 (*113*)	109	16240218
	2021-22	274	19.31	6.47 (*34*)	41	1.01	1.64 (*162*)	128	30160766
Sundargarh	2019-20	224	6.13	3.55 (58)	18	0.26	0.40 (*154*)	86	1213222
	2020-21	240	15.47	6.42 (*41*)	31	0.3	0.93 (*310*)	121	4495229
	2021-22	301	19.2	7.44 (*39*)	24	0.23	0.41 (*178*)	198	44300157

(Source: Data obtained from the test-checked DHHs)

Appendix 4.2
(Refer Paragraph 4.2.6.1)
Equipment, not put to use, in MCHs

Sl. No.	Equipment	Quantity	Department	Date of purchase	Date of installation	Price (in ₹)	Reasons for non-use, as furnished by the MCH
(A)	**PRM MCH, Baripada**						
1	Large Extension Kymograph	3	Physiology	21.3.2018	17.6.2019	3,52,800	As Mammalian experiments have not been permitted since March 2014.
2	Dale's Bath for Internal Organ	10	Physiology	2.5.2018	17.6.2019	63,22,912	
3	Dale's Bath for Internal Organ	5	Physiology	17.2.2020	13.02.2020	31,61,456	
4	Operation Table	3	Physiology	13.2.2020	13.2.2020	21,41,700	
5	Gas Analyser (Co2, N2, O2)	1	Physiology	17.2.2020	17.2.2020	40,01,568	Due to non-supply of reagents, it has not been used since September 2020.
6	ECG Machine	1	Physiology	02.03.2019	12.03.2019	23,660	Out of order, from the date of installation (March 2019).
7	Semi-automatic Rotary Microtomes	1	Pathology	1.1.2018	01.04.2018	6,43,100	Out of order, from the date of installation (1.4.2018).
8	Parafin Embedding Bath	1	Pathology		10.5.2018	5,38,080	Out of order, since September 2019.
9.	Hot Plate	1	Biochemistry (Central Research Lab)	06.12.2017	26.03.2018	43,680	The Central Research Laboratory would be functional after opening of PG course, in future.
10.	Deep Freezer	1	Biochemistry (Central Research Lab)	01.01.2018	26.03.2018	1,36,880	
11	Autoclaves	4	Biochemistry (Central Research Lab)	23.12.2017	26.03.2018	7,55,200	
12	Hot Air Oven	1	Biochemistry (Central Research Lab)	06.12.2017	26.03.2018	77,280	

Sl. No.	Equipment	Quantity	Department	Date of purchase	Date of installation	Price (in ₹)	Reasons for non-use, as furnished by the MCH
13	Water Stills for Distilled Water	1	Biochemistry (Central Research Lab)	01.01.2018	26.03.2018	69,000	
14	Laminar Flow Bench	1	Biochemistry (Central Research Lab)	10.01.2018	26.03.2018	2,95,000	
15	Vacuum Pump	2	Biochemistry (Central Research Lab)	10.01.2018	26.03.2018	98,000	
16	ELISA Reader and Washer	3	Biochemistry (Central Research Lab)	04.12.2017	24.05.2018	5,86,500	
17	Fume Hood	2	Biochemistry (Research Laboratory)	04.12.2017	17.07.2018	3,30,000	Equipment were retained for use in PG course.
18	Autoclave	1	Biochemistry (Research Laboratory)	23.12.2017	12.03.2018	1,88,769	
19	Hot Air Oven	1	Biochemistry (Research Laboratory)	04.12.2017	12.03.2018	77,280	
20	Actimeter	1	Pharmacology	04.12.2017	12.07.2018	2,10,000	Not required for UG students. They will be used for PG Students, in future.
21	Rotarod Apparatus (Acceleration mode)	1	Pharmacology	04.12.2017	12.07.2018	3,55,000	
22	Rotarod apparatus	1	Pharmacology	04.12.2017	12.07.2018	1,42,500	
23	Hot Air Oven	1	Pharmacology	04.12.2017	28.02.2018	77,280	
24	Hot Plates	2	Pharmacology	04.12.2017	28.02.2018	79,000	
25	Cook's Pole Climbing Apparatus	1	Pharmacology	04.12.2017	12.07.2018	76,700	
26	Water stills for Distilled water	2	Pharmacology	04.12.2017	28.02.2018	69,000	
27	Metabolic cage for small rodents	1	Pharmacology	04.12.2017	12.07.2018	41,300	

Sl. No.	Equipment	Quantity	Department	Date of purchase	Date of installation	Price (in ₹)	Reasons for non-use, as furnished by the MCH
28	Metabolic cage for small rodents	1	Pharmacology	04.12.2017	12.07.2018	35,400	
29	Metabolic cage for large rodents	1	Pharmacology	04.12.2017	12.07.2018	47,040	
30	Autoclave	1	Pharmacology	04.12.2017	28.02.2018	1,60,000	
31	Digital Physiograph	1	Pharmacology	04.12.2017	06.07.2020	8,09,622	
32	Computerised Physiograph	1	Pharmacology	04.12.2017	06.07.2020	16,07,608	
33	Parafin Embedding Bath with Cold Plate	2	Forensic Medicine & Toxicology Department (FMT)	24.01.2018	26.02.2018	1076160	Out of order since October 2021. Nozzle is not working. Complaint was given for repairing, but the same was not repaired.
34	Semi-automatic Microtones	1	FMT	24.01.2018	24.02.2018	5,90,000	The equipment would be used by the FMT Department after operation of mortuary in new attached hospital which was under construction.
35	Embalming Pump	1	FMT	24.01.2018	26.02.2018	1,56,800	
36	Potable X-ray machine	1	FMT	24.06.2020	24.06.2020	9,38,100	
37	Anthrometric Set	1	FMT	02.03.2020	24.03.2020	92,040	
38	Digital Spectrometer	1	FMT	18.02.2020	18.02.2020	2,95,000	
39	Dissection Set Complete	4	FMT	02.03.2020	24.03.2020	2,73,760	
40	Deep Freezer for keeping Tissue	2	FMT	09.01.2020	28.02.2018	2,19,008	
41	Automatic Tissue Processing Machine	1	FMT	12.01.2018	26.02.2018	6,43,000	
42	Four Body Mortuary Chamber	1	FMT	23.12.2017	26.02.2018	8,23,640	
43	Autopsy Table	2	FMT	19.02.2018	26.02.2018	9,55,800	
44	Autopsy Saw with Accessories	3	FMT	12.01.2018	26.02.2018	7,39,200	
45	Instrument trolley	20	FMT	24.01.2018	26.02.2018	2,12,400	
46	Ventilator (for paediatric covid 19)	24	Issued to 30 bedded ICU	11.11.2021	08.04.2022	OSMCL supplied	As the 30-bedded ICU is not functioning
47	Oxygen concentrator	84	Kept in Central Stock	16.7.2021	1.9.2021	OSMCL supplied	Due to decrease of Covid patients
48	Motorized ICU bed (paediatric covid 19) prm	10	Issued to 30 bedded ICU	11.11.2021	1.12.2021	OSMCL supplied	As the 30-beded ICU is not functioning

Sl. No.	Equipment	Quantity	Department	Date of purchase	Date of installation	Price (in ₹)	Reasons for non-use, as furnished by the MCH
49	Defribilator (covid 19)	1	Issued to 30 bedded ICU	11.11.2021	9.3.2022	OSMCL supplied	
50	Laboratory refrigerator (covid 19)	2	Kept in Central Stock	11.11.2021	Not installed	OSMCL supplied	
51	ECG machine(12 channels)for covid 19)	1	Issued to 30 bedded ICU	11.11.2021	10.3.2022	OSMCL supplied	
52	X-ray view box(paediatric covid 19)prm	2	Issued to 30 bedded ICU	11.11.2021	10.3.2022	OSMCL supplied	
53	Phototherapy (for paediatric covid-19)	2	Issued to 30 bedded ICU	11.11.2021	10.3.2022	OSMCL supplied	
54	Refrigerated Centrifuge	1	Blood Bank	12.6.2017	28.6.2017	22,22,325	In the absence of a license & Pathologist, it was lying idle
55	Intensive Care Ventilator	1	SNCU	25.3.2017	30.8.2017	12,23,333	As the central oxygen pipe line was not connected to the SNCU, machine was not used.
56	Blood Gas & Electrolyte Analyzer	1	Central Lab	6.4.2017	8.1.2018	4,30,500	Non-available of Separate AC Room. It is meant for ICU, for examining veinous blood
57	Non Contact Tonometer	1	Ophthalmology	25.5.2018	25.7.2018	4,35,120	Due to space constraints in the Ophthalmology Department
58	Retina Laser	1	Ophthalmology	27.11.2018	27.11.2018	31,63,948	Lack of infrastructure facilities
59	Tread Mill Test Machine	1	Medicine	12.6.2018	7.3.2019	9,48,080	Non-availability of a specific room
60	Elisa Reader & Washer	1	Ophthalmology	31.5.2019	23.8.2019	2,18,000	For use at the time of Eye bank functioning
61	Biomedical Waste Microwaves	1	Biomedical Waste Management	11.11.2019	28.11.2019	33,06,592	As the machine was shifted to a new building .
62	Blood Gas Analyzer	1	ICU DEPT	10.4.2017	4.7.2018	2,59,500	Required Cartridge was not supplied
63	Bubble CPAP Machine	2	SNCU	10.8.2018	25.11.2019	5,01,556	The central oxygen pipe line was not connected to the SNCU. Hence, the machine was not used.

Sl. No.	Equipment	Quantity	Department	Date of purchase	Date of installation	Price (in ₹)	Reasons for non-use, as furnished by the MCH
64	RETCAM 3 wide Field Digital Imaging System	1	Ophthalmology	6.1.2020	5.2.2020	1,41,12,000	As AC room was not available, therefore the machine was not used.
65	Ventilator (Infant to Adult)	20	30 bedded ICU	3.12.2019	13.3.2020	2,68,98,300	As 30-bedded ICU is not functioning
B.	**MKCG MCH, Berhampur**						
66	Rat cage bin grill & cage grill	100	Pharmacology	02.12.2019	-	74,340	Kept in the store room, as use of animals, for research, for education, could not be conducted due to non-posting of a Veterinary Officer since April 2020
67	Rat Metabolic Cage	5	Pharmacology	28.12.2019	-	2,00,010	
68	Physiograph, Laptop, printer	4	Pharmacology	06.01.2020	-	5,94,720	
69	Electric Balance	2	Pharmacology	11.06.2021	-	1,98,240	
70	pH Meter	2	Pharmacology	27.09.2021	-	1,06,200	
71	Stepdown Latency Apparatus	2	Pharmacology	27.09.2021	-	2,73,760	
72	Digital Plethysmograph	1	Pharmacology	27.09.2021	-	2,26,560	
73	Computer Assisted Learning module (CAL Software	1	Pharmacology	15.04.2021	-	2,57,122	Due to lack of the security and renovation of the new lab building, computers and accessories are kept in the store room. These are to be installed in another lab soon
74	Desktop and monitor	25	Pharmacology	08.06.21 to 21.08.2021	-	22,12,500	
75	25 UPS for 25 Desktop	25	Pharmacology			1,10,000	
76	BOD Incubators	1	Microbiology			1,03,000	Complaint given to KTPL. Not yet rectified.
77	Deep freezer (-20 degree C)	1	Microbiology			1,11,360	Telephonic complaint given to KTPL, but not yet repaired.
78	Real Time PCR Machine (BIO RAD)	1	Microbiology	6.8.2020	6.8.2020	13,60,000	Complaint has been lodged with concerned supplier. But problem has not been resolved till date.
79	Refrigerated Centrifuge, PCR Plate Centrifuge and Auto pipette set	1	Microbiology	14.5.2020	14.5.2020	13,03,900	Complaint was lodged to KTPL. But, problem has not been resolved till date.
80	Tarson Spinwin Mini Centrifuge	1	Microbiology	22.6.2020	22.6.2020	30,723	

Sl. No.	Equipment	Quantity	Department	Date of purchase	Date of installation	Price (in ₹)	Reasons for non-use, as furnished by the MCH
81	Bio Safety Cabinet Class	1	Microbiology	21.4.2020	Not installed	4,01,200	Due to non-installation of equipment
82	Deep Freezer -20 Degree to -40 degree)	1	Microbiology	7.10.2020	Not installed	3,01,000	Due to non-installation of equipment
83	Water Purification System Brand-Millipore	1	Pathology	8.3.2021		16,80,320	Not completed due to renovation of building
84	Five Part Fully Automated Cell Counter	1	Pathology	9.4.2021	Not installed	NA	Due to non-installation of equipment
85	CO_2 Incubator (Model: ICO150MED	1	MRU	16.7.2019	16.7.2019	6,54,900	The equipment would be used after collection of required research samples.
86	Orbital Shaking Incubator Brand- Remi	1	MRU	19.06.2019	19.06.2019	3,48,100	The equipment would be used after collection of required research samples.
87	CO2 Cylinder with Regulator Brand- Lab Items	1	MRU	12.7.2019	12.7.2019	17,110	The equipment would be used after collection of required research samples.
88	RT-PCR (Model: Quanto Studio 5 Real Time PCR System	1	MRU	20.9.2021	20.9.2021	19,80,040	The equipment will be used after procurement of required consumables (Probe-primer).
89	Water Bath	1	Physiology	July 2014		78,315	Unused at Research Lab
90	Meditech England Monitor	10	54 bedded ICU	Not available	Not available	OSMCL supplied	Due to non-functioning of 54-bedded ICU in the PMSSY building
91	Mindray Syringe Pump	16	54 bedded ICU	NA	NA	OSMCL supplied	
92	Maquet Ventilator- High End (ICU)	14	54 bedded ICU	NA	NA	OSMCL supplied	
93	Skan Respiro Plus Ventilator	14	54 bedded ICU	30-12-2018	NA	OSMCL supplied	
94	Cardio Lab Ventilator	5	54 bedded ICU	20-03-2020	NA	OSMCL supplied	

Sl. No.	Equipment	Quantity	Department	Date of purchase	Date of installation	Price (in ₹)	Reasons for non-use, as furnished by the MCH
95	CV 20 Skanray Ventilator	12	54 bedded ICU	NA	NA	OSMCL supplied	
96	Medi Tech England 1700 Ventilator	5	54 bedded ICU	NA	NA	OSMCL supplied	
97	Neu movent Schiller Ventilator	6	54 bedded ICU	NA	NA	OSMCL supplied	
98	Nellcor Puritan benneth 840 Vent System Ventilator	6	54 bedded ICU	NA	NA	OSMCL supplied	
99	Nihon Kohden Defibrillator	1	54 bedded ICU	NA	NA	OSMCL supplied	
100	Laryngo Scope	4	54 bedded ICU	NA	NA	OSMCL supplied	
101	Nebulisation Machine	7	54 bedded ICU	NA	NA	OSMCL supplied	
102	Cardiac Cath Lab Accessories	1	Cardiology Cath Lab	July 2010		3,13,00,000	Operation of the Cath Lab had been discontinued since 04 March 2022, due to setting up of a new Cath Lab in the PMSSY building. No arrangement has been made to shift the Cath lab, from the unsafe building, to another location, for treatment of patients.
103	Intra Aortic Balloon Pump (IABP)	1	Cardiology (Cath-Lab.)	19.5.2014		52,50,000	It was unused since 4 March 22, due to the Cath Lab having been shifted from the unsafe Indoor Hospital Building to the PMSSY building.
104	Extra Corporeal Shockwave Lithotripter	1	Urology	14.11.2014	21.11.2014	3,21,83,457	Lithotripter machine was laying in an unsafe building and had not been used since March 2020.
105	Bubble CPAP	4	Paediatric SNCU	28.1.2020	21.1.2022	11,23,485	As the central oxygen pipe line was not connected to the SNCU, the machine was not used.

Sl. No.	Equipment	Quantity	Department	Date of purchase	Date of installation	Price (in ₹)	Reasons for non-use, as furnished by the MCH
106	Stroboscope	1	ENT (OPD)	3.2.2020	1.3.2020	9,40,844	Non-available of display unit (Monitor etc.)
107	Prachy Meter with Non-Contact Tono Meter	1	Ophthalmology	19.4.2018	20.4.2018	8,40,479	Complaint has been lodged with KTPL, but, problem has not been resolved till date.
108	Automated Clinical Chemistry Analyser	1	Endocrinology	12.8.2021	3.9.2021	18,88,000	Due to technical problem with the machine, it has not functioning from the date of installation.
109	Basic Anaesthesia Machine	1	Anaesthesiology Department. Installed in Main OT	7.12.2018	31.12.2018	6,25,400	Complain had been lodged with KTPL. But the problem had not been resolved till date of audit.
110	Basic Anaesthesia Machine	1	Anaesthesiology Department. Installed in Surgery OT	8.6.2019	21.6.2019	6,25,400	
111	Boyle's Apparatus	1	Anaesthesiology Department. Installed in Trauma OT	3.1.2011	NA	1,21,874	
112	Operating Table, Electro Hydraulic	1	Ortho OT	31.7.2018	10.10.2018	18,15,254	
113	C-Arm	1	Ortho OT	28.4.2018	1.5.2018	14,48,113	
114	Electro Surgical Unit (Frequency Energy Platform with vessel sealing	1	Neuro Surgery	1.2.2014	4.3.2014	25,20,000	Due to shortage of Neurosurgery doctor, delay occurred in functioning of Neurosurgery OT.
	Total	**553**				**17,75,93,203**	

(Source: Information furnished by the two test-checked MCHs)

Appendix 4.3

(Refer Paragraph 4.2.9.2)

Excess expenditure, due to procurement of EIF higher than contract price of OSMCL

Sl. No	Item	Date of procurement	Quantity	Unit cost (contract price of OSMCL) (in ₹)	GST per cent	Procured price per unit (in ₹)	Excess per unit (in ₹)	Total excess on unit cost (in ₹)	Extra GST (in ₹)	Total excess including GST (in ₹)
1	Emergency and Recovery Trolley	05.03.2018	1	29,475	18	54,000	24,525	24,525	4,415	28,940
2	Infantometer	22.08.2018	2	1,800	12	2,900	1,100	2,200	264	2,464
3	Patient examination table	30.07.2018	1	3,200	18	16,500	13,300	13,300	2,394	15,694
4	Direct Ophthalmscope	27.03.2019	1	12,950	12	30,576	17,626	17,626	2,115.10	19,741
6	Instrument Trolley	17.12.2019	20	5,740	18	67,10	970	19,400	3,492	22,892
7	Examination table	17.12.2019	1	3,200	18	7,260	4,060	4,060	731	4,791
8	Infantometer Standard Brand-INCO	30.08.2021	4	1,800	12	7,800	6,000	24,000	2,880	26,880
10	Autoclave Brand-Equitron	15.06.2019	2	2,02,000	28	3,90,000	1,88,000	3,76,000	1,05,280	4,81,280
11	Hot Air Oven Brand-Equitron	15.06.2019	2	30,500	28	1,16,900	86,400	1,72,800	48,384	2,21,184
12	Incubator Brand-Equitron	15.06.2019	2	28,500	18	99,700	71,200	1,42,400	25,632	1,68,032
	Total		**36**					**7,96,311**	**1,95,587**	**9,91,898**

(Source: Information and records, supplied by MKCG MCH)

Appendix 4.4
(Refer Paragraph 4.2.12)
Defunct equipment in various departments of MKCG MCH, as per data maintained by M/s KTPL

Sl. No.	Barcode No	Department	Device Name	Manufacturer	Purchase value (in ₹)	Installation Date	Contract Status	Current Status
1	229968	Orthopedic OT	Anaesthesia Workstation	Meditec International England Ltd	590000	21-06-2019	No warranty/ cmc/ amc	Not working
2	229939	Labor Room	Light, Examination	Medinain	41720	31-03-2021	Under warranty	Not working
3	149365	Chest & TB	Pulse Oximeter, High End	Covidien	49404	28-06-2019	No warranty/ cmc/ amc	Not working
4	149366	Chest & TB	Pulse Oximeter, High End	Covidien	49404	28-07-2019	No warranty/ cmc/ amc	Not working
5	129400	PICU	Syringe Infusion Pump	Mindray	23800	02-02-2021	Under warranty	Not working
6	129399	PICU	Syringe Infusion Pump	Mindray	23800	02-02-2021	Under warranty	Not working
7	129572	Pediatric Ward	Multipara Monitor	Schiller	154000		No warranty/ cmc/ amc	Not working
8	129574	Pediatric Ward	Syringe Infusion Pump	Plenumtek	27699		Under warranty	Not working
9	177702	Blood Bank	Platelet Incubator	Remi	165000		Under warranty	Not working
10	177672	ENT OT	Micro Motor Drill	Stryker	1203111		Under warranty	Not working
11	177689	SNCU	Radiant Heat Warmer	Phoenix	26631	01-09-2019	Under warranty	Not working
12	177678	SNCU	Radiant Heat Warmer	Phonix Medical	26631	01-10-2019	Under warranty	Not working
13	177620	Pediatric Ward	Multipara Monitor	Schiller	154000		No warranty/ cmc/ amc	Not working
14	177697	Surgery OT	Bowl Steriliser	Geeta Industries Pvt. Ltd.	54700	13-10-2018	Under warranty	Not working
15	177798	SNCU	Radiant Heat Warmer	Phoenix Medical System	26631	01-10-2019	Under warranty	Not working

Sl. No.	Barcode No	Department	Device Name	Manufacturer	Purchase value (in ₹)	Installation Date	Contract Status	Current Status
16	177802	SNCU	Radiant Heat Warmer	Phoenix Medical System	26631	01-10-2019	Under warranty	Not working
17	177804	SNCU	Radiant Heat Warmer	Phoenix Medical System	26631	01-10-2019	Under warranty	Not working
18	177860	Plastic Surgery	Electro Surgical Unit, Bipolar/ Mono Polar	Covidien	624000	20-09-2018	No warranty/ cmc/ amc	Not working
19	150128	NICU	Cpap	Phoenix	250778	03-12-2019	Under warranty	Not working
20	150129	NICU	Cpap	Phoenix	250778	03-12-2019	Under warranty	Not working
21	177901	Male Surgery Ward	Sterilizer, Basic	Local	4660		No warranty/ cmc/ amc	Not working
22	177894	Male Surgery Ward	Patient Monitor	Schiller	120000	12-09-2019	Under warranty	Not working
23	114493	PICU	Multipara Monitor	Schiller	154000	18-08-2016	No warranty/ cmc/ amc	Not working
24	114491	PICU	Multipara Monitor	Schiller	154000	18-08-2016	No warranty/ cmc/ amc	Not working
25	113884	SNCU	Oxygen Concentrator	Longfian Scitech Co Ltd	25900	16-09-2015	Under warranty	Not working
26	115714	CICU	Monitor, Multipara, Cardiac Output	Mindray	795000	19-12-2018	Under warranty	Not working
27	115625	Radiology	Cr System Single Loader, With Printer	Fujifilm	1138673	01-02-2019	Under warranty	Not working
28	115626	Radiology	X-Ray Machine, 100ma	Skanray	264797	16-03-2018	Under warranty	Not working
29	114393	SNCU	Radiant Heat Warmer	Neotech	50410	15-02-2018	Under warranty	Not working
30	115768	CICU	Hospital Bed, Electronic	Medimek	85000	03-09-2019	Under warranty	Not working
31	115774	CICU	Hospital Bed, Electronic	Medimek	85000	03-09-2019	Under warranty	Not working
32	115776	CICU	Hospital Bed, Electronic	Medimek	85000	03-09-2019	Under warranty	Not working
33	115780	CICU	Hospital Bed, Electronic	Medimek	85000	03-09-2019	Under warranty	Not working

Sl. No.	Barcode No	Department	Device Name	Manufacturer	Purchase value (in ₹)	Installation Date	Contract Status	Current Status
34	115777	CICU	Hospital Bed, Electronic	Medimek	85000	03-09-2019	Under warranty	Not working
35	113868	CICU	Hospital Bed, Electronic	Medimek	85000	03-09-2019	Under warranty	Not working
36	115703	CICU	Hospital Bed, Electronic	Medimek	85000	03-09-2019	Under warranty	Not working
37	113297	CICU	Hospital Bed, Electronic	Medimek	85000	03-09-2019	Under warranty	Not working
38	115702	CICU	Hospital Bed, Electronic	Medimek	85000	03-09-2019	Under warranty	Not working
39	113291	CICU	Hospital Bed, Electronic	Medimek	85000	03-09-2019	Under warranty	Not working
40	113288	CICU	Hospital Bed, Electronic	Medimek	85000	03-09-2019	Under warranty	Not working
41	115452	NICU	Multipara Monitor	Schiller	154000	18-08-2016	No warranty/ cmc/ amc	Not working
42	115237	SNCU	Oxygen Concentrator	Longfian Scitech Co Ltd	25900	05-01-2014	Under warranty	Not working
43	115436	NICU	Syringe Infusion Pump	Plenum Tech Pvt Ltd	22300	17-02-2018	Under warranty	Not working
44	124665	Gynecology	Fetal Monitor	Bpl Medical Technologies	8840	04-10-2018	Under warranty	Not working
45	115427	Casualty	Ecg Machine 6 Channel	Contech	43658	28-02-2019	Under warranty	Not working
46	115553	Casualty	Ecg Machine 6 Channel	Contech	43658	28-02-2019	Under warranty	Not working
47	124577	Ophthalmology	Microscope, Operating, Opthalmic	Topcon	700000	27-12-2017	No warranty/ cmc/ amc	Not working
48	124667	Gynecology	Multipara Monitor	Schiller	287350	06-02-2019	No warranty/ cmc/ amc	Not working
49	124671	Gynecology	Multipara Monitor	Schiller	287350	06-02-2019	Under warranty	Not working
50	124601	Ophthalmology	Auto Refractometer/Keratometer	Unicos	294636	18-01-2018	Under warranty	Not working
51	124700	Gynecology	Ot Stand Light Single Dome/Movable	Dr. Mach	575000	16-01-2018	Under warranty	Not working

Sl. No.	Barcode No	Department	Device Name	Manufacturer	Purchase value (in ₹)	Installation Date	Contract Status	Current Status
52	124697	Gynecology	Ot Light, Ceiling, Dual Dome	Dr-Mach	2048000	08-08-2018	Under warranty	Not working
53	124727	Physiotherapy	Traction Machine	Akay Hi-Trac Unit	35000		No warranty/ cmc/ amc	Not working
54	115562	Orthopedic OT	C Arm Image Intensifier, Basic	Kiran	1448113	01-05-2018	Under warranty	Not working
55	114553	Surgery T	Operating Table, Electro Hydraulic	Palakkad Surgical	274000	01-11-2018	Under warranty	Not working
56	114544	Emergency OT	Operating Table, Electro Hydraulic	Palakkad Surgical	274000	01-11-2018	Under warranty	Not working
57	114555	Surgery OT	Anaesthesia Workstation	Meditec England	590000	01-02-2019	Under warranty	Not working
58	115283	ENT OT	Cold Light Source	Sure Well	32000		No warranty/ cmc/ amc	Not working
59	134046	Pathology	Centrifuge 8 Tube	Remi	30100		No warranty/ cmc/ amc	Not working
60	115274	ENT OT	Anaesthesia Workstation	Meditec England	590000	01-02-2019	Under warranty	Not working
61	114548	Emergency OT	Anaesthesia Workstation	Meditec England	590000	31-12-2018	Under warranty	Not working
62	115637	Minor OT	Anaesthesia Workstation	Meditec England	590000	01-02-2019	Under warranty	Not working
63	115524	Orthopedic OT	Operating Table, Electro Hydraulic	Benq Medical	1815254	10-10-2018	Under warranty	Not working
64	115299	Orthopedic OT	Anaesthesia Workstation	Meditec England	590000	31-12-2018	Under warranty	Not working
65	124608	Orthopedic OT	Operating Table, Electronic	Benq Medical	1815254	10-10-2018	Under warranty	Not working
Total					**20602202**			

(Source: Data supplied by MKCG MCH, Berhampur)

Appendix 5.1
(Refer Paragraph 5.1.7.1)
Availability of beds in DHHs, as on 31 March 2022

Sl. No.	DHHs	Sanctioned Beds	Functional Beds
1	Angul	300	444
2	Balasore	330	773
3	Bargarh	91	300
4	Bhadrak	191	336
5	Bolangir	212	500
6	Boudh	93	162
7	Cuttack	130	130
8	Deogarh	200	200
9	Dhenkanal	300	300
10	Gajapati	111	161
11	Ganjam	137	172
12	Jagatsinghpur	300	190
13	Jajpur	201	305
14	Jharsuguda	116	300
15	Kalahandi	330	377
16	Kandhamal	186	236
17	Kendrapara	250	195
18	Keonjhar	330	460
19	Khurda	158	205
20	Koraput	250	221
21	Malkangiri	200	376
22	Mayurbhanj	255	659
23	Nabarangpur	200	252
24	Nayagarh	250	188
25	Nuapada	120	315
26	Puri	280	451
27	Rayagada	99	229
28	Sambalpur	271	325
29	Subarnapur	110	192
30	Sundargarh	330	330
31	Capital Hospital	557	750
32	RGH Rourkela	400	437
	TOTAL	**7,288**	**10,471**

(Source: Data furnished by DHS, Odisha and DHHs)

Appendix 6.1
(Refer Paragraph 6.3.2.4)
Irregular payments made to M/s Neelachal Hospital

Sl. No.	Name of patient	Date of Admission	Date of Discharge	Report of MO, Balakati as on 14-7-21	DCH claimed	No of days stayed	Fraudulently Claimed (Amount in ₹)	Report of MO,CHC Balakati
1.	****** Das	23-6-21	10-8-21	General	Fully HDU	49	4,04,250	Semicritical, 2lt Oxygen
2.	****** Prusty	25-6-21	10-8-21	General	Fully HDU	47	3,87,750	Stable, Room air
3.	****** Mallick	26-6-21	11-8-21	General	Fully HDU	47	3,87,750	Stable, Room air
4.	****** Nayak	27-6-21	26-7-21	General	Fully ICU	30	3,07,500	Stable, 2lt Oxygen
5.	****** Mansingh	27-6-21	26-7-21	General	Fully HDU	30	2,47,500	Stable, Room air
6.	****** Barik	28-6-21	13-8-21	General	Fully HDU	47	3,87,750	Stable, 2lt Oxygen
7.	****** Digal	29-6-21	15-8-21	General	Fully HDU	48	3,96,000	Semicritical, 2lt Oxygen
8.	****** Sahoo	29-6-21	15-8-21	General	Fully HDU	48	3,96,000	Stable, Room air
9.	****** Bhoi	1-7-21	15-8-21	General	Fully HDU	46	3,79,500	Stable, Room air
10.	****** Nayak	3-7-21	10-8-21	General	Fully HDU	39	3,63,000	Stable, Room air
11.	****** Mahakud	3-7-21	27-7-21	General	Fully HDU	25	2,06,250	Stable, Room air
12.	****** Patra	6-7-21	15-8-21	General	Fully ICU	41	4,20,250	Stable, Room air
13.	****** Ray	6-7-21	18-8-21	HDU	Fully ICU	44	18,000	Critical
14.	****** Harichandan	5-7-21	14-8-21	HDU	Fully ICU	41	20,000	Critical
15.	****** Pradhan	2-7-21	11-8-21	HDU	Fully ICU	41	26,000	Critical
16.	****** Mangaraj	1-7-21	9-8-21	HDU	Fully ICU	40	28,000	Critical
17.	****** Sahoo	30-6-21	26-7-21	HDU	Fully ICU	27	54,000	Room Air, semi critical

Sl. No.	Name of patient	Date of Admission	Date of Discharge	Report of MO, Balakati as on 14-7-21	DCH claimed	No of days stayed	Fraudulently Claimed (Amount in ₹)	Report of MO,CHC Balakati
18.	****** Khatai	30-6-21	27-7-21	HDU	Fully ICU	28	56,000	Room Air, semi critical
19.	****** Roula	28-6-21	12-8-21	HDU	Fully ICU	46	92,000	Critical
20.	******	6-7-21	1-8-21	-	ICU	27	3,32,000	Admission after scheduled date
21.	****** Swain	6-7-21	14-8-21	-	ICU	40	4,80,000	Admission after scheduled date
22.	****** Dash	6-7-21	15-8-21	-	ICU	41	4,92,000	Admission after scheduled date
23.	****** Mohanty	6-7-21	15-8-21	-	ICU	41	4,92,000	Admission after scheduled date
24.	****** Parida	6-7-21	15-8-21	-	HDU	41	4,10,000	Admission after scheduled date
25.	****** Pal	6-7-21	15-8-21	-	HDU	41	4,10,000	Admission after scheduled date
26.	****** Behera	6-7-21	15-8-21	-	ICU	41	4,92,000	Admission after scheduled date
27.	****** Rao	6-7-21	15-8-21	-	ICU	41	4,92,000	Admission after scheduled date
28.	****** Patra	6-7-21	15-8-21	-	ICU	41	4,92,000	Admission after scheduled date
29.	****** Ray	6-7-21	15-8-21	-	ICU	41	4,10,000	Admission after scheduled date
30.	****** Muduli	6-7-21	30-7-21	-	ICU	25	3,07,000	Admission after scheduled date
Total							**93,86,500**	

(Source: Data provided by the test-checked DCHs)

Appendix 6.2
(Refer Paragraph 6.3.2.9)
Inadmissible payments made towards more bed occupancy

Sl. No.	Name of the Hospital	Period	Number of days claimed	ICU beds approved	Actual Bed days	Bed days claimed	Excess bed days claimed	Excess amount claimed (In ₹)
1	SUM	1-9-20 to 30-9-20	30	125	3,750	3,911	161	19,32,000
2	Ashwini	16-8-20 to 31-8-20	16	30	480	524	44	5,28,000
3	Ashwini	1-9-20 to 15-9-20	15	30	450	484	34	4,08,000
4	Ashwini	16-9-20 to 30-9-20	15	30	450	484	34	4,08,000
5	Ashwini	1-10-20 to 15-10-20	15	30	450	471	21	2,52,000
6	Ashwini	16-10-20 to 31-10-20	16	30	480	492	12	1,44,000
Total					**6,060**	**6,366**	**306**	**36,72,000**

(Source: Data provided by the test-checked DCHs)

Appendix 7.1
(Refer Paragraph 7.2.1)
Ayushman Bharat (Operationalisation of Health and Wellness centres)

Sl. No.	District	Number of SCs	Target for converting SC into HWC by March 2022	SCs converted into HWC by March 2022	PHCs/Other Hospitals	Target for converting PHC+OH into HWC by March 2022	PHCs +OH converted into HWC by March 2022	Number of UPHC	Target for converting UPHC into HWC by March 2022	UPHCs converted into HWC by March 2022
1	Angul	166	92	58	31	31	29	1	1	1
2	Bolangir	226	121	111	46	46	44	2	2	2
3	Balasore	275	137	141	71	71	68	3	3	3
4	Bargarh	204	106	130	47	47	45	2	2	2
5	Boudh	67	37	32	12	12	12	0	0	0
6	Bhadrak	178	85	51	52	52	51	3	3	3
7	Cuttack	332	184	72	59	59	56	13	13	13
8	Deogarh	42	23	29	8	8	8	0	0	0
9	Dhenkanal	167	88	86	37	37	35	1	1	1
10	Gajapati	136	78	83	21	21	21	1	1	1
11	Ganjam	460	246	178	93	93	86	8	8	8
12	Jagatsinghpur	189	104	98	35	35	33	1	1	1
13	Jajpur	260	133	116	62	62	59	0	0	0
14	Jharsuguda	66	33	56	17	17	16	4	4	4
15	Kalahandi	242	133	130	45	45	45	1	1	1
16	Kandhamal	172	89	109	40	40	40	1	1	1
17	Kendrapara	227	122	100	46	46	46	1	1	1
18	Keonjhar	351	192	169	66	66	66	3	3	3
19	Khurda	202	102	118	50	50	47	24	24	24
20	Koraput	307	175	111	48	48	47	4	4	4
21	Malkangiri	158	88	47	27	27	24	1	1	1
22	Mayurbhanj	589	336	290	86	86	85	3	3	3
23	Nabarangpur	289	167	107	41	41	38	1	1	1
24	Nayagarh	166	86	90	38	38	37	0	0	0
25	Nuapada	95	52	68	17	17	17	0	0	0

Sl. No.	District	Number of SCs	Target for converting SC into HWC by March 2022	SCs converted into HWC by March 2022	PHCs/Other Hospitals	Target for converting PHC+OH into HWC by March 2022	PHCs +OH converted into HWC by March 2022	Number of UPHC	Target for converting UPHC into HWC by March 2022	UPHCs converted into HWC by March 2022
26	Puri	241	131	121	47	47	43	5	5	5
27	Rayagada	235	133	136	38	38	36	3	3	3
28	Sambalpur	167	93	73	29	29	26	8	8	8
29	Subarnapur	89	46	68	20	20	20	0	0	0
30	Sundargarh	390	222	164	59	59	55	12	12	12
Total		**6688**	**3634**	**3142**	**1288**	**1288**	**1235**	**106**	**106**	**106**

(Source: Data obtained from NHM, Odisha)

Appendix 8.1
(Refer Paragraph 8.2.2)
Inspection of the test-checked CEs

Sl. No.	Name of the clinical Establishment	Display of certificates, like CE registration, PCPNDT, *etc*. & rate chart in the clinic premises for public knowledge (as per Odisha Clinical Establishment Rules, 2018)	Maintenance of records	Others
1	Salandi Hospital, Bhadrak	Only PC-PNDT Certificate	OPD, IPD and OT registers were maintained. Medico legal case register, Register of staff engaged, deployed, on call and consultants, Acquaintance Ledger, showing payment to Doctors, paramedical and other staff and Register showing the list of doctors/ staff attending the Clinical Establishments, were not made available.	
2	Sonocare Ultrasound Clinic, Bhadrak	Only Rate chart displayed	Patient registers were maintained.	
3	SR Dr Micro Diagnostics and Analytica, Bhadrak	Only registration of CE displayed	Patient registers were maintained, both online and offline	
4	Zass Midtown Hospital, Bhadrak	No certificates displayed	OPD, IPD and OT registers were maintained. Medico legal case register, Register of staff engaged, deployed, on call and consultants, Acquaintance Ledger, showing payment to Doctors, paramedical and other staff and Register showing the list of doctors/staff attending the Clinical Establishments, were not made available.	There was one ICU bed in the hospital
5	New Omm Shanti Diagnostic Centre, Bhadrak	All certificates displayed	Patient registers were maintained.	
6	Shree Jagannath Hospital, Dhenkanal	Only Registration Certificate and Approved Rate Chart displayed.	OPD, IPD and OT registers were maintained. Medico legal case register, Register of staff engaged, deployed, on call and consultants, Registers showing the list of doctors/staff attending	

Sl. No.	Name of the clinical Establishment	Display of certificates, like CE registration, PCPNDT, *etc*. & rate chart in the clinic premises for public knowledge (as per Odisha Clinical Establishment Rules, 2018)	Maintenance of records	Others
			the Clinical Establishment and Complaint Register, were not maintained.	
7	Shree Krishna Ultrascan, Dhenkanal	Only PCPNDT Certificate and Rate chart displayed	Patient registers were maintained.	
8	S.R. Laboratory, Dhenkanal	Registration Certificate and Approved Rate Chart displayed	Patient register was maintained online.	
9	New Hope Nursing Home, Dhenkanal	Only Registration Certificate and SPCB authorization displayed.	OPD, IPD and OT register were maintained. Medico legal case register, Register of staff engaged, deployed, on call and consultants, Acquaintance Ledger showing payment to Doctors, paramedical and other staff and Register showing the list of doctors/staff, attending the Clinical Establishment, were not maintained.	
10	Sun Hospital, Dhenkanal	All certificates, except Trade License displayed	OPD Register (Computerised), IPD Register, OT Register, Death Register, Register of staff engaged, deployed, on call and Consultants and Acquaintance Ledger were maintained. Medico Legal Case Register was not maintained.	
11	Mother Sai Pathological , Sundargarh	No certificates displayed	Laboratory register was maintained	Shifted to new premises but online application of shifting of premises awaited.
12	Aastha Mother and child care hospital, Rourkela	Trade license, Fire Safety certificate not displayed	Medico Legal Case Register and register showing government doctors attending the clinical establishments, was not maintained	

Sl. No.	Name of the clinical Establishment	Display of certificates, like CE registration, PCPNDT, *etc*. & rate chart in the clinic premises for public knowledge (as per Odisha Clinical Establishment Rules, 2018)	Maintenance of records	Others
13	Vesaj Patel Hospital, Rourkela	No certificates displayed	Medico Legal Case register and register on staff engaged on call and acquaintance register showing payment to doctors and staff was not maintained.	Fire Safety certificate not obtained, Trade License expired, Pollution certificate expired on 31.03.2022
14	Samaleswari Hospital, Sundargarh	All certificated displayed	Medico Legal Case Register was not maintained.	
15	Maa Anapurna Diagnostic, Sundargarh	Rate Chart not available	Ultrasound register was maintained.	

(Source: Joint Physical Inspection along with departmental officials)

Glossary

Glossary of abbreviations

ABG	Arterial Blood Gas
AERB	Atomic Energy Regulatory Board
ALS	Advanced Life support
AMO	Authorised Medical Officer
ANM	Auxiliary Nurse-Midwife
AP	Authorised Person
API	Annual Parasite Incidence
APP	Annual Procurement Plan
AYUSH	Ayurveda, Yoga and Naturopathy, Unani, Sidha and Homeopathy
BC	Blood Centre
BCSU	Blood Component Separation Unit
BLS	Basic Life Support
BMC	Bhubaneswar Municipal Corporation
BMW	Bio-Medical Waste
BOR	Bed Occupancy Rate
BSKY	Biju Swasthya Kalyan Yojana
CBWTF	Common Bio-Medical Waste Treatment Facilitator
CDM&PHO	Chief District Medical and Public Health Officer
CDS	Central Drug Store
CE	Clinical Establishment
CHC	Community Health Centre
CMC	Cuttack Municipal Corporation
CMRF	Chief Minister's Relief Fund
CO	Controlling Officer
CPAP	Continuous Positive Airway Pressure
CPCSEA	Committee for Control and Supervision of Experiments on Animals
CRACs	Consignee Receipt and Acceptance Certificates
CSR	Corporate Social Responsibility
DCH	Dedicated Covid Hospital
DDC	Drug Dispensing Counter
DDO	Drawing and Disbursing Officer
DEIC	District Early Intervention Centres
DHH	District Headquarter Hospital
DHS	Director of Health Services
DLC	District Leprosy Consultant
DLMC	District Level Monitoring Committees
DLO	District Leprosy Officers
DM	Doctorate of Medicine
DMC	Disaster Management Committee
DMET	Director of Medical Education and Training
DMP	Disaster Management Plan
DPH	Director of Public Health
DVC	Diet Vigilance Committee
DWH	District Drug Ware House

ECRP	Emergency Covid Response Package
EDL	Essential Drug List
EIC	Engineer in Chief
EIF	Equipment, Instrument and Furniture
EMAS	Emergency Medical Ambulance Service
EmOC	Emergency Obstetric Care
ENT	Ear, Nose and Throat
ETP	Effluent Treatment Plant
FMT	Forensic Medicine and Toxicology
FRU	First Referral Unit
FY	Financial Year
GDMO	General Duty Medical Officer
GeM	Government e Marketplace
GoI	Government of India
GoO	Government of Odisha
GSDP	Gross State Domestic Product
H&FW	Health and Family Welfare
HCF	Healthcare Facilities
HDU	High Dependency Unit
HMIS	Health Management Information System
HPC	High Powered Committee
HTC	Hospital Transfusion Committee
HW	Health Worker
HWC	Health and Wellness Centre
ICU	Intensive Care Unit
IFA	Iron and Folic Acid
IMR	Infant Mortality Rate
IPC	Intra Partum Care
IPD	Inpatient Department
IPHS	Indian Public Health Standards
JPI	Joint Physical Inspection
JSSK	Janani Shishu Suraksha Karyakram
JSY	Janani Suraksha Yojana
KTPL	Kirloskar Technologies Private Limited
LAMA	Leave Against Medical Advice
LHV	Lady Health Visitor
LPR	Leprosy Prevalence Rate
LT	Laboratory Technician
MBBS	Bachelor of Medicine and Bachelor of Surgery
MCEMC	Medical College Equipment Management Committee
MCH	Medical College and Hospital
MCI	Medical Council of India
MGPS	Medical Gas Pipeline System
MHT	Mobile Health Team
MKCG	Maharaja Krushna Chandra Gajapati
MMR	Maternity Mortality Ratio
MNH	Maternal and Newborn Health

MO	Medical Officer
MoU	Memorandum of Understanding
MSRR	Minimum Standard Requirements Regulation
NABH	National Accreditation Board for Hospital and Healthcare Providers
NACO	National Aids Control Organisation
NCD	Non-Communicable Diseases
NFHS	National Family Health Survey
NHM	National Health Mission
NHP	National Health Policy
NIF	National Indicator Framework
NITI	National Institute for Transforming India
NLEP	National Leprosy Eradication Programme
NMHP	National Mental Health Programme
NMR	Neo-natal Mortality Rate
NOC	No Objection Certificate
NPCDCS	National Programme for Prevention and Control of Cancer, Diabetes, Cardiovascular diseases and Stroke
NPHCE	National Programme for Health Care of the Elderly
NRC	Nutrition Rehabilitation Centre
NRHM	National Rural Health Mission
NSQ	Not of Standard Quality
NTEP	National Tuberculosis Elimination Programme
NVBDCP	National Vector Borne Disease Control Programme
O&G	Obstetrics and Gynaecology
OBM	Odisha Budget Manual
OCE	Odisha Clinical Establishment
OMBADC	Odisha Mineral Bearing Areas Development Corporation
OPD	Out Patient Department
OSIF	Odisha State Indicator Framework
OSMCL	Odisha State Medical Corporation Limited
OT	Operation Theatre
PCPNDT	Pre-Conception and Pre-Natal Diagnostic Techniques
PG	Post Graduate
PHC	Primary Health Centre
PHRF	Public Health Response Fund
PIP	Programme Implementation Plan
PIP	Persons-in-position
PMSSY	Pradhan Mantri Swasthya Suraksha Yojana
PNC	Post Natal Care
PO	Purchase Order
PPE	Personal Protective Equipment
PPP	Public Private Partnership
PRM	Pandit Raghunath Murmu

PSS	Patient Satisfaction Survey
PSUs	Public Sector Undertakings
PW	Pregnant Woman
PwMI	Persons with Mental Illness
RBC	Red Blood Cell
RBSK	Rashtriya Bal Swasthya Karyakram
RDC	Regional Diagnostic Centre
RNTCP	Revised National Tuberculosis Programme
RSBY	Rashtriya Swasthya Bima Yojana
SAM	Severely Acute Malnourished
SBTC	State Blood Transfusion Committee
SCB	Sriram Chandra Bhanja
SDG	Sustainable Development Goal
SDH	Sub-Divisional Hospital
SDMC	State Drug Management Committee
SDMU	State Drug Management Unit
SDRF	State Disaster Relief Fund
SEMC	State Level Equipment Management Committee
SLIT	State Level Inspection Team
SNCU	Special New Born Care Unit
SOP	Standard Operating Procedure
SPCB	State Pollution Control Board
SPMU	State Project Management Unit
SRS	Sample Registration System
SS	Sanctioned Strength
TCC	Trauma Care Centre
TFR	Total Fertility Rate
TLD Badge	Thermo Luminescent Dosimeter Badge
U5MR	Under 5 Mortality Rate
UG	Under Graduate
VD	Veneral Disease
WBC	White Blood Cell
WHO	World Health Organisation

https://cag.gov.in/ag1/odisha/en