सत्यमेव जयते

Report of the Comptroller and Auditor General of India

Performance Audit on Public Health Infrastructure and Management of Health Services in Goa

SUPREME AUDIT INSTITUTION OF INDIA

लोकहितार्थ सत्यनिष्ठा

Dedicated to Truth in Public Interest

सत्यमेव जयते

सर्वे भद्राणि पश्यन्तु मा कश्चिद् दुःखभाग्भवेत्

GOVERNMENT OF GOA

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Report No. 4 of the year 2024

REPORT OF THE COMPTROLLER AND AUDITOR GENERAL OF INDIA

Performance Audit on Public Health infrastructure and Management of Health Services in Goa

For the year ended 31 March 2022

GOVERNMENT OF GOA

Report No. 4 of the year 2024

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Preface

This Report for the year ended 31 March 2022 has been prepared for submission to the Governor of Goa under Article 151 of the Constitution of India.

Audit of Public Health Department (PHD), Directorate of Health Services (DHS), Goa Medical College and Hospital (GMCH) and other Public Health Institutions (PHIs) under DHS were conducted under the provisions of the Comptroller and Auditor General's (Duties, Powers and Conditions of Service) Act, 1971 which empowers the Comptroller and Auditor General of India to conduct audit of the accounts of Public Health Department and submit such Audit Report to the State Government for its placement in the State Legislature.

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

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

Executive Summary

Executive Summary

Introduction

Health is a State subject in India. The National Health Policy (NHP), 2017 envisages attainment of the highest possible level of health and well-being for all as its goal, through a preventive and promotive health care orientation in all developmental policies. Role of public health infrastructure and efficient management of health services are vital in this regard.

Why this performance audit?

To assess the adequacy of funding for healthcare services, the robustness of infrastructure and patient care provided by Public Health Institutions (PHIs) in the State, availability of human resources, drugs, medicines, equipment, effectiveness of regulatory mechanisms for ensuring quality health care and progress towards the achievement of Sustainable Development Goal-3 (SDG-3).

Review of implementation of selected Centrally Sponsored Schemes in the State has also been done.

Period of audit: **2016-17 to 2021-22**

Sample: 19 units (1 District Hospital, 1 Sub-district Hospital, 1 Specialised Hospital, 2 Community Health Centres (CHCs), 4 Primary Health Centres and 10 Sub-Centres) under Directorate of Health Services (DHS) and Goa Medical College and Hospital (GMCH) were selected.

What audit found?

The chapter-wise findings that led to audit conclusions and recommendations are as follows:

Chapter 2: Human resources

The State did not have a human resource policy for PHIs. There were vacancies among doctors, nurses and paramedics to the extent of 17.5 *per cent* in North Goa district and 17.9 *per cent* in South Goa district under primary health care and to the extent of 20.24 *per cent* in North Goa district and 18.75 *per cent* in South Goa district under secondary health care in the State. Doctors, nurses and paramedics were hired on contract in excess of the sanctioned strength by DHS in primary and secondary healthcare. However, in both the District Hospitals, test-checked PHIs under DHS and in GMCH, Audit noticed lack of adequate specialists which led to non-delivery of related services to patients. GMCH had shortfall of 51 *per cent* of doctors/medical officers despite being the only tertiary hospital in the State. Vacancy of doctors ranged from 18.18 to 81.25 *per cent* in the super-speciality departments of GMCH. ASHA workers who were the key health care personnel at grassroots level were not recruited in the State.

Recommendations:

- ***The State Government may frame a Human Resource policy for the public health sector for effective and efficient management of human resources.***
- ***The State Government may take steps for filling up the vacant posts in GMCH and DHS. DHS may ensure that contract staff are hired only as per available vacancies.***

Chapter 3: Healthcare services

North Goa District Hospital and all CHCs in the State could not achieve the required Bed Occupancy Rate (BOR) as per IPHS norms. There were gaps in availability of essential IPD services as per IPHS norms in both District Hospitals, in all CHCs in the State and the test-checked Sub-District Hospital. Intensive Care Unit (ICU) services were not available in both the District Hospitals of the State. There were gaps in availability of diagnostics, maternity and dietary services in PHIs as per Indian Public Health Standards (IPHS) norms. There were gaps in availability of auxiliary services such as firefighting and hospital infection control.

Recommendations:

- ***The State Government may ensure the availability of line services as per IPHS norms and strive to increase productivity of hospitals/ health centres.***
- ***The State Government may address the gaps in availability of diagnostics, maternity and dietary services in PHIs as per IPHS norms.***
- ***The State Government may make efforts to address deficiencies in auxiliary services in PHIs as per norms.***

Chapter 4: Availability of Drugs, Medicines, Equipment and Other Consumables

The State neither framed a procurement policy nor set up a Centralised Procurement Body for procurement and distribution of drugs, consumables and equipment. Procurement of drugs and equipment by PHIs in the State was fraught with inadequate quality controls and delays.

Non-provision of free drugs in the range of 10 to 83 *per cent* was observed in the test-checked PHIs under DHS and in GMCH during May to July, 2022. 43 to 76 *per cent* of the drugs required as per IPHS norms were not available in the test-checked PHIs under DHS during 2020-21.

There were delays in finalisation of tenders in GMCH and DHS, which affected the availability of drugs, consumables and equipment in PHIs. Lack of policy or mechanism for testing of each batch of drugs received from suppliers by DHS and GMCH led to drugs being distributed without testing, exposing patients to health risks. Gaps in availability of infrastructure as per norms for storage of drugs at GMCH, at Medical Store Depot and at test-checked hospitals under DHS were noticed.

Recommendations:

- ***The State Government may frame a comprehensive procurement policy for drugs, consumables and equipment in PHIs and consider setting up a Centralised Procurement Body to ensure quality, timeliness, efficiency and economy in procurement.***
- ***The State Government may ensure the availability of the full range of required drugs in all PHIs as well as the provision of free drugs to patients as envisaged in NHP.***
- ***The State Government may put in place an appropriate system for quality testing of drugs procured by GMCH and DHS through National Accreditation Board for Testing and Calibration Laboratories (NABL) certified laboratories as per Free Diagnostics Service Initiative (FDSI) guidelines.***
- ***The State Government may ensure that infrastructure facilities for storage of drugs and medicines in PHIs are compliant with FDSI guidelines and Assessors' Guidebook for Quality Assurance.***

Chapter 5: Healthcare Infrastructure

There was a shortfall of 71 Sub-Centres (24 *per cent*), 20 Primary Health Centres (42 *per cent)* and 6 Community Health Centres (50 *per cent)* in the State *vis-à-vis* IPHS norms. There were inordinate delays in setting up the Tertiary Care Cancer Centre and up-gradation of Trauma Care Facility in GMCH. There were gaps in the availability of infrastructure in GMCH against National Medical Commission (NMC) norms and in test-checked PHIs under DHS *vis-à-vis* IPHS norms, including instances of dilapidated buildings, which impacted health care services.

Recommendations:

- ***The State Government may ensure the availability of healthcare centres as per IPHS norms, by addressing the shortfall in the number of CHCs, PHCs and SCs in the State.***
- ***The State Government may take measures for improved planning and preparation of public health infrastructure projects and ensure that they are executed expeditiously.***
- ***Infrastructural gaps in PHIs may be addressed on priority by the State Government by making adequate budgetary provisions and ensuring their effective utilisation. Specifically, urgent action may be taken regarding PHIs functioning in dilapidated buildings.***

Chapter 6: Financial Management

Only 19.94 *per cent* of total health care allocation was allotted to primary health care as against 66 *per cent* envisaged in the NHP. The State could utilise only 26 to 41 *per cent* of total capital allocation during 2016-22 for creation of health infrastructure in the State. Delays in transfer of funds were observed for

Centrally Sponsored Schemes (CSS) to implementing agencies by the State Government, affecting their timely utilisation.

Recommendations:

- ***The State Government may review its budgetary allocations to health sector for strengthening health systems in the State as envisaged in the NHP.***
- ***The State Government may ensure timely transfer of central funds to implementing agencies to facilitate effective utilisation.***

Chapter 7: Implementation of Centrally Sponsored Schemes

Under Ayushman Bharat Scheme, the unspent balances ranged between 60.26 *per cent* and 95.00 *per cent* during 2018-22. Against the reported up-gradation of 201 health centres to Health and Wellness Centres (HWCs) during 2018-22, non-compliance with the norms was noticed *vis-à-vis* the availability of infrastructure, health care services and required equipment, consumables and miscellaneous supplies in the test checked centres. Non availability of required manpower was noticed in Sub-Centres (HWCs).

Under National AYUSH Mission, the unspent balances ranged between 51 and 88 *per cent* of the total grants available during the period 2017-22. Under the National Health Mission, there was under-utilisation of funds allotted.

Recommendations:

- ***The State Government may make efforts to comply with all norms for HWCs as prescribed in the Ayushman Bharat Scheme.***
- ***The State Government may review the implementation of NHM to identify reasons for under-utilisation of funds and devise strategies to address the same.***

Chapter 8: Adequacy and Effectiveness of Regulatory Mechanisms

Goa enacted the Goa Clinical Establishments (CE) Act, 2019, nine years after the enactment of the Central Act and notified the Goa CE Rules with a further delay of two years in July 2021. The Council of Clinical Establishments and the District Registering Authorities were constituted in April 2022 with a delay of three years from the enactment of the Goa CE Act.

Audit observed shortfall in the number of mandated inspections of establishments conducted by the Food and Drug Administration Department, shortages in drawal of drug samples for testing, absence of NABL certification of FDA's laboratory and absence of follow up action where drugs were found to be sub-standard. Thirty seven out of 38 Public Health Institutions did not apply for National Quality Assurance Standards (NQAS) certification. None of the four test-checked Public Health Institutions' laboratories had obtained NABL certification.

The Goa Medical Council, Goa Pharmacy Council and Goa Nursing Council, responsible for the regulation of medical practitioners, pharmacists and nurses in the State did not publish the lists of the respective professionals registered with them in the public domain as mandated. Pharmacy Council had not appointed inspectors as a result of which licensed premises where drugs are compounded and dispensed remained uninspected in the State.

Several health facilities were functioning in the State without authorisation from Goa State Pollution Control Board (GSPCB) for handling of Bio-Medical waste. Gaps were noticed in Bio-Medical waste management (BMWM) by the test-checked PHIs relating to BMWM Committee and its working.

***Recommendations*:**

- ***The State may ensure validation and certification of its health centres and laboratories as per IPHS norms.***
- ***Public Health Department (PHD) may ensure that the Councils comply with the requirement of publishing the list of registered medical practitioners, nurses and pharmacists in the public domain. They may be advised to make these databases available online as per regulation.***
- ***The State Government may ensure compliance with the BMWM Rules for monitoring the collection and disposal of Bio-Medical Waste in the State at the earliest.***

Chapter 9: Sustainable Development Goal-3

The requirements for time-bound achievement of SDG-3, such as formation of SDG Cell to ensure quality and timely flow of data with regard to SDG indicator framework, mapping of SDG-3 indicators with schemes/departments, dovetailing of health sector plans with SDG-3 targets and assessment of financial resources necessary for achieving SDG-3 targets were not undertaken.

The SDG Core Committee set up for monitoring the SDGs was not functional and the State did not set up any High-Level Technical Committee for reviewing the State Indicator framework.

Recommendations:

- ***The State Government may dovetail health sector plans with SDG-3 targets for achieving the targets in a time bound manner.***
- ***The State Government may strengthen the monitoring and reporting mechanism to track the achievement of SDG targets.***

Chapter I
Introduction

Chapter 1- Introduction

Health is a vital indicator of human development. As per the World Health Organization (WHO), enjoyment of the highest attainable standard of health is one of the fundamental rights of every human being. In India, the National Health Policy 2017 seeks to achieve the highest possible level of good health and well-being, through a preventive and promotive health care orientation in all developmental policies, and to achieve universal access to quality health care services without anyone having to face financial hardship as a consequence.

Robust Public Health Infrastructure and effective management of health services are of vital importance to ensure good health of citizens. Public Health Infrastructure comprises hospitals and other health care institutions while the health services can be broadly divided into three categories namely:

(a) **Line Services:** Services directly related to patient care like Out-Patient Department (OPD), In-Patient Department (IPD), Emergency, Super-Speciality, Intensive Care Units, Operation Theatre, Blood bank, Maternity and Diagnostic services.

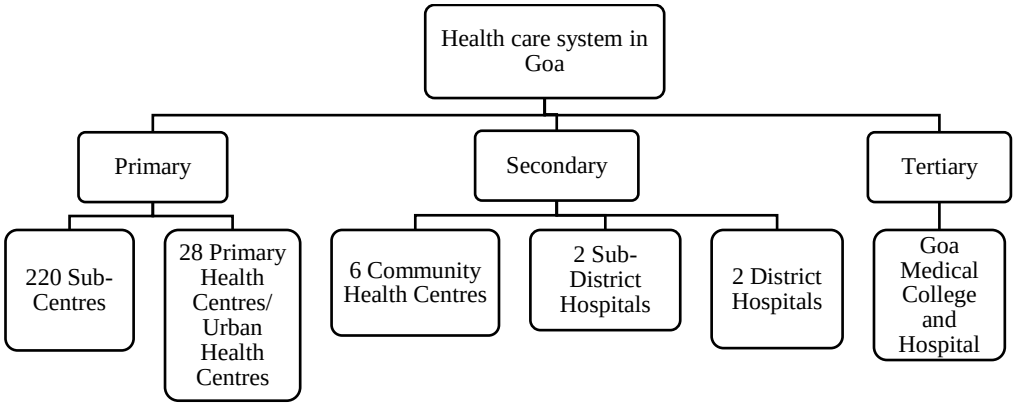
(b) **Support Services:** Services indirectly related to patient care like Oxygen Services, Dietary Services, Laundry Services, Bio-Medical Waste Management, Ambulance Services and Mortuary Services.

(c) **Auxiliary Services:** Services for facilitating the delivery of healthcare services like patient safety facilities, patient registration, grievance/ complaint redressal and stores.

1.1 Healthcare facilities in Goa

Availability, accessibility and usability are the essential features of any sound healthcare system to be able to meet public healthcare requirements. Public healthcare facilities in the State are organised in three tiers for providing primary care, secondary care and tertiary care under the administrative control of the Public Health Department (PHD). The three-tier system in Goa is depicted below in **Chart 1.1:**

Chart-1.1: Healthcare system in Goa[1]



(Source: Data compiled from information received from DHS and GMCH)

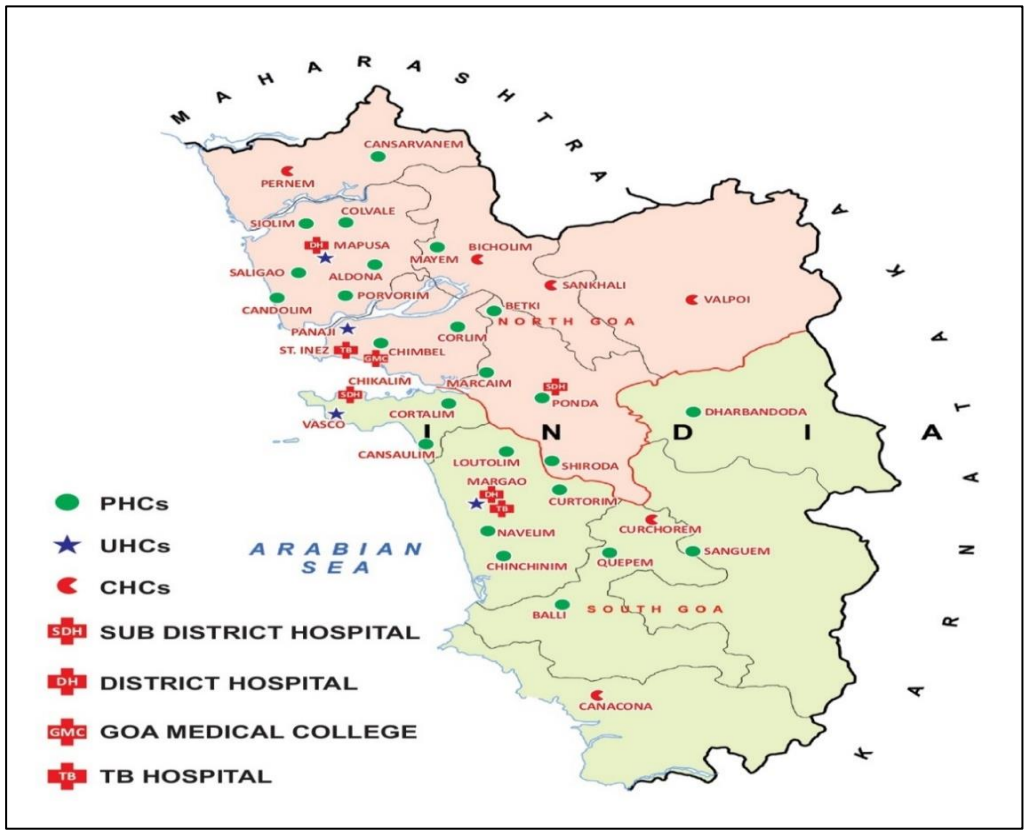
Sub-Centres (SCs) and Primary Health Centres (PHCs) are primary level healthcare units which provide initial healthcare services to the people. Primary Health Centres functioning in urban areas are referred to as Urban Health Centres. Patients requiring specialised care are referred to the second tier of the health care system consisting of Community Health Centres (CHCs), Sub-District/Sub-Divisional Hospitals and District Hospitals, established in each district for providing preventive, promotive and curative healthcare services to the population. A tertiary hospital is one that provides tertiary care, which is health care from specialists in a large hospital upon referral from primary care and secondary care facilities.

The Secretary, Health is the administrative head of PHD. The Director, Directorate of Health Services (DHS) is the administrative head of primary and secondary healthcare centres. Dean is the Head of the Department in GMCH.

The State map showing location of these Public Health Institutions (PHIs) is shown in **Figure 1.1**

[1] In addition, Goa Dental College, Institute of Psychiatry and Human Behaviour, TB Hospital and All India Institute of Ayurveda provide specialised care. All the primary and secondary healthcare institutions and TB Hospital come under the Directorate of Health Services.

Figure 1.1: Map of Goa showing location of PHIs



(Source: Compiled from information provided by PHD)

1.2 Human Resources in Healthcare

The availability of adequate manpower is essential to provide effective health services. The availability of medical doctors in GMCH and under DHS is given in Table 1.1**.**

Table 1.1: Persons-in-position of medical doctors in DHS and GMCH as on 31 March 2022

Sl. No.	Name of the Department	Sanctioned Strength	Persons in Position
1	DHS	508	360
2	GMCH	650	262
	Total	**1158**	**622**

(Source: Information provided by DHS and GMCH)

1.3 Health Infrastructure

To deliver quality health services, adequate and properly maintained infrastructure is of critical importance. The availability of PHIs in the State of Goa is shown in **Table 1.2:**

Table 1.2: PHIs under DHS as on 31 March 2022

Sl. No.	Public Health Institutions under DHS	Number of units
1	District Hospitals	02
2	Sub-District Hospitals	02
3	Community Health Centres	06
4	Urban Health Centres / Primary Health Centres	28
5	Health Sub-Centres	220
	Total	**258**

(Source: Data compiled from DHS)

In Goa, the Goa Medical College and Hospital (GMCH) in Bambolim is the only hospital providing general tertiary health care. Further, T.B. Hospital, Margao, Goa Dental College, Bambolim and Institute of Psychiatry and Human Behaviour, Bambolim provide specialised care. An All India Institute of Ayurveda has been established in Goa in December 2022.

1.4 Public Health Funding

The State Government makes budgetary provisions under the annual budget for the State's health sector. Financial assistance under the National Health Mission (NHM) is received from the Government of India (GoI) with corresponding share of the State Government in the ratio of 60:40. The State Health Society (SHS) headed by the Mission Director (Secretary, Health) is the implementation agency for NHM.

1.4.1 Expenditure on Healthcare

Expenditure on health and family welfare is an important parameter to gauge the importance given to this sector by the Government.

National Health Policy (NHP), 2017 proposes raising public health expenditure to 2.5 *per cent* of the Gross Domestic Product (GDP) in a time bound manner upto 2025. Further, NHP also envisages increasing State health sector spending to more than eight *per cent* of the State budget by 2020. Funds expended during the period of 2016-17 to 2021-22 on Health and Family Welfare by the Government of Goa are given in **Table 1.3.**

Table 1.3: Public expenditure on healthcare

(₹ in crore)

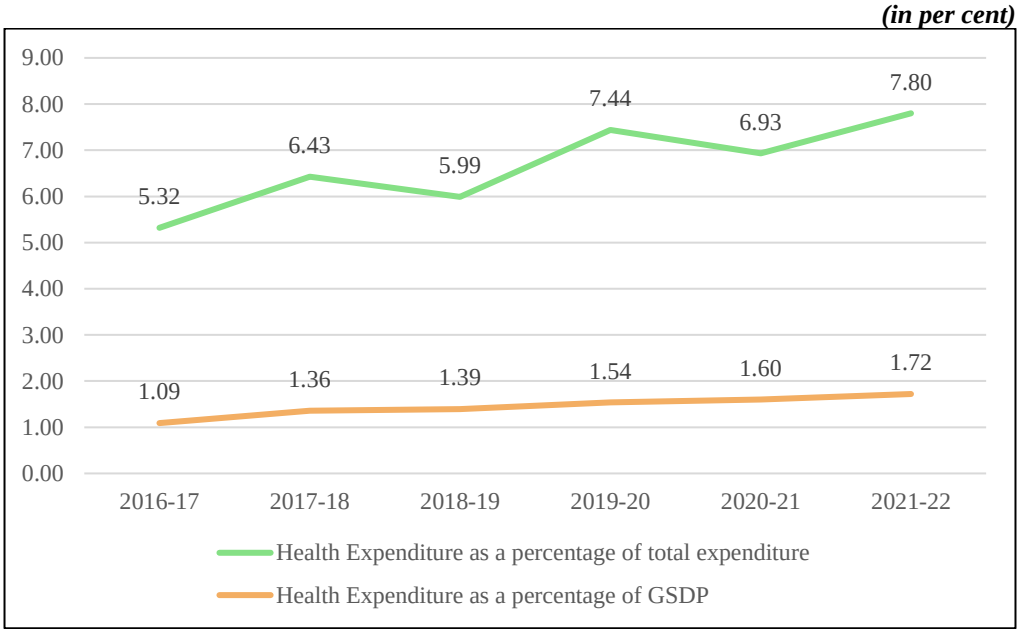
Sl. No.	Indicator	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22
1	Total State Expenditure*	12848.37	14718.23	16728.80	15525.88	18043.93	19654.20
2	Total State Expenditure on Health*	683.97	945.68	1001.40	1155.28	1250.22	1533.98
3	Total State Expenditure on Health as percentage of total State expenditure	5.32	6.43	5.99	7.44	6.93	7.80
4	GSDP on current prices @	62976	69352	71853	74828	78338	89422
5	Health expenditure as a percentage of GSDP	1.09	1.36	1.39	1.54	1.60	1.72

*(Source: *Detailed Appropriation Accounts of the State*
@Directorate of Planning, Statistics and Evaluation, Government of Goa)

Health expenditure as a percentage of the State GDP ranged between 1.09 and 1.72 *per cent* and remained below the target of 2.5 *per cent*. Similarly, health expenditure as a percentage of total expenditure ranged between 5.32 and 7.80 *per cent* against the target of eight *per cent.* However, the State's performance in terms of these two targets has shown an improving trend in the last five years as shown in **Chart 1.2.**

Chart 1.2: Trend of expenditure on public healthcare

(in per cent)



(Source: Finance Accounts of the respective years of Government of Goa)

1.5 Performance against SDG-3

The Sustainable Development Goals (SDGs), 2030, also known as the Global Goals, were adopted by the United Nations in 2015 as an universal call of action to end poverty, protect the planet, and ensure that by 2030 all people enjoy peace and prosperity. The 17 SDGs and 169 targets are part of the 2030 Agenda for Sustainable Development adopted by 193 Member States at the UN General Assembly Summit in September 2015 and came into effect from 01 January 2016.

The Directorate of Health Services, Government of Goa is the nodal department for the implementation of SDG-3 in the State.

1.5.1 Health indicators under SDG-3

"Good Health and Well-being" (SDG-3) is one of the 17 SDGs. SDG-3 aims to end preventable deaths across all ages from communicable and non-communicable diseases, achieve universal health coverage, including financial risk protection, *etc*. A comparison of major status of health indicators under SDG-3 of Goa with All India score is shown in **Table 1.4:**

Table 1.4: Status of Health Indicators under SDG-3 of Goa

Indicator	SDG-3 Target No.	Target	Goa	India
Percentage of children in the age group 9-11 months fully immunised	3.2	100	94	91
HIV incidence per 1000 uninfected population by 2030	3.3	0	0.03	0.05
Death rate due to road traffic accidents (per 1,00,000 population)	3.6	5.81	19.38	11.56
Percentage of Institutional Births (5 years/1 year) 2015-16 by 2030	3.7	100	99.90	94.40
Monthly per capita out-of-pocket expenditure on health as a share of monthly per capita consumption expenditure	3.8	7.83	9	13
Total physicians, nurses and midwives per 10,000 population, in percentage	3.c	45	33	37

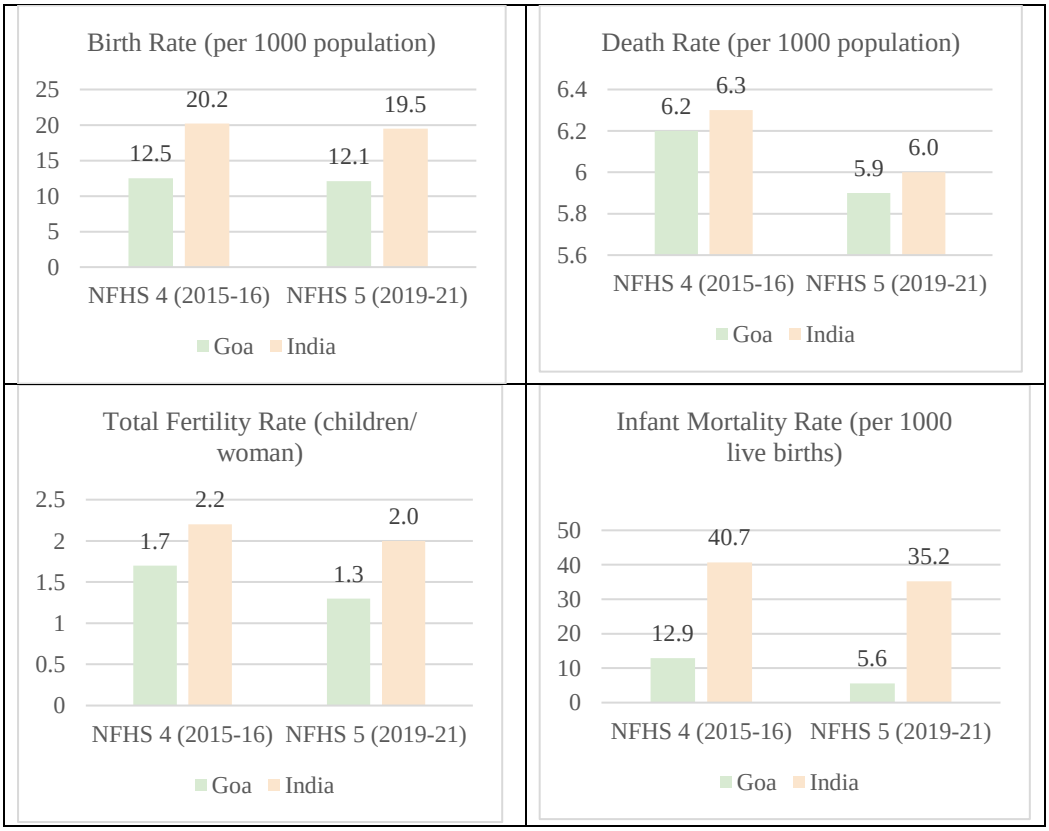
(*Source: SDG India Index 3.0, 2020-21, NITI Aayog*)

It can be seen that out of six indicators, four indicators[2] are better than the All India average in the State.

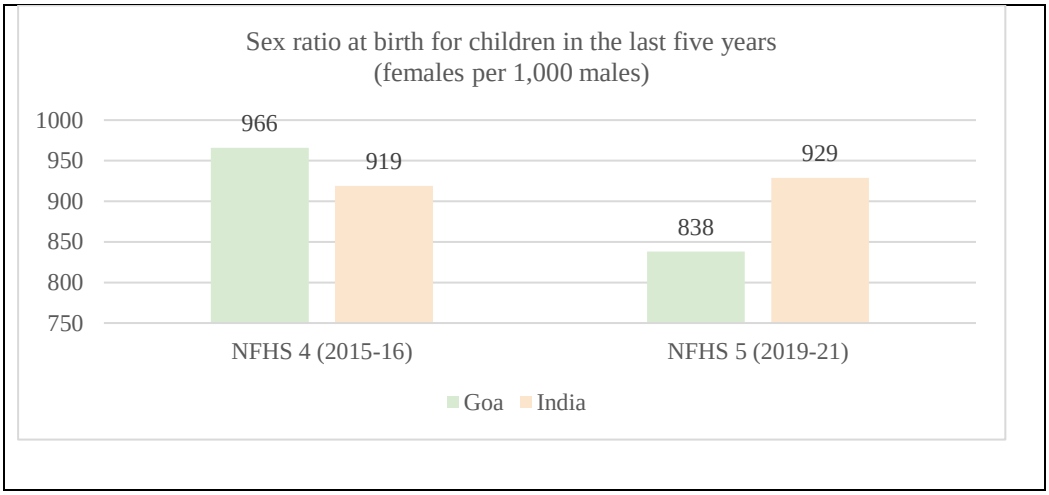
1.6 Health indicators

Major health indicators of the State compared with national figures is shown in **Chart 1.3**

Chart 1.3 Health indicators in the State



[2] Four indicators: Percentage of children in the age group 9-11 months fully immunised, HIV incidence per 1000 uninfected population by 2030, Percentage of Institutional Births (5 years/1 year) 2015-16 by 2030 and Monthly per capita out-of-pocket expenditure on health as a share of monthly per capita consumption expenditure.



(Source: SRS Bulletin 2017, SRS Bulletin 2020, National Family Health Survey – 5)

1.7 State Health Policy

The NHP, 2017 (Para 2.1) envisages the attainment of the highest possible level of health and well-being for all as its goal, through a preventive and promotive health care orientation in all developmental policies. A comprehensive health policy plays a pivotal role in setting priorities and strengthening the role and capacity of the Government in shaping public health systems. It can serve as a guide in aligning the State's investments in health, organisation of healthcare services, development of human resources, better financial protection strategies, strengthening regulatory framework, *etc*. However, the State of Goa, has not yet framed a State Health Policy.

The Secretary, Health stated (February 2023) that health policies of other States will be reviewed and corrective measures would be taken as required.

Ministry of Health and Family Welfare (MoH&FW), Government of India, had issued Indian Public Health Standards (IPHS) for District Hospitals, Sub-District/Sub-Divisional Hospitals, Community Health Centres, Primary Health Centres, Sub-Centres in 2007 which were revised in 2012 and 2022. The Government of India had urged the states and UTs to adopt these guidelines.

The Government of Goa uses these guidelines as a reference for human resources, infrastructure, equipment *etc*., in the said PHIs.

1.8 Audit Objectives

The Performance audit was carried out to assess:

i. *the adequacy of public healthcare funding;*
ii. *the availability and management of healthcare infrastructure;*
iii. *the availability of drugs, medicines, equipment and other consumables;*
iv. *the adequacy of human resources for providing healthcare services;*
v. *whether effective monitoring and regulatory systems exist for ensuring delivery of quality healthcare to public;*
vi. *the progress towards achievement of SDG-3; and*

vii. *the funding and expenditure of Centrally Sponsored health sector schemes.*

1.9 Audit Criteria

The Performance Audit was benchmarked against the criteria derived from the following sources:

- National Health Policy, 2017;
- Sustainable Development Goals;
- Minimum Standard Requirements for Medical College Regulation, 1999 replaced by National Medical Commission in 2020;
- Indian Public Health Standards, 2012;
- Indian Medical Degrees Act, 1916;
- Professional Conduct, Etiquette and Ethics Regulation, 2002;
- Clinical Establishment (Registration and Regulation) Act, 2010;
- Drugs & Cosmetics Act, 1940;
- Pharmacy Act, 1948 & Pharmacy Practice Regulations, 2015;
- The Goa Nursing Council Act, 2012;
- Bio-Medical Waste Management Rules, 2016;
- National Accreditation Board for Testing and Calibration Laboratories Accreditation programmes for Testing Laboratories as per ISO/IEC 17025, Calibration Laboratories as per ISO/IEC 17025, Medical Laboratories as per ISO 15189, *etc*.;
- National Accreditation Board for Hospitals and Healthcare Providers accreditation programmes for various healthcare providers such as Hospitals, Blood Banks and Allopathic Clinics *etc*.;
- Atomic Energy (Radiation Protection) Rules, 2004;
- World Health Organization (WHO) norms;
- Assessors' Guidebook for Quality Assurance in Government Healthcare Centres published by MoH&FW in 2013 and 2014;
- Manual, orders, circulars and scheme guidelines issued by GoI and GoG from time to time;
- Framework for implementation of schemes issued by GoI; and
- NITI Aayog reports.

1.10 Audit Scope and Methodology

An Entry Conference was held (July 2021) with the Secretary, Health wherein audit objectives, audit criteria, scope and methodology were discussed.

The Audit was conducted from November 2021 to October 2022 covering the period 2016-17 to 2021-22 through test-check of records at PHD (Secretary), DHS, GMCH, DH, SDH, CHCs, PHCs/UHCs and SCs. Directorate of Food and Drugs Administration, Mission Director of National Health Mission, Mission Director of PMJAY, Mission Director of AYUSH, Medical Store Depot were also audited. Further, information regarding the State Nursing

Council, State Medical Council and State Pharmacy Council was collected through the PHD. Apart from these units, records of Secretary (Planning) and Directorate of Planning, Statistics and Evaluation, Goa and selected private hospitals were also scrutinised.

The Audit Methodology included scrutiny of records and document analysis, response to audit queries, collection of information through questionnaires, prescription survey and doctor and patient survey for end-user satisfaction. In addition, joint physical inspection of hospital assets, sub-stores and civil works were also conducted.

The draft report on Public Health Infrastructure and Management of Health Services (PHIMHS) was forwarded to State Government in January 2023 and again in September 2023. The Government has not furnished its replies to the Report (February 2024).

Audit findings were discussed with the Secretary, Health and other senior officials from the PHD in the Exit Conference **(**February 2023) and the views/ responses of the concerned officials have been included in the report wherever necessary.

1.11 Audit Sample

GMCH being the only general tertiary care hospital was selected by default. The following 19 units at various levels under DHS were selected through simple random sampling. The details of units selected for test-check is shown in the **Table 1.5:**

Table 1.5: Units under DHS selected for test-check

District Hospital	North Goa District Hospital, Mapusa
Sub-district Hospital	SDH, Chicalim
Specialised Hospital	T. B. Hospital, Margao
CHCs (2)	North Goa: CHC-Pernem South Goa: CHC-Canacona
PHCs (4)	North Goa: PHC-Porvorim and PHC-Chimbel South Goa: PHC- Chinchinim and PHC- Balli
Sub Centres (10)	North Goa: Sal, Siolim, Piligao, Nanoda and Nagargao South Goa: Colva, Ambelim, Cola, Veling and Betalbetim

1.12 Structure of the Report

This report structure is detailed below:

Chapter 1	Introduction
Chapter 2	Human Resources
Chapter 3	Healthcare Services
Chapter 4	Availability of Drugs, Medicines, Equipment and Other Consumables
Chapter 5	Healthcare Infrastructure
Chapter 6	Financial Management
Chapter 7	Implementation of Centrally Sponsored Schemes
Chapter 8	Adequacy and Effectiveness of the Regulatory Mechanisms
Chapter 9	Sustainable Development Goal-3

1.13 Acknowledgement

Audit acknowledges the cooperation of the State Government including the Secretary, Health, Dean of GMCH and Director of Health Services, Government of Goa. Audit also appreciates the assistance provided by the various field functionaries of these departments for smooth conduct of the audit.

Chapter II
Human Resources

Chapter 2-Human Resources

The State did not have a human resource policy for PHIs.

There were vacancies in doctors, nurses and paramedics to the extent of 17.50 per cent in North Goa district and 17.90 per cent in South Goa district under primary healthcare and to the extent of 20.24 per cent in North Goa district and 18.75 per cent in South Goa district under secondary healthcare in the State.

Doctors, nurses and paramedics were hired on contract in excess of the sanctioned strength by Directorate of Health Services (DHS) in primary and secondary healthcare. However, lack of adequate number of Specialists in both the District Hospitals, test-checked PHIs under DHS and in Goa Medical College and Hospitals (GMCH), led to non-delivery of related services to patients. GMCH had shortfall of 51 per cent of doctors/medical officers despite being the only general tertiary hospital in the State. Vacancy of doctors ranged from 18.18 to 81.25 per cent in the super-speciality departments of GMCH.

ASHA workers who were the key health care personnel at grassroots level were not recruited in the State.

2.1 Introduction

The National Health Policy (NHP), 2017 (Para 11.9) recognises that Human Resource (HR) management is critical to strengthening of health system and delivery of healthcare services. The GMCH and DHS are key pillars of the State's healthcare system, providing a range of services to meet the medical needs of the local population. Audit findings on human resources in PHIs in Goa are discussed below.

2.2 Lack of Human Resource policy

The NHP, 2017 (Para 11.8) recommends the framing of a recruitment policy to attract young and talented multi-disciplinary professionals.

Audit observed that the State did not frame a HR policy for the health sector to ensure adequacy of human resources in the health sector and their effective and efficient management. There were no plans/targets pertaining to human resources and rationalisation of resources based on the needs of patients and utilisation of key services was not carried out.

Adhoc management of human resources led to excess hiring of contract staff (1,057 against vacancy of 833) among doctors, nurses, paramedics and other staff by DHS. However, there was a total vacancy of 753 (considering 79 numbers of contractual staff) among doctors, nurses, paramedics and other staff in GMCH as on 31 March 2022.

The Secretary, Health accepted the audit observation and assured to take remedial action during the Exit Conference (February 2023).

Recommendation 1: The State Government may frame a Human Resource policy for the public health sector for effective and efficient management of human resources.

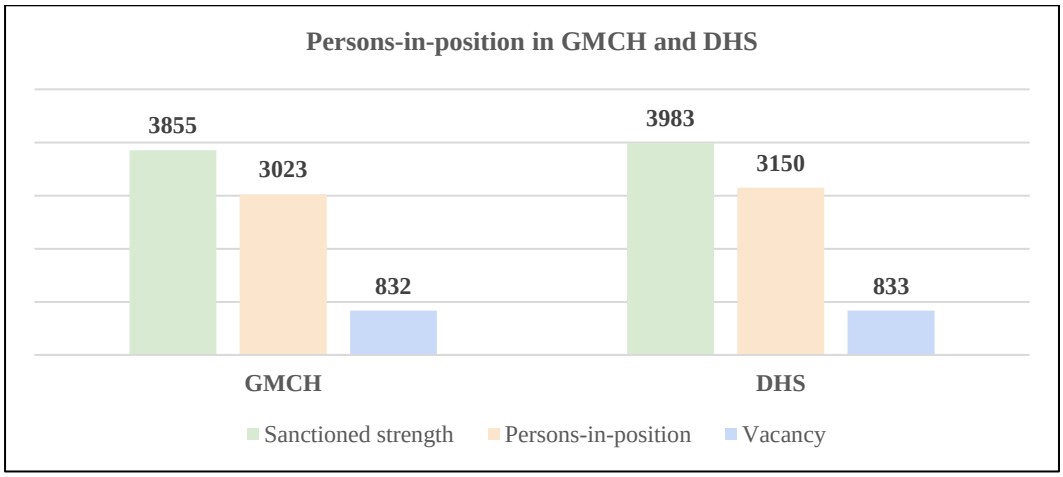
2.3 Availability of doctors as per WHO norms

As against the World Health Organization (WHO) benchmark of doctor: population ratio of 1:1000, the State fared better with a ratio of 1:500[1]. The State had 3,130 active Medical Practitioners registered with the Goa Medical Council as on May 2022.

2.4 Human resource availability against sanctioned strength

The availability of human resource in GMCH and DHS is given in **Chart 2.1** below:

Chart 2.1: Persons-in-position under GMCH* and DHS as on 31 March 2022



(Source: Information furnished by GMCH and DHS)

***excluding 79 contractual staff in GMCH.**

Overall, in the State, the sanctioned strength (SS) is 7838, Persons-in-position (PIP) is 6173[2] and vacancy position is 21.24 *per cent*. The vacancy position in GMCH is 21.58 *per cent* and in PHIs under DHS it is 20.91 *per cent*.

Details of SS, PIP and vacancies at different healthcare levels are discussed below.

[1] As per projected population as on 1st March 2022 for Goa *i.e.*, 15.67 lakh given by National Commission on Population by MoHFW in the Report of the Technical Group on Population Projections.

[2] Excluding Contractual Staff, Bond Doctors and NHM Doctors.

2.4.1 District wise availability of human resources in primary healthcare

Indian Public Health Standards (IPHS), 2012 prescribes the minimum requirement of manpower for delivery of essential services in primary healthcare.

While sanctioned posts of doctors, paramedics and others in PHCs/UHCs in both the districts are higher than those prescribed in IPHS, 2012, sanctioned posts of nursing staff in North Goa district is less than that prescribed in IPHS, 2012, the details of which are given in **Appendix 2.1**.

Details of district wise sanctioned strength and persons-in-position of doctors, nurses and paramedics in the PHCs/UHCs as on 31 March 2022 is shown below in **Table 2.1:**

Table 2.1: Persons-in-position in 28 PHCs/ UHCs in Goa as on 31 March 2022

Post	North Goa District				South Goa District			
	Sanctioned Post	Persons -in- position	Vacancy	Contract staff	Sanctioned Post	Persons -in- position	Vacancy	Contract staff
Doctors	52	43	9	79	84	72	12	88
Nurses	31	28	3	14	55	52	3	30
Paramedics	191	155	36	106	313	247	66	123
Total	**274**	**226**	**48**	**199**	**452**	**371**	**81**	**241**

(Source: Directorate of Health Services)

As per the above table, there was overall vacancy to the extent of 17.5 *per cent* in North Goa and 17.9 *per cent* in South Goa. Against the vacancy of 21 doctors at primary healthcare level, 167 doctors were hired on contract basis and against the vacancy of six nurses at primary healthcare level, 44 nurses were hired on contract basis by the DHS. Thus, DHS hired staff in excess of sanctioned strength in Primary Healthcare Centres.

Reply from the State Government on the above audit observation is awaited (March 2024).

2.4.2 District wise availability of human resources in secondary healthcare

IPHS, 2012, prescribes minimum manpower for delivery of essential services in CHCs/SDHs/DHs based on bed strength. Also, IPHS, 2012 states that efforts should be made by the States/UTs to provide manpower for all desirable services in the CHCs/SDHs/DHs.

The sanctioned posts of doctors, nursing staff and other staff in CHCs/SDHs/DHs in both the districts are higher than the requirement prescribed in IPHS, 2012. However, sanctioned posts of paramedic staff is less than IPHS requirements in both the District Hospitals and the two SDHs, the details of which are given in **Appendix 2.1**.

Table 2.2: Persons-in-position in secondary healthcare in Goa as on 31 March 2022

Post	North Goa District				South Goa District			
	Sanctioned Post	Persons -in- position	Vacancy	Contract staff	Sanctioned Post	Persons -in- position	Vacancy	Contract staff
Doctors/ Specialist	153	100	53	78	213	141	72	89
Nurses	209	191	18	31	395	365	30	47
Paramedics	201	158	43	116	165	122	43	102
Total	**563**	**449**	**114**	**225**	**773**	**628**	**145**	**238**

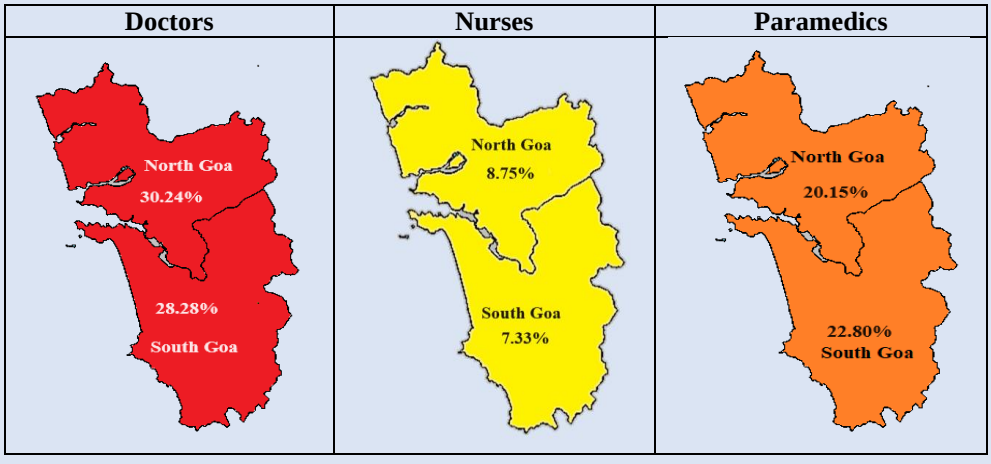
(Source: Directorate of Health Services)

As per the above table, there was overall vacancy to the extent of 20.24 *per cent* in North Goa and 18.75 *per cent* in South Goa. Against the vacancy of 125 doctors at secondary healthcare level, 167 doctors were hired on contract basis by the DHS. Similarly, against the vacancy of 48 nurses at secondary healthcare level, 78 nurses were hired on contract basis by the DHS. Thus, DHS hired staff in excess of sanctioned strength in secondary healthcare, which needs to be reviewed/rationalised.

The district wise SS and PIP is given in **Appendix 2.1**.

The Director, DHS did not furnish any specific reply about the audit observation regarding excessive hiring of contract staff *vis-à-vis* the sanctioned strength.

Figure 2.1: District wise vacancy position of regular PIP in PHIs of North and South Goa districts under DHS as on 31.03.2022



(Source: Information furnished by DHS)

2.4.3 Shortfall of surgeons, anaesthetists and radiologists *etc.*, in PHIs under DHS

The Sanctioned Strength (SS) of surgeons, anaesthetists, radiologists, orthopaedics and gynaecologists against the requirement mentioned in IPHS, 2012 in the test-checked Community Health Centres (CHCs)/Sub-Divisional Hospitals (SDHs)/District Hospitals (DHs) of the State as on 31 March 2022 is shown below in **Table 2.3 (A).**

Table 2.3 (A): RQ and SS of Specialists as on 31 March 2022

Name of Post	CHC, Pernem		CHC, Canacona		SDH, Chicalim		NGDH, Mapusa		SGDH Margao	
	RQ[3]	SS	RQ	SS	RQ	SS	RQ	SS	RQ	SS
Surgeon	2	2	2	1	3	1	3	6	3	4
Anaesthetist	1	1	1	1	1	1	3	8	3	6
Radiologist	NR[4]	1	NR	-	1	-	2	5	2	4
Orthopaedic	NR	1	NR	-	1	-	2	4	2	5
Gynaecologist	1	2	1	1	1	1	4	9	5	6

(Source: Directorate of Health Services)

The sanctioned strength in both the District Hospitals and CHC, Pernem was in alignment with IPHS requirements. In the case of CHC, Canacona, there was shortfall in the SS of surgeons, while there was shortfall in the SS of surgeons, radiologists and orthopaedics in SDH, Chicalim.

However, Audit observed shortfall in the number (PIP) of surgeons, anaesthetists, radiologists, orthopaedics and gynaecologists against the sanctioned strength in the test-checked units except SDH, Chicalim where PIP of gynaecologists match with SS as detailed below in **Table 2.3 (B):**

Table 2.3 (B): SS and PIP of Specialists as on 31 March 2022

Name of Post	CHC, Pernem		CHC, Canacona		SDH, Chicalim		NGDH, Mapusa		SGDH Margao	
	SS	PIP	SS	PIP	SS	PIP	SS	PIP	SS	PIP
Surgeon	2	0	1	0	1	0	6	5	4	2
Anaesthetist	1	0	1	0	1	0	8	5	6	4
Radiologist	1	0	-	-	-	-	5	3	4	3
Orthopaedic Surgeon	1	0	-	-	-	-	4	2	5	2
Gynaecologist	2	1	1	0	1	1	9	8	6	3

(*Source: Information furnished by DHS*)

In the absence of surgeons/anaesthetists in the above test-checked SDH and CHCs, the Operation Theatres (Ots) were non-functional as discussed in Para 5.3.2.2. Consequently, among other cases, the cases of surgery and essential maternity services (Obstetrics and Gynaecology) such as C-Section delivery in test-checked CHCs and SDH were referred to DHs and GMCH.

Further, Medical Superintendent, NGDH, Mapusa stated (September 2022) that despite the availability of equipment in ICU, it was non-functional for want of trained staff as discussed in Para 5.3.2.3. Further, SDH, Chicalim had no radiologist. Despite the availability of ultra-sonography machines in SDH, Chicalim, it had only one lab technician posted against the IPHS norms requirement of one radiologist and six lab technicians.

DHS stated (December 2021) that the proposal for filling up vacant posts was sent to Public Health Department (PHD) (November 2020) and awaiting approval. PHD stated (August 2022) that Group A and B Gazetted

[3] RQ = Requirement as per IPHS, 2012.
[4] NR = Not required as per IPHS, 2012.

Doctors/Officers posts are filled through Goa Public Service Commission (GPSC) and accordingly, all these proposals are under process with GPSC.

2.4.4 Availability of human resources in tertiary level at GMCH

The SS and PIP of doctors/medical officers, nurses, paramedics and other staff for GMCH as on 31 March 2022 is shown in **Table 2.4**:

Table 2.4: PIP at GMCH as on 31 March 2022

Name of Post	SS	PIP	Vacancy	*Vacancy Percentage in regular staff*	Contract staff	*Total vacancy percentage (considering contractual staff)*
Doctors/Medical Officer	650	262	388	*59.69*	56	*51.10*
Nurses	1357	1186	171	*12.60*	0	*12.60*
Paramedics	150	127	23	*15.33*	23	*0*
Total	**2157**	**1575**	**582**	***26.98***	**79**	***23.32***

(Source: Information provided by GMCH)

Department wise data of doctors, nurses, paramedics and other staff in GMCH is given in **Appendix 2.2**. Audit noticed that in Surgical Gastroenterology, Medical Gastroenterology, and Medical Rehabilitation no doctors or nurses were posted. In Cardiology, Radiation Oncology, Medical Oncology, and Cardiovascular and Thoracic Surgery departments (CVTS), there were no doctors posted on regular basis.

2.4.4.1 Shortage of specialists in super-speciality departments in GMCH

The NHP, 2017 (Para 11.1) recommends the strengthening of existing medical colleges to increase the number of doctors and specialists in States with large HR deficit.

Audit observed acute shortage of doctors in super-speciality departments of GMCH against the SS as shown below in **Table 2.5.**

Table 2.5: SS, PIP and vacancy of doctors in GMCH as on 31 March 2022

Name of Super-Speciality Departments	SS	PIP	Vacancy	*Vacancy Percentage in Regular staff*	Vacancies filled up by Contract Doctors	*Total Vacancy percentage*	Patients registered during 2016-22	IPD bed occupancy during 2018-22*
Nephrology	9	3	6	*66.67*	1	*55.60*	33,760 (OPD) IPD is included in General Medicine	
Urology	15	2	13	*86.67*	2	*73.33*	82,482 (OPD) 45,277* (IPD)	59 to 80 *per cent*
Neurology	9	3	6	*66.67*	1	*55.60*	57,449 (OPD) 10,596* (IPD)	37 to 74 *per cent*
Neurosurgery	11	9	2	*18.18*	0	*18.18*	58,151 (OPD) 54,787* (IPD)	105 to 141 *per cent*
Oncology	16	1	15	*93.75*	2	*81.25*	4,289 (OPD) 14,950 (IPD)	139 to 166 *per cent*[5]
Cardiology	20	0	20	*100*	7	*65.00*	33,369 (OPD) 15,623 (IPD)	54 to 89 *per cent*
CVTS[6]	14	0	14	*100*	5	*64.30*	8,617 (OPD) 3,240 (IPD)	21 to 70 *per cent*

(*Source: Information furnished by GMCH)*
*{*Department wise Midnight Count (2016-17 and 2017-18 data not provided by GMCH)}*

Vacancy in respect of doctors in the super-speciality departments ranged from 18.18 to 81.25 *per cent.* In Oncology, Cardiology, and CVTS departments, the vacancy of regular doctors was more than 90 *per cent*. It was observed that in GMCH, despite having the CVTS and Cardiology patients load, no regular doctors/specialists were appointed. The Oncology department also had 81.25 *per cent* vacancy of doctors/specialists despite appointing the doctors on contractual basis. The above vacancies are a matter of concern as GMCH is the only general tertiary hospital in the State.

The Dean, GMCH accepted the observation and stated (October 2023) that GMCH is continuously strengthening human resource and filling of the posts are in process.

The reply from GMCH regarding continuously strengthening and filling up vacant posts is not tenable as while the vacancy position *vis-a-vis* overall

[5] Bed Occupancy was 166 *per cent* in 2019-20, 139 *per cent* in 2020-21 and 158 *per cent* 2021-22

[6] Cardio Vascular Thoracic Surgery

medical personnel decreased from 27.28 *per cent* in 2016 (1,074 available against SS of 1,477) to 23.32 *per cent* in 2022, the vacancy position in regard to doctors increased from 33 *per cent* in 2016 (238 available against SS of 355) to 51 *per cent* in 2022.

Recommendation 2: The State Government may take steps for filling up the vacant posts in GMCH and DHS. DHS may ensure that contract staff are hired only as per available vacancies.

2.5 Failure to appoint ASHA as per norms

As per the National Rural Health Mission (NRHM), every village in the country will have a trained female community health activist called ASHA[7]. ASHA was to be trained to work as an interface between the community and the public health system and is the first port of call for any health-related demands of deprived sections of the population, especially women and children, who find it difficult to access health services. The general norm prescribed in NRHM is 'One ASHA per 1000 population'.

As per norms, there is a requirement of 1458[8] ASHA workers in the State. However, ASHA workers have not been appointed in the State.

The Director, DHS stated (November 2022) that several attempts were made in the past to employ ASHAs. However, appropriate candidates were not available as monetary benefits for them was only in the form of incentive and this could not attract interest among people.

No evidence/records substantiating the DHS' claims were produced to Audit.

[7] Accredited Social Health Activist
[8] Calculated based on Census of 2011 (14.59 lakh). One ASHA per population of 1000

Chapter III
Healthcare Services

Chapter 3- Healthcare Services

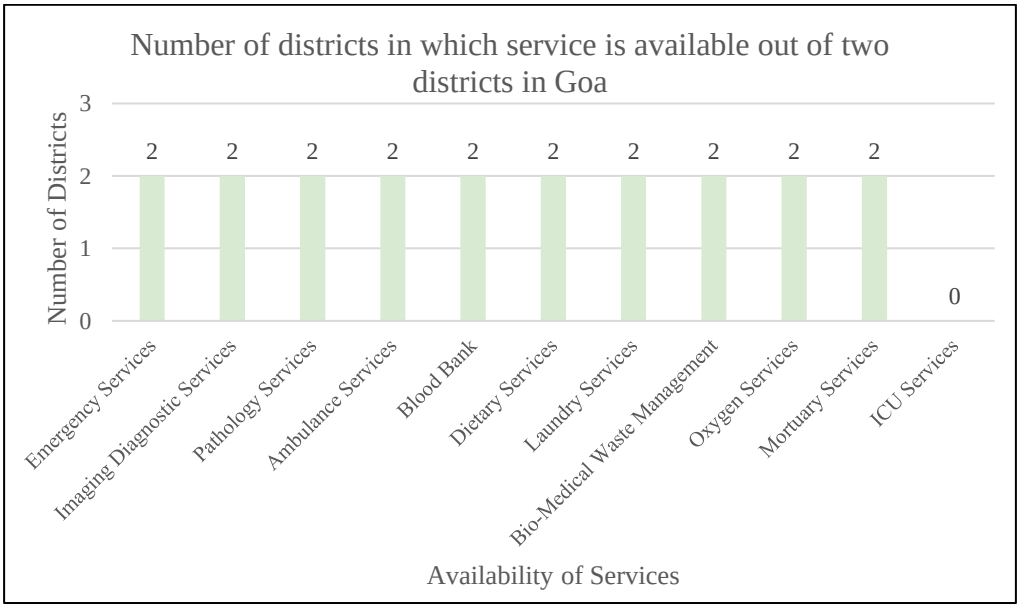
North Goa District Hospital (NGDH), Mapusa and all Community Health Centres (CHCs) in the State could not achieve the required Bed Occupancy Rate as per Indian Public Health Standards, 2012 (IPHS) norms. There were gaps in availability of essential IPD services as per IPHS norms in both the District Hospitals, in all CHCs in the State and the test-checked Sub-District Hospital. ICU services were not available in both the District Hospitals of the State. Auxiliary services in Goa Medical College and Hospital (GMCH) and support and auxiliary services in test-checked hospitals under DHS were not as per norms. Deficiencies were noticed in the availability of required fire safety equipment. The Citizen's charter, meant to enforce accountability of organisations to citizens for the delivery of public services was not in place in GMCH and was deficient in test-checked PHIs under DHS.

3.1 Introduction

The National Health Policy (NHP), 2017 (Para 2.3.2) suggests reinforcing the trust in public healthcare system by making it predictable, efficient, patient centric, affordable and effective, with a comprehensive package of services and products that meet immediate health care needs of most people.

The healthcare services are broadly divided into three categories, namely Line Services, Support Services and Auxiliary Services. The availability of Line and Support Healthcare services in District Hospitals of Goa are shown in **Chart 3.1.**

Chart 3.1: Availability of Line and Support healthcare services in District Hospitals in North Goa District Hospital (NGDH) and South Goa District Hospital (SGDH)



(Source: Information furnished by North Goa District Hospital and South Goa District Hospital)

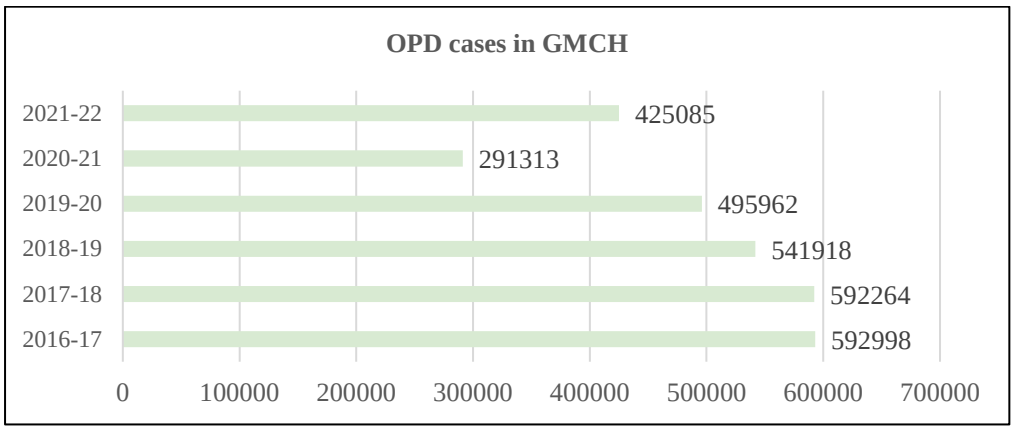
ICU services were not available in both the District Hospitals of Goa. Non-operation of ICU in NGDH, Mapusa has been mentioned in Chapter 5 (Paragraph No. 5.3.2.3) of this report.

Audit findings on the availability and management of healthcare services in the State are discussed in subsequent paragraphs.

3.2 OPD, IPD services and Bed Occupancy Rate (BOR) in GMCH

An Out-Patient Department (OPD) is the part of a hospital designed for the treatment of people with health problems who visit the hospital for diagnosis or treatment, but do not require a bed or to be admitted for overnight care. The number of OPD patients visiting GMCH during 2016-22 in shown in **Chart 3.2.**

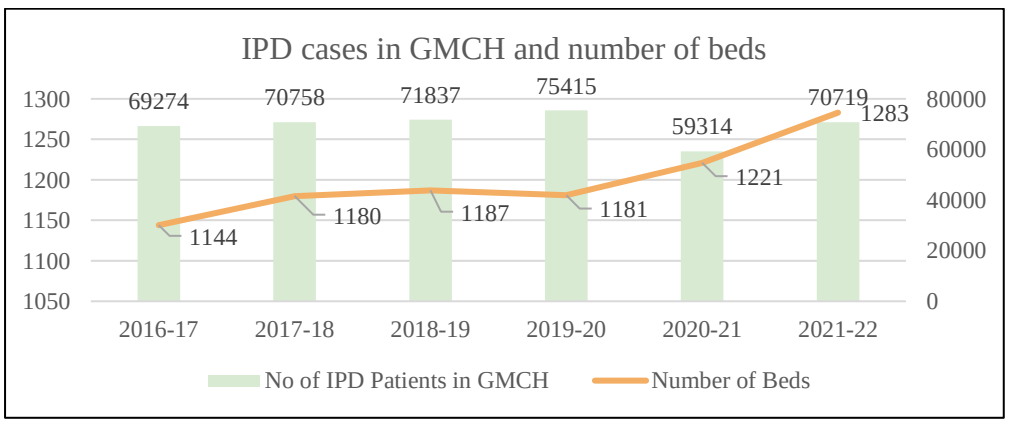
Chart 3.2: OPD cases in GMCH



(Source: Information provided by GMCH)

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 OPDs, Emergency Services and Ambulatory Care due to their medical condition. The number of patients admitted in the IPD of GMCH during the period 2016-22 ranged from 59,314 to 75,415. The availability of beds in GMCH during 2016-22 and number of IPD patients in GMCH is shown in **Chart 3.3**.

Chart 3.3: IPD cases per year and the availability of beds in GMCH

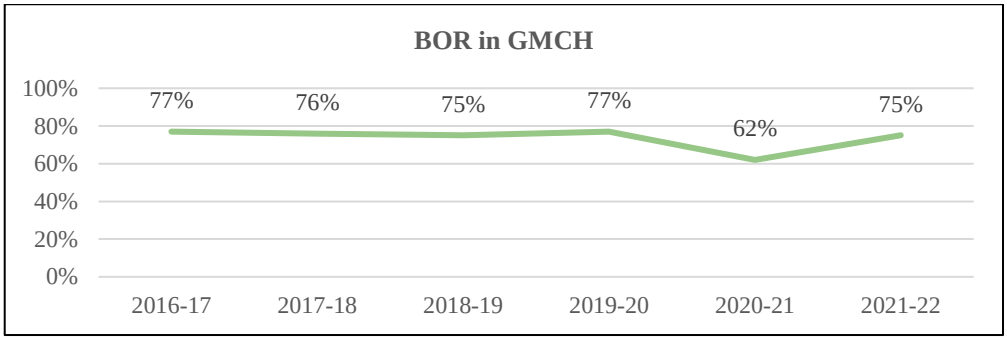


(Source: Information provided by GMCH)

Bed Occupancy Rate (BOR)[1] in hospitals refers to the percentage of hospital beds that are occupied by patients at a given time. BOR reflects the efficiency in the use of available hospital beds and is an indicator of quality of services, infrastructure, trained staff, patient care and satisfaction provided by the facility. As per National Medical Commission, 2020 (NMC) norms, average occupancy of indoor beds shall be a minimum of 75 *per cent* per annum.

The BOR in GMCH during 2016-22 is shown in **Chart 3.4** below.

Chart 3.4: BOR in GMCH during 2016-22



(Source: Information provided by GMCH)

The BOR in GMCH was equal or above the minimum norm of 75 *per cent* (except in 2020-21) during 2016-22.

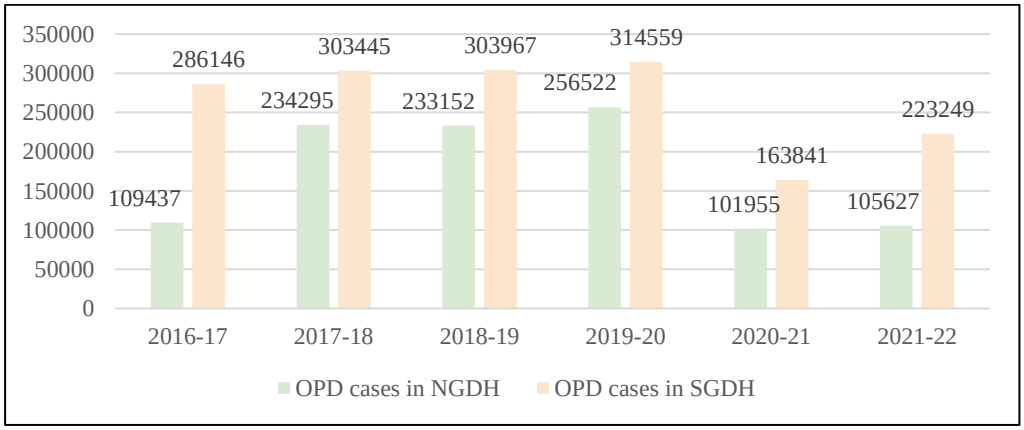
The Dean, GMCH accepted the observation and stated (October 2023) that the BOR was affected in 2020-21 due to COVID-19 pandemic.

3.3 OPD, IPD services and BOR in PHIs under DHS

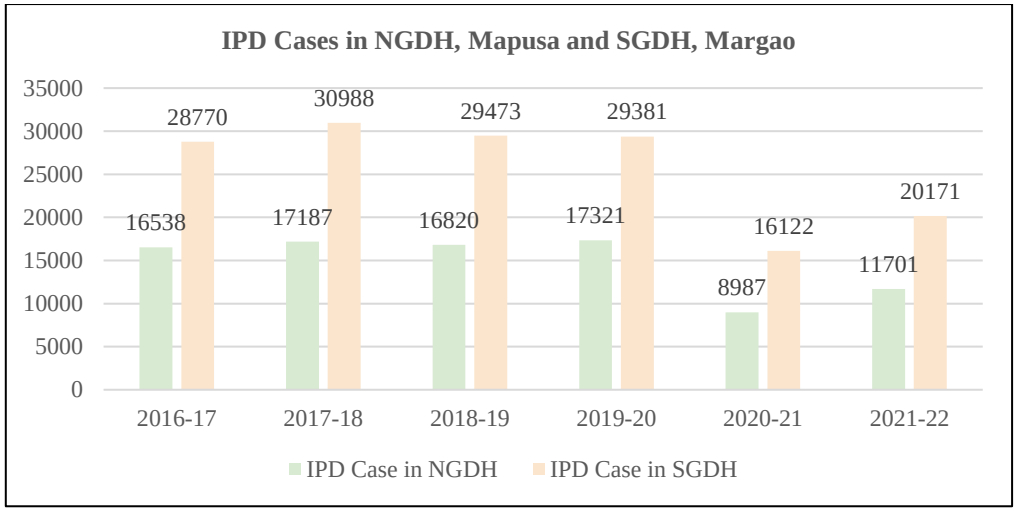
3.3.1 OPD and IPD services in District Hospitals and CHCs

The district hospital is the apex healthcare institution in secondary level of public healthcare. There are two district hospitals in Goa. The OPD cases, IPD cases in district hospitals during the period 2016-22 is shown in **Chart 3.5 below:**

Chart 3.5 A: OPD and IPD cases in District Hospitals



[1] BOR = (Number of occupied beds × 100) / (total number of functional beds × 365)

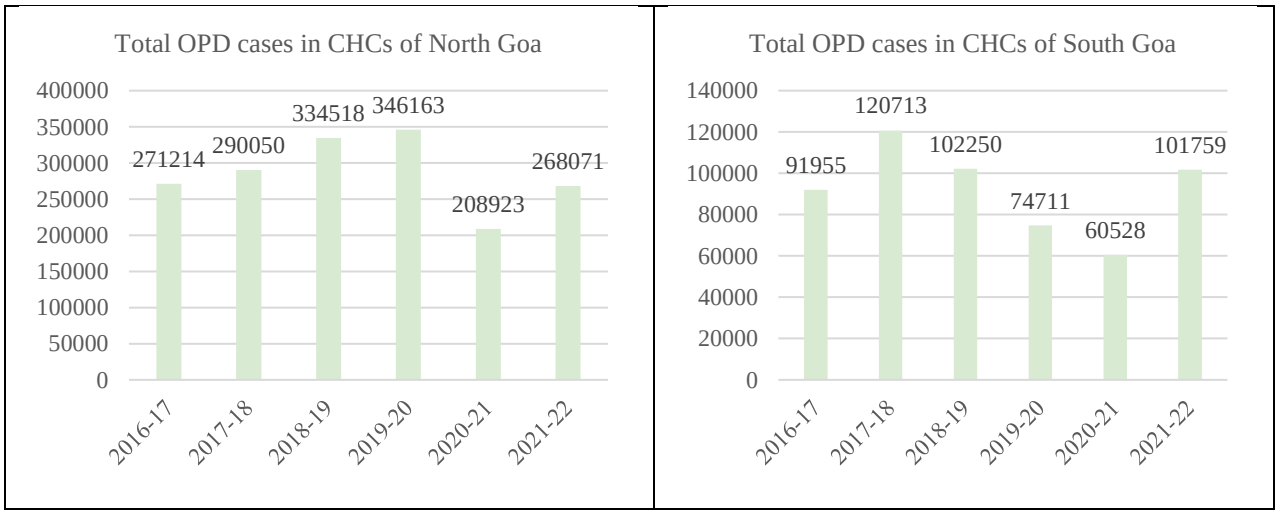


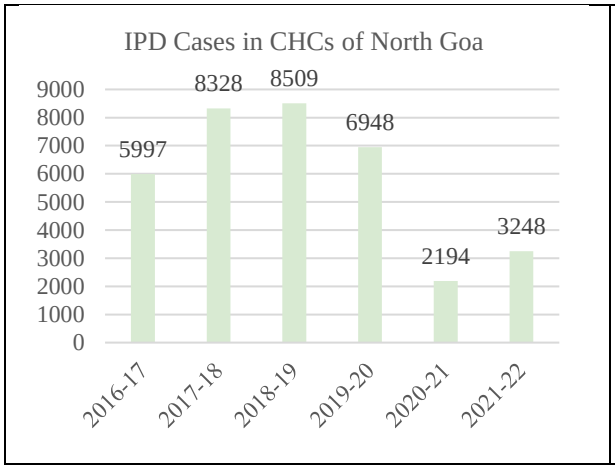
(Source: Information furnished by NGDH and SGDH)

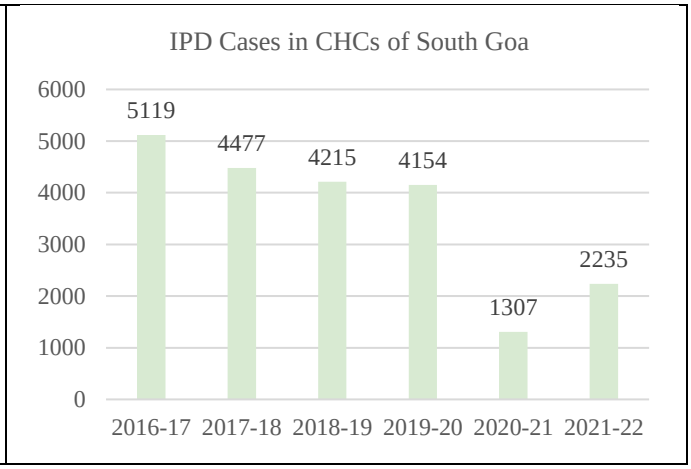
Details of patient per day per Registration Counter and OPD cases per day per doctor in NGDH, Mapusa are shown in **Appendix 3.1**.

The Community Health Centre constitute the secondary level of healthcare and are designed to provide referral as well as specialist healthcare to the rural population. The district wise IPD and OPD cases in CHCs during the period 2016-22 is shown in **Chart 3.6** below.

Chart 3.6: District wise OPD and IPD cases in CHCs







(Source: Information provided by DHS)

Details of patient per day per Registration Counter and OPD cases per day per doctor in test checked CHCs are shown in **Appendix 3.1**.

(i) Availability of beds in DH/Sub-District Hospital (SDH)/CHC/PHC as on 31 March 2022

Table 3.1: District wise availability of beds at the DH/SDH/CHC/PHC as on 31 March 2022

District wise availability of beds at the DH/SDH/CHC/PHC as on 31 March 2022		
Hospital/Health care centre	**District**	
	North Goa	**South Goa**
District Hospital	250	350
Sub-District Hospital	303* (both SDH are in South Goa District)	
CHC	146	90
PHC	46	179

(Source: Information furnished by DHS)

SDH Ponda-183 beds and SDH Chicalim-120 beds

(ii) BOR in NGDH[2], Mapusa and CHCs

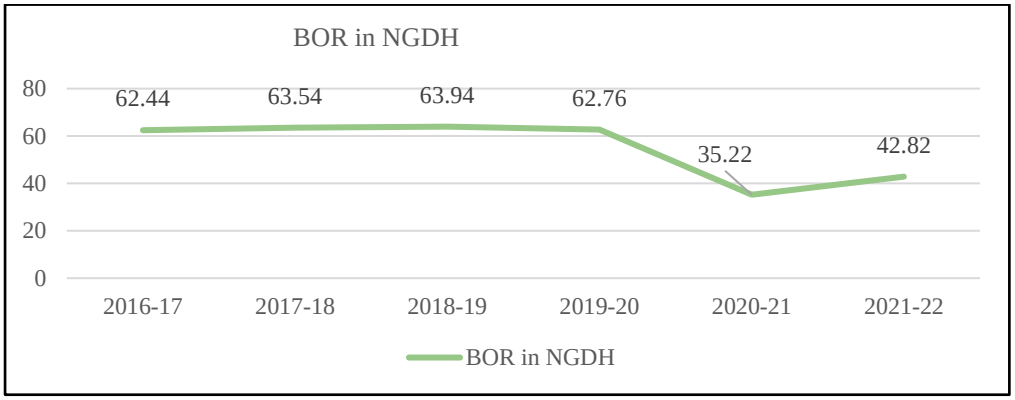
As per NITI Aayog's report on best practices in the performance of District Hospitals, a high BOR is an indicator of health system under pressure. The report states that hospitals cannot operate at 100 *per cent* occupancy, as spare bed capacity is needed to accommodate variations in demand. Lack of available beds increases delays in emergency departments, causes patients to be placed on clinically inappropriate wards and increases the rate of hospital-acquired infections. This also puts staff under pressure to free up beds that can pose a risk to patient safety.

Similarly, the report also states that very low BOR (<42 *per cent*) at primary health care level indicates lack of medically trained personnel, irregular supply of drugs and other medical supplies and a complete breakdown in the transfer and referral system. Further, IPHS stipulates BOR of at least 80 *per cent* and

[2] BOR for SGDH, Margao could not be calculated for want of complete details of midnight count of patients.

60 *per cent* for DH and CHC respectively. The BOR in NGDH, Mapusa during the period 2016-22 is shown in **Chart 3.7 below.**

Chart 3.7: BOR in NGDH, Mapusa during 2016-22

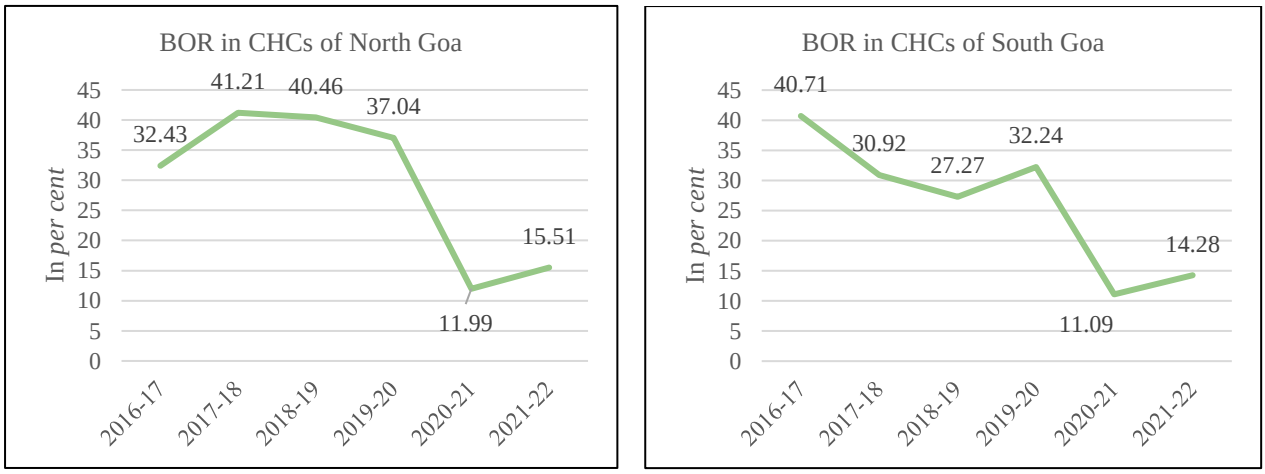


(Source: Information furnished by NGDH, Mapusa)

As per above chart, the BOR in NGDH, Mapusa ranged between 35.22 and 63.94 *per cent* during the period 2016-22, which was less than the prescribed minimum of 80 *per cent* during the period 2016-22, which indicates low productivity of the hospital in providing quality health care services to the citizens.

The district wise BOR in CHCs during the period 2016-22 is shown in **Chart 3.8** below:

Chart 3.8: BOR in CHCs



(Source: Information furnished by DHS)

As per the above chart, the BOR in CHCs ranged between 11.99 and 41.21 *per cent* in North Goa and 11.09 to 40.71 *per cent* in South Goa during the period 2016-22, which was way below the prescribed minimum of 60 *per cent* as per IPHS. This indicated low productivity of the hospitals in providing quality health care services to the citizens.

3.3.2 Availability of OPD Services as per IPHS norms

IPHS stipulates the list of essential OPD services to be available in hospitals and health centres. Test check of selected PHIs revealed that essential services stipulated in IPHS norms were not available in few CHCs as given in **Table 3.2 (A) and 3.2 (B).**

Table 3.2 (A): Details of OPD services available in DHs/SDH as on 31 March 2022

Name of the essential OPD Services as per IPHS norms	As per IPHS Guidelines for DH	NGDH Mapusa	SGDH Margao	As per IPHS Guidelines for SDH	SDH Chicalim
Paediatrics	Essential	Yes	Yes	Essential	Yes
Gynaecology	Essential			Essential	Yes
Ophthalmology	Essential			Essential	Yes
ENT	Essential			Essential	Yes
General Orthopaedic	Essential			Essential	Yes #
Psychiatry	Essential			Desirable	No

(*Source: Information from test checked hospitals****)***
 # Available from 2021-22

Table 3.2 (B): Details of OPD services available in CHCs as on 31 March 2022

Name of the essential OPD Services as per IPHS norms	As per IPHS Guidelines for CHC	CHC Pernem	CHC Canacona	CHC Valpoi	CHC Sanquelim	CHC Bicholim	CHC Curchorem
Paediatrics	Essential	No	Yes	Yes	Yes	Yes	Yes
Gynaecology	Essential	Yes	Yes	Yes	Yes	Yes	Yes
Ophthalmology	Eye Specialist services (one for every 5 CHCs).	No	No	Yes	Yes	Yes	Yes
ENT	Not Required	No	No	Yes	Yes	No	No
General Orthopaedic	Not Required	No	No	Yes	No	No	No
Psychiatry	Not Required	No	Yes	Yes	No	Yes	Yes

(*Source: Information from hospitals****)***

As seen from the above table, all the essential services as per IPHS norms were available in NGDH, Mapusa and SGDH, Margao and CHCs except CHC Pernem where OPD services related to Paediatrics was not available.

The Director, DHS regarding non-availability of Paediatrics services informed (February 2024) that the Paediatrician from District Hospital, Mapusa visits the CHC, Pernem on a fortnightly basis.

3.3.3 Availability of In-Patient Services in test-checked hospitals

IPHS prescribes IPD services to be provided by public healthcare facilities. The IPD services relating to Orthopaedics, ENT, Psychiatry, Physiotherapy, Burn, and Dialysis are not prescribed for CHCs. Test check of five selected PHIs

revealed that IPHS prescribed services were not provided as given in **Table 3.3** below:

Table 3.3: Details of IPD services available in all DHs/SDH and test checked CHCs as on 31 March 2022

Name of Unit	GM	GS	Pdt	Orth	Ophth.	ENT	Psy	Act	Phy	Bur	Dia
NGDH, Mapusa	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	No	No	Yes
SGDH, Margao	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No	No
SDH, Chicalim	Yes	No	No	No	No	No	No	No	No	No	No
CHC, Pernem	Yes	No	No	*NA	No	*NA	*NA	No	*NA	*NA	*NA
CHC, Canacona	Yes	No	Yes	*NA	No	*NA	*NA	No	*NA	*NA	*NA

GM: General medicine, **GS**: General surgery, **Pdt:** Paediatrics, **Orth:** Orthopaedics, **Ophth:** Ophthalmology, **ENT:** Ear Nose & Throat, **Psy:** Psychiatry, **Act:** Accident and Trauma ward, **Phy**: Physiotherapy, **Bur**: Burn ward and **Dia**: Dialysis.

(Source: Information furnished by test checked units)
NA- not required as per IPHS norms, hence not available.
**NA- not required as per IPHS norms).*

As per the above table:

- Out of the 11 prescribed services for NGDH, Mapusa and SGDH, Margao three and four services were not available respectively.
- Out of the 11 prescribed services for SDH, Chicalim, 10 were not available.
- Out of the five prescribed services for CHCs, four were not available in CHC, Pernem and three were not available in CHC, Canacona.

The Secretary, Health in the exit meeting (February 2023) stated that corrective measures would be taken as per recommendations of Audit.

Recommendation 3: The State Government may ensure the availability of line services as per IPHS norms and strive to increase productivity of hospitals/health centres.

3.3.4 Availability of Maternity and Childcare services

Antenatal care (ANC) during foetal growth, Intra-Partum Care (IPC) for safe delivery and Post Natal Care (PNC) of the mother and the new-born especially during the critical 48 hours post-delivery are the major components of facility based maternity services. Details of Maternity and Childcare Services alongwith availability of beds in both North Goa and South Goa Districts are given in **Appendix 3.2**. Audit observed the following in the test-checked units under DHS.

3.3.4.1 Non-availability of Special Newborn Care Units (SNCU) and Newborn Stabilisation Unit (NBSU)

SNCU and NBSU are special newborn units to reduce fatality among sick children born within the hospital or outside, including home deliveries within first 28 days of life. As per IPHS norms, there should be a SNCU in DH and NBSU in SDH and CHC for providing 24 hours of service to the sick newborns. Further, side laboratory for Bilirubin testing was required for the SNCU. As per Maternal and Newborn Health (MNH) toolkit, four trained medical officers in sick newborn care are required in SNCU at DHs and one trained medical officer/ paediatrician is required in NBSU at SDHs and CHCs.

Audit observed the following in the test checked PHIs under DHS:

- The SNCU in NGDH, Mapusa had 10 beds against the requirement of 12 as per IPHS[3] norms.
- NBSU was not available in SDH, Chicalim and the two CHCs (CHCs, Pernem and Canacona) due to non-availability of full time paediatrician as per requirement.
- In NGDH, Mapusa, neither the side laboratory for testing Bilirubin near the SNCU was available nor 24x7 testing of Bilirubin was available in the diagnostic ward until May 2022.
- In NGDH, Mapusa, only two medical officers were posted against the requirement of four medical officers in SNCU. Further, these two medical officers were not trained in sick newborn care.

The Director, DHS (February 2023) cited shortage of manpower as the reason for non-availability of SNCU and NBSU in test-checked PHIs.

The reply is not tenable as the deficiencies identified by audit were not limited to manpower shortage alone and these remain un-addressed.

3.4 Gaps in Support Services

3.4.1 Diagnostic Services

NHP, 2017 recommends providing free diagnostic services in public hospitals for accessibility and financial protection of patients at secondary and tertiary care levels. Audit found shortage in services as per IPHS norms in test-checked PHIs as given in **Table 3.4** below:

Table 3.4: Non availability of Radiology Services in test-checked PHIs during May to July 2022

PHI	X-ray Services	Ultrasonography	Remarks
SDH, Chicalim	Available	Available	Available but not functional
CHC, Pernem	Available	Not Available	Radiologist not available
CHC, Canacona	Available	Not Available	

(Source: Information provided by test-checked PHIs)

[3] Annexure VI of IPHS 2012 for District Hospitals

The above CHCs cited shortage of manpower as the reason for non-availability of required Radiology services.

3.4.2 Dietary Services

IPHS prescribes that dietary service of a hospital is an important therapeutic tool. Normal, diabetic, semi-solid and liquid diet shall be available in hospitals. Quality and quantity of diet shall be checked on regular basis in secondary care.

Details of availability of dietary services in test-checked units is as given in **Table 3.5** below:

Table 3.5: Details of availability of dietary services in test-checked units as on 31 March 2022

Particulars	DH, Mapusa	SDH, Chicalim	CHC, Pernem	CHC, Canacona
Availability of dietary service in the hospital	Available	Available	Available	Available
Commercial Gas cylinders are used in kitchen[4]	Yes	No	No	No
Food supplied to the patients was patient specific.	Yes	Yes	No	Yes
Diet chart for patients was prepared	Yes	Yes	No	Yes

(Source: Information furnished by test checked units)

As per the above table:

- In three out of four PHIs, commercial gas cylinders were not being used.
- In one out of four PHIs, food supplied to the patients was not patient specific.
- In one out of four PHIs, diet chart for patients was not prepared.

3.4.3 Ambulance Services

As per the National Health Mission (NHM) guidelines, one Basic Life Support (BLS) ambulance for one lakh population and one Advance Life Support (ALS) ambulance for five lakh population should be available.

Details of availability of ambulance services in test-checked units as per IPHS norms is as given in **Table 3.6** below:

Table 3.6: Details of availability of ambulance services in test-checked units during May to July 2022

Name of the Hospital/health centre	Ambulances available	
	ALS	BLS
NGDH, Mapusa	0	2
SDH, Chicalim	0	2
CHC, Pernem	1[5]	2
CHC, Canacona	1	4[6]

(Source: Information furnished by test-checked units)

[4] Contravention of the provisions the Liquified petroleum Gas (Regulation of supply and Distribution) order 2000 read with the provision of the LPG marketing Discipline Guideline 2001.

[5] Out of order since June 2021.

[6] One out of four was out of order.

Audit noticed the following regarding the functioning of the ambulances in the test-checked units.

- In NGDH, Mapusa and SDH Chicalim, technician for operating BLS ambulance was not deployed.
- In CHC, Pernem, one ALS ambulance was available but was not functional since August 2020. In CHC, Canacona, BLS Ambulance was used for office purposes and for carrying dietary items.

Apart from the above, the State operates Emergency Medical Services (108-Ambulance Service) in Public Private Partnership (PPP) mode.

Operationalisation of 108 services for management of emergency response services

The Government of Goa entered into an MoU with GVK EMRI in 2008 to manage the emergency response services in the State. The year wise availability of 108 Ambulances in Goa for the years 2016-22 is shown in **Table 3.7** below:

Table 3.7: Availability of 108 services during 2016-22

Type of service	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22
108 ALS Ambulances	15	25	37	39	39	41
108 BLS Ambulances	17	11	3	5	5	2
Neo natal Ambulances	2	2	2	2	2	2
Cardiac Care Ambulances	0	5	5	5	5	5
Bike Ambulances	0	20	32	35	35	35
Drop Back Van	4	4	4	4	4	1
Hearse Van	0	0	0	10	10	6
Total	**38**	**67**	**83**	**100**	**100**	**92**

(Source: Information furnished by DHS)

Population wise requirement of ALS and BLS ambulances and availability of the same in the State is shown in **Table 3.8** below:

Table 3.8: Availability of ALS and BLS ambulance against NHM norms

Year	Projected population[7] of the State	No. of ALS ambulances required as per NHM	No. of BLS ambulances required as per NHM	No of ALS ambulances available	No of BLS ambulances	Shortage (-) / excess of BLS	Excess of ALS
2016-17	1521000	3	15	15	17	2	12
2017-18	1531000	3	15	25	11	(-)4	22
2018-19	1540000	3	15	37	3	(-)12	34
2019-20	1549000	3	15	39	5	(-)10	36
2020-21	1559000	3	16	39	5	(-)11	36
2021-22	1567000	3	16	41	2	(-)14	38

(Source: Information furnished by DHS)

[7] As per projected population as on 1st March 2017 to 2022 for Goa *i.e.,* given by National Commission on Population by MoHFW in the Report of the Technical Group on Population projections.

From the table above, considering the total number of BLS and ALS ambulances, more than adequate number of ambulances as per NHM were available in the State.

Further, as per the MoU of 2008, Emergency Management and Research Institute (EMRI) was to achieve an average response time of 35 minutes in rural areas and 25 minutes in urban areas. The MoU was subsequently renewed (January 2019) and the average response was modified as equal to or less than 20 minutes in urban areas and 30 minutes in rural areas. It was observed that the average response time during 2017-22 ranged between 11.00 minutes and 16.27 minutes[8], which was within the timelines as per the MoU.

Further, the distribution of cases *vis-à-vis* response time is detailed in **Table 3.9** below:

Table 3.9 - Response time of 108 Ambulances during 2017-22

Sl. No.	Response time range (in minutes)	No. of cases	*Percentage of cases*
1	0-15	183009	*72.76*
2	15-30	55632	*22.12*
3	30-60	11465	*4.56*
4	60-120	1230	*0.49*
5	120-240	172	*0.07*
6	240-360	0	*0*
7	More than 360	0	*0*
	Total Cases	**251508**	

(Source: Information furnished by DHS)

As per above, in 94.88 *per cent* of the cases, the response time of 108 ambulances was less than or equal to 30 minutes[9].

Recommendation 4: The State Government may address the gaps in availability of diagnostics, maternity and dietary services in PHIs as per IPHS norms.

3.5 Gaps in Auxiliary services in GMCH and test-checked units under DHS

3.5.1 Public Safety and Disaster Management

Hospitals can be prepared for disasters by increasing their resilience and reducing their vulnerability by strengthening both structural and operational aspects of the hospital, such that they achieve a reasonable degree of safety.

[8] Annual average response time during 2017, 2018, 2019, 2020, 2021 and 2022 was 12.46, 11.07, 11.00, 13.45, 15.00 and 16.27 minutes respectively.

[9] DHS informed that bifurcation of urban and rural cases is not available in the system.

Therefore, preparing for expected and unexpected threats in advance is the best way to ensure that damages are as minimal as possible.

(a) ***Part of Academic block in GMCH in dilapidated condition:***

During Joint Inspection (July 2022) of the Academic Block, Audit noticed that exterior wall and windows of the East and West side of the academic block were badly damaged and in precarious condition.

The Dean, GMCH accepted the audit observation and stated (February 2023) that new lecture halls for students and academic block was constructed and shifted to the new block. Further, it was also stated (October 2023) that the part of the Academic Block in dilapidated condition was left unused and the rest of the building was stable as per the report submitted by Goa College of Engineering.

	
Photo No 3.1: East side of Academic Block	*Photo No.3.2: West side of Academic Block*

(b) ***Fire Fighting Services:***

IPHS prescribes that building structure and internal structure of hospital should be equipped with fire protection measures. Further, in every hospital, firefighting equipment such as fire extinguishers, sand buckets, *etc*., should be available and maintained for use in case of an incident. During joint inspection (May 2022 to December 2022) with departmental authorities, following were noticed by Audit in the test-checked units:

- In NGDH, Mapusa, fire pumps were non-functional, and the fire pump room located in the basement floor was found fully flooded with water due to leakage in the Water Tank. External hose boxes were in dilapidated condition. Fire alarm panel was found non-functional. Wall mounted illuminated signages with battery backup were found to be non-functional. Portable fire extinguishers were not in operable range.
- In CHC, Canacona, directional fire exit sign, emergency lighting, manually operated electric fire alarm system, first aid firefighting extinguishers and hose reel were not available.
- In SDH, Chicalim, fire safety alarm panel was not found to be installed.
- In TB Hospital, Margao, firefighting equipment was not installed.

3.5.2 Hospital Infection Control

Kayakalp guidelines issued by MoH&FW, GoI stipulate the constitution of Hospital Infection Control Committee (HICC) in public healthcare facilities which should meet at least once in a month[10] and review the progress made for meeting the criteria for cleanliness and infection control.

Out of the required 72 meetings to be held during 2016-22 of the HICC, only 14, one and 50 meetings were held in NGDH, Mapusa, SDH, Chicalim and CHC, Canacona respectively. CHC, Pernem did not furnish any data in this regard.

No reply in this regard was furnished by the Department.

3.5.3 Citizen's Charter

National Health Mission Assessors' Guidebook and IPHS prescribe the requirement to display the Citizen's Charter at a suitable place in the hospital so that the patients are aware of their rights.

During joint inspection (June 2022) at GMCH, it was found that citizen's charter was not displayed in the hospital premises.

Citizen's charter was displayed in all other test-checked PHIs; however, it was written in English and not in the local language (Konkani) and did not specify information such as responsibilities of the users and information about services available to BPL patients.

After being pointed out by the Audit, the Citizen's Charter has been displayed in GMCH premises (October 2023).

Recommendation 5: The State Government may make efforts to address deficiencies in auxiliary services in PHIs as per norms.

[10] For 2016-22 required number of meetings was 12 X 6 = 72

Chapter IV
Availability of Drugs, Medicines, Equipment and Other Consumables

Chapter 4 – Availability of Drugs, Medicines, Equipment and Other Consumables

The State neither framed a procurement policy nor set up a Centralised Procurement Body for procurement and distribution of drugs, consumables and equipment. Procurement of drugs and equipment by Public Health Institutions (PHIs) in the State was fraught with inadequate quality controls and delays.

In 10 to 83 per cent of prescriptions in the test-checked PHIs under Directorate of Health Services (DHS) and in Goa Medical College and Hospital (GMCH) during May to July 2022, all the prescribed drugs were not available. Forty three to 76 per cent of the drugs required as per Indian Public Health Standards (IPHS) norms were not available in the test-checked PHIs under DHS during 2020-21.

There were delays in finalisation of tenders in GMCH and DHS, which affected the availability of drugs, consumables and equipment in PHIs. Gaps in availability of equipment required at GMCH as per National Medical Commission (NMC) norms and in test-checked PHIs under DHS as per IPHS norms were noticed.

Lack of policy or mechanism for testing of each batch of drugs received from the suppliers by DHS and GMCH led to drugs being distributed without testing, exposing patients to health risks. Gaps in availability of infrastructure as per norms for storage of drugs at GMCH and in test-checked hospitals under DHS were noticed.

4.1 Procurement of drugs, equipment and consumables

As per the National Health Policy (NHP), 2017 (Para 17) a well-developed public procurement system is a pre-requisite for providing free drugs through the public sector. A procurement policy that ensures economic, efficient and timely procurement of all necessary drugs, surgical items, consumables and equipment of assured quality and their availability in all PHIs, is an integral part of such a system.

Further, the Free Drug Service Initiative (FDSI) guidelines, 2015 of Ministry of Health and Family Welfare (MoH&FW), GoI stipulate that in the States where autonomous bodies such as corporations have not been set up for centralised procurement of medicines, a Centralised Procurement Body must be set up at the State level to procure and distribute essential generic drugs and strengthen the process of quality control and to ensure uninterrupted availability of drugs. Further, the guidelines advocate use of IT enabled systems for real-time status of drugs and vaccines to help in better planning, execution and control on demand and supply at all the levels.

Audit observed that the State neither framed a Procurement Policy nor set up a Centralised Procurement Body for procurement and distribution of drugs, consumables and equipment. The procurement and distribution of drugs, consumables and equipment in the State were processed through tenders and local purchases separately by DHS[1] and GMCH[2]. Audit noticed that these procurements were fraught with inadequate quality controls and delays as discussed in succeeding paragraphs.

The Director, DHS stated (February 2023) that the process for formulation of Drug and Procurement Policy has been initiated.

Recommendation 6: The State Government may frame a comprehensive procurement policy for drugs, consumables and equipment in PHIs and consider setting up a Centralised Procurement Body, to ensure quality, timeliness, efficiency and economy in procurement.

4.2 Availability of drugs and medicines

4.2.1 Assessment of availability of medicines based on prescriptions

The NHP, 2017 (Para 3.3) recommends the provision of free drugs in all public hospitals to ensure access and financial protection to patients while seeking secondary and tertiary medical care.

Audit test-checked 224 prescription slips during May to July 2022 in the following five test-checked PHIs to ascertain the availability of free drugs and medicines prescribed to the Out-Patient Department (OPD) patients as detailed below in **Table 4.1**:

Table 4.1: Provision of free drugs to patients in hospitals and health centres as checked during May to July 2022

Name of test-checked units	No. of prescriptions checked	No. of prescriptions for which all prescribed drugs were available	*Per cent of prescriptions for which all prescribed drugs were available*
NGDH, Mapusa	35	6	*17.14*
SDH, Chicalim	34	16	*47.05*
CHC, Pernem	30	27	*90.00*
CHC, Canacona	30	24	*80.00*

[1] DHS procured drugs and consumables through tendering process. The Medical Stores Depot (MSD) wing in DHS assesses the requirement of drugs and consumables based on the demands received from peripheral hospitals/health centres and tenders are floated. Purchase Committee of DHS finalises the tender and the MSD wing issues supply orders. The drugs and consumables are then stored in the MSD. On receipt of indent from peripheral hospitals/health centres, MSD wing in DHS supplies the drugs and consumables.

[2] GMCH procured drugs, surgical items and consumables through tendering process and local purchases. The annual requirements are assessed by the Central Pharmacy and submitted to Drugs Purchase Committee (DPC) for approval. The tenders are called and finalised by the DPC. The purchase section issues supply orders as per the periodic indents placed by the Central Pharmacy of the GMCH.

Name of test-checked units	No. of prescriptions checked	No. of prescriptions for which all prescribed drugs were available	*Per cent of prescriptions for which all prescribed drugs were available*
GMCH	95	75	*78.95*
Total	**224**	**148**	***66.07***

(*Source: Patient Satisfaction Survey conducted by Audit in the test-checked units)*

As per the above table, it is seen that all the prescribed drugs were available in 66 *per cent* of the test-checked cases in five PHIs during May to July 2022. Non-availability of drugs ranged from 10 to 83 *per cent* in the test-checked PHIs under DHS and GMCH.

The Director, DHS stated (November 2023) that the department ensures timely supply and availability of maximum essential drugs, but it is the responsibility of the hospitals/centres to lift all the stock as per requirement from Medical Store Depot and to maintain adequate buffer stock of the same at their hospitals/centres.

The Dean, GMCH accepted the audit observation and stated (October 2023) that the observation was noted and that GMCH was trying to provide a 100 *per cent* free medicines to all patients under treatment there.

In regard to reply from DHS, the responsibility of ensuring availability of all medicines prescribed cannot be solely fixed on the hospitals. System may be put in place for monitoring the indents raised by hospitals and availability of drugs therein by DHS centrally for ensuring timely processing and delivery of drugs against the indents raised.

4.2.2 Availability of drugs and consumables at test-checked units under DHS

Test-check of availability of drugs and consumables for the year 2020-21 in the four test-checked units as per IPHS norms is detailed below in **Table 4.2:**

Table 4.2: Details of availability of drugs and consumables in test-checked hospitals/health centres during 2020-21

Particulars	NGDH, Mapusa	SDH, Chicalim	CHC, Pernem	CHC, Canacona
Number of drugs and consumables required as per IPHS norms	530	441	176	176
Number of drugs and consumables available	179	107	99	100
Number of drugs and consumables not available	***351***	***334***	***77***	***76***

(*Source: Information collected from test-checked hospitals/CHCs*)

As per the table above, during 2020-21:

- Sixty six *per cent* and Seventy six *per cent* of the required drugs and consumables were not available in test-checked NGDH, Mapusa and SDH, Chicalim respectively.

- In the two test-checked CHCs, 44 *per cent* and 43 *per cent* of the required drugs and consumables were not available.

No reply in this regard was furnished by the Department.

Recommendation 7: The State Government may ensure the availability of the full range of required drugs in all PHIs as well as the provision of free drugs to patients as envisaged in NHP.

4.3 Delays in procurement process

Audit observed delays in the processing of tenders for drugs, consumables and equipment by GMCH and DHS which are brought out in the succeeding paragraphs.

4.3.1 Delay in finalisation of tenders by DHS and GMCH

During 2016-22, DHS procured drugs and consumables amounting to ₹ 233.44 crore through tenders/limited tender/quotation. The tender process for 2018-19 was initiated in June 2017[3] and finalised in April 2018. The tender process for 2020-21 was initiated in March 2021 and finalised in September 2022. Thus, there were delays in finalisation of tenders for procurement of drugs and consumables by DHS leading to shortages in availability of medicines in test-checked PHIs.

In the case of GMCH, during 2016-22, out of the total procurement of ₹ 334.37 crore, 61.42 *per cent* procurement was through open tender/limited tender/quotations at discounted rates, while the rest was through local purchase. Audit observed undue delay in finalisation of tenders for procurement of drugs, medicines and consumables by GMCH. The process of tendering for medicines for the years 2016-17 and 2018-19 started in June 2016 and June 2018 respectively and were completed after more than one year[4] in August 2017 and in July 2019 respectively. During the period pending finalisation of tender, the requirement was met through extension of previous tender and local purchases.

[3] Tender for the year 2017-18 initiated by DHS in June 2017; Tender floated in September 2017 for 841 items; technical bid/financial bids opened in October 2017/December 2017 and the Government accorded A.A & E.S in April 2018 for ₹ 37.74 crore with tender validity up to April 2020.

[4] Tender for the year 2016-17 floated by GMCH in June 2016 at an estimated cost of ₹ 28.00 crore; Technical bid/financial bid opened in August 2016/ May 2017 and the Government accorded AA & ES in August 2017 for ₹ 16.73 crore with validity up to November 2018. Due to this delay, the requirements for the years 2017-18 were not assessed and tendered.
Tender for the year 2018-19 floated by GMCH in August 2018; technical bid/financial bid were opened in October 2018/February 2019 and the Government accorded AA & ES in July 2019 for ₹ 21.75 crore with validity up to April 2022. Due to this delay, the requirements for the years 2019-20 were not assessed and tendered.

The Dean, GMCH stated (October 2023) that the tendering process of medicines, drugs, chemicals and orthopaedic implants for the period 2023-24 to 2025-26 has been finalised within a period of less than eight months.

However, the fact remained that GMCH failed to finalise the tender before the expiry of the validity period of previous tender observed during the audit period.

The Director, DHS stated (November 2023) that the tendering process was delayed due to requirement of permissions from the Government at multiple levels.

The reply is not tenable because procurement of drugs, *etc*., are done by the department every year and there should have been proper planning to avoid such delays.

4.3.2 Delays in procurement of equipment

DHS procured 202 items of medical equipment valuing ₹ 24.08 crore and GMCH purchased 171 items valuing ₹ 52.70 crore during the period 2016-21[5]. Out of these, Audit test-checked the procurement process of 10 medical equipment worth ₹ 26.07 crore (detailed in **Appendix 4.1**) and observed the following:

- The process of procurement of equipment took nine months to over two years from the date of tendering to the date of installation.
- One equipment[6] required urgently took one year and seven months for procurement and installation.
- Similarly, in two other cases[7], around two years was taken for procurement and installation.

The Dean, GMCH in his reply stated (October 2023) that the delay in purchase of equipment was contingent on factors such as creation of civil infrastructure for installation of equipment, NIT approval from PHD and Finance Department and Expenditure Sanction from Finance Department.

The reply is not tenable as the process of procurement is a regular job for the department and the delay could have been avoided by proper planning.

4.3.3 Delay in supply of drugs, surgical items and consumables by the suppliers

As per tender condition issued by DHS for supply of drugs, surgical items and consumables, the suppliers were required to ensure delivery of the goods within a period of 30 days from the receipt of the supply order.

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5 DHS did not furnish data for 2016-17; GMCH did not furnish data for 2017-18.

6 Procurement of Operating Microscope for Department of Ophthalmology, GMCH.

7 For procurement of Lab scan 3D system, GMCH took two years and four months and for seven 'Multi-para monitors' for Department of Surgery, GMCH took one year and eight months for procurement.

DHS[8] issued 2,691 Purchase Orders (POs) during the period from October 2016 to March 2022 against which 7,925 batches of drugs were received. Only 2,041 out of 7,925 batches of medicines/drugs were received within the stipulated period of 30 days. For the remaining 5,884 batches, the medicines/drugs were received with delays ranging between 1 and 1,291 days.

The Director, DHS replied (November 2023) that the department does not allow large delays in supplies and that supplies are taken as per requirements/consumption and considering space availability.

This response of DHS is not acceptable as the delay in supply of medicines ranged up to 1,291 days which was way beyond the deadline of 30 days.

4.4 Quality Control

Free Diagnostics Service Initiative (FDSI) guidelines stipulate that random samples of each batch of drugs received from the supplier should be drawn for testing and sent to National Accreditation Board for Testing and Calibration Laboratories (NABL) accredited empanelled laboratories for analysis. The drug samples should be tested by the empanelled laboratories within a reasonable time frame of 30 days. Only batches which 'pass' the testing will get a 'release' confirmation for distribution to the patients. Audit findings related to quality control of drugs in PHIs in the State are discussed below.

4.4.1 Absence of quality control mechanism in drugs for PHIs for the State

The State did not have a policy or mechanism for quality control of drugs procured and supplied by either DHS or GMCH. Audit, however, noticed that Directorate of Food and Drugs Administration (FDA) was testing the samples of drugs from PHIs.

Audit observed that during the period 2016-22, FDA tested 316 samples (5.80 *per cent*) out of the 5,455 batches of drugs procured by DHS and 55 samples (0.16 *per cent*) out of the 35,281 batches procured by the GMCH. There was no system in GMCH to send any drug on its own to FDA for testing while DHS sent 65 samples on its own accord to FDA for testing.

Audit also noticed that out of the 371 samples collected from GMCH and DHS during the period 2016-22 by FDA, 17[9] drugs were found to be of 'Not of Standard Quality' (NOSQ). As FDA took 12 days to 78 days to intimate the test reports, by that time most of the sub-standard medicines were already issued to the patients.

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8 In GMCH, PO was manually issued through Purchase section and the batches of drugs received did not have PO number for matching. Hence the delays in supply of a PO could not be ascertained for GMCH.

9 16 pertained to DHS and one pertained to GMCH.

The Dean, GMCH in his reply stated (October 2023) that several measures have been taken to ensure quality control of the drugs and medicines, such as collecting batchwise analytical report from the manufacturer, collecting certificates from the State FDA regarding compliance of WHO Good Manufacturing Practice as laid down in the revised schedule of Drugs and Cosmetics Rules, 1945 and compliance of other relevant provisions of Drugs and Cosmetic Rules, 1945.

The Director, DHS in his reply stated (November 2023) that the DFDA tests random samples of drugs received as per their schedule for total analysis, the reports for which are received later. It was also stated that the matter may be further taken up with the Directorate of Food and Drug Administration, Bambolim.

The reply is not tenable as there is no policy framed for the quality control of drugs procured and supplied by GMCH and DHS. Further, it is to be stated that the percentage of drugs sent to FDA for tests were minimal.

Recommendation 8: The State Government may put in place an appropriate system for quality testing of drugs procured by GMCH and DHS through NABL certified laboratories as per FDSI guidelines.

4.5 Storage

FDSI guidelines issued by GoI and Assessors' Guidebook for Quality Assurance framed by MoH&FW stipulate the basic requirements to be adhered to for storage facilities of drugs and medicines. Storage space shall consist of cold storage (2-8 degree Celsius) and ambient storage (room temperature). The facility should ensure specified place to store medicines with labelled shelves/rack. Drugs are not to be stored on the floor or adjacent to a wall. ILR[10] and deep freezer should have functional temperature monitoring devices. There should be separate shelf/rack for storage of expired drugs.

Audit findings on aspects related to storage of drugs in test-checked PHIs are discussed in subsequent paragraphs.

4.5.1 Inadequate infrastructure for storage of drugs and medicines

i. Central Pharmacy (CP) and Drugs Distribution Counter (DDC) of GMCH:

During joint inspection (May 2022), Audit observed the following:

- Drug stores room was in a shabby condition with damp and soiled walls and drugs were kept on the floor.
- Drugs were also kept in corridor outside the stores room.

[10] Ice lined refrigerator.

- Insulin/vaccines in cold storage room of CP were kept on the floor stacked above one another.
- Only three out of five freezers of DDC displayed temperature and temperature chart was not maintained in both DDC and CP.
- Old records were kept in the stores room of CP along with flammable chemicals.

The Dean, GMCH in his reply (October 2023) agreed to the observation and ensured compliance in the future. It was also stated that necessary steps were already taken for ensuring proper storage of drugs and medicines in the hospital pharmacy such as clearing the area of DDC, informing Goa State Infrastructure Development Corporation (GSIDC) to carry out necessary repair work at Counter, providing pallets to keep medicines above the floor, *etc*.

However, no evidence of the action taken were furnished to Audit by the GMCH.

Photo 4.1: Damp interior wall of the DDC.

Photo 4.2: Drugs in the corridor of CP.

ii. Medical Stores Depot, Ponda under DHS:

During joint inspection (August 2022), Audit observed the following:

- Drugs were kept outside the stores room in the corridor in Sub-district hospital, Ponda.
- Drug stores room was in a shabby condition with damp walls.
- Six-drums of 200 litres capacity of Methylated spirit, a highly inflammable spirit was kept along with drugs in the stores room.

Photo 4.3: Drugs stored adjacent to damp walls.

Photo 4.4: Methylated spirit kept along with drugs in the same room.

iii. Stores room and pharmacy of four test-checked hospitals of DHS:

During joint inspection (June/July 2022), Audit observed the following:

- Drugs were stored in damp and soiled rooms in CHCs, Pernem and Canacona.
- No proper labelling was done to identify storage area of drugs in CHCs, Pernem and Canacona.

Photos 4.5 and 4.6: Medicine boxes dumped on floor in CHC, Pernem

Photo No.4.7 and Photo 4.8: Medicines boxes dumped on floor, soiled walls in drugs stores room. (CHC, Canacona)

The Director, DHS, while agreeing to the observations, in his reply stated (November 2023) that the Directorate was in the process of selecting a suitable premise for setting up the store keeping in mind all the audit observations.

Recommendation 9: The State Government may ensure that infrastructure facilities for storage of drugs and medicines in PHIs are compliant with FDSI guidelines and Assessors' Guidebook for Quality Assurance.

4.6 Medical Equipment

Medical equipment are procured by GMCH for concerned departments on the basis of requests received from the departments through tender process after obtaining requisite approvals from the Government. Similar procurements are done by DHS for its peripheral hospitals based on the requests received from these hospitals.

4.6.1 Non-availability of Equipment as per NMC standards in GMCH

NMC norms provide for the minimum requirement of equipment in departments of Medical College and Hospital for efficient functioning. Audit scrutiny of the availability of equipment in eight departments in GMCH revealed significant shortfall of equipment in GMCH as shown in **Table 4.3.**

Table 4.3: Details of non-availability of equipment in clinical departments of GMCH during May to July 2022

Name of Department	Type of equipment required as per NMC norms	Equipment available as per quantity specified in NMC norms	Equipment available but with shortfall in quantity specified in NMC norms	Equipment not available
Ophthalmology	39	22	08	09
Orthopaedic	25	17	05	03
Surgery	42	30	07	05
Otorhinolaryngology	179	124	27	28
Dermatology	08	06	00	02
Obst. and Gynaecology	97	68	12	17
Medicine	53	28	09	16
Anaesthesiology	51	20	08	23
Total	**494**	**315**	**76**	**103**

(Source: Information furnished by GMCH.)

As per the above table, out of 494 types of equipment required as per NMC norms, only 315 were available in full quantity, 76 were available with shortfall in the required quantity and 103 equipment were not available.

The Dean, GMCH stated (October 2023) that the necessary equipment as per NMC norms have been installed in multiple departments.

The reply is not tenable as specific department wise availability of equipment have not been furnished.

4.6.2 Non-availability of equipment against IPHS norms in test-checked PHIs under DHS

IPHS prescribes for equipment to be available at the level of hospitals and health centres. Shortages in equipment impact the clinical efficiency and compromise the level of care offered to patients in these PHIs.

Audit test-checked availability of equipment in the four test-checked PHIs. Result of test-check are shown below in **Table 4.4.**

Table 4.4: Details of availability of Equipment in test-checked PHIs during March to July 2022

Name of facility	Particular	Imaging	Cardio-pulmonary	Labor and Neo-natal	Laboratory	ENT	Ophthalmology	Endoscopy	OT
NGDH, Mapusa	Required	6	15	65	53	20	24	7	24
	Available	6	9	51	50	19	22	2	11
	Not Available	0	6	14	03	01	02	5	13
	Percentage available	***100***	***60***	***78.46***	***94.34***	***95***	***91.67***	***28.57***	***45.83***
SDH, Chicalim	Required	5	12	20	33	22	9	6	23
	Available	2	09	16	14	03	5	0	09
	Not Available	3	03	04	19	19	4	6	14
	Percentage available	***40***	***75***	***80***	***42.42***	***13.64***	***55.56***	***0***	***39.13***
CHC, Pernem	Required	9	NA	45	10	NA	NA	NA	11
	Available	8	NA	42	8	NA	NA	NA	11
	Not Available	1	NA	3	2	NA	NA	NA	0
	Percentage available	***88.89***	***NA***	***93.33***	***80***	***NA***	***NA***	***NA***	***100***
CHC, Canacona	Required	9	NA	45	10	NA	NA	NA	11
	Available	9	NA	43	10	NA	NA	NA	11
	Not Available	0	NA	2	0	NA	NA	NA	0
	Percentage available	***100***	***NA***	***95.56***	***100***	***NA***	***NA***	***NA***	***100***

(Source: Information provided by test checked PHIs)
(NA: Not Applicable)

As per the table above, availability of essential equipment as per IPHS norms was 28.57 to 100 *per cent* in NGDH, Mapusa and zero to 80 *per cent* in SDH, Chicalim. In the selected CHCs, it was 80 to 100 *per cent*.

The Director, DHS replied (November 2023) that equipment/machinery are ordered only against indents received from hospitals/centres under DHS.

The reply is not tenable as the availability of equipment should be as per IPHS norms.

Chapter V
Healthcare Infrastructure

Chapter 5 - Healthcare Infrastructure

There was a shortfall of 71 Sub-Centres (24 *per cent*), 20 Primary Health Centres (42 *per cent)* and 6 Community Health Centres (50 *per cent)* in the State *vis-à-vis* Indian Public Health Standards (IPHS) norms. There were inordinate delays in setting up the Tertiary Care Cancer Centre and up-gradation of Trauma Care Facility in Goa Medical College and Hospital (GMCH).

There were gaps in the availability of infrastructure in GMCH against National Medical Commission (NMC) norms and in test-checked Public Health Institutions (PHIs) under Directorate of Health Services (DHS) *vis-à-vis* IPHS norms. Instances of dilapidated buildings were also noticed in test-checked PHIs, with impact on healthcare services.

5.1 Healthcare Infrastructure

Infrastructure is a key pillar for promoting improved standards of care and wellbeing for all patients, together with a positive experience of the healthcare system.

The National Health Policy (NHP), 2017 (Para 3.3) states that the public healthcare system must retain a certain excess capacity in terms of health infrastructure for effectively handling medical disaster and health security. It also recommends (Para 3.3.4) closing the infrastructure gaps for improvement in quality of care by aiming for measurable improvements in quality of care in districts and blocks which have wider gaps for development of infrastructure.

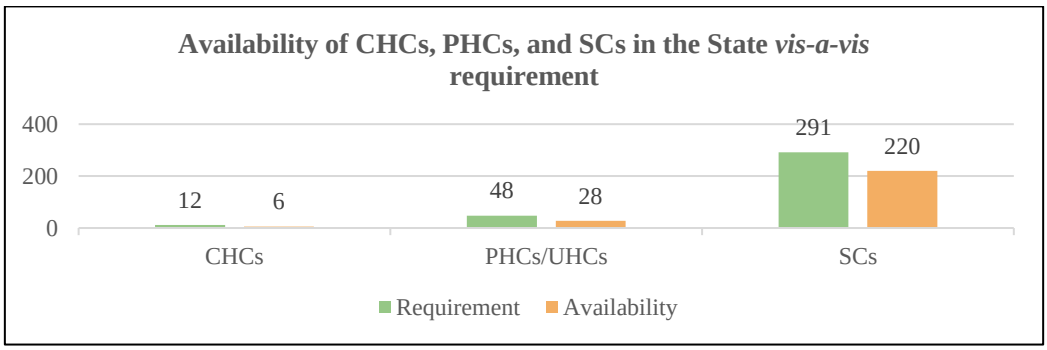
5.2 Availability of health infrastructure in the State

Audit findings on the availability and management of healthcare infrastructure in the State are discussed in the succeeding paragraphs.

5.2.1 Gaps in establishment of SCs, PHCs and CHCs against IPHS norms

IPHS, 2012 stipulates the establishment of Public Health Institutions as per population norms. As per IPHS norms, there should be a CHC for a population of 1.20 lakh, a PHC for a population of 30,000 and Sub-Centre for a population of 5,000. The population of Goa as per Census of India 2011 was 14.59 lakh. There was shortage of Community Health Centres (CHCs), Primary Health Centres (PHCs)/Urban Health Centres (UHCs) and Sub-Centres (SCs) against IPHS norms in the State as on 31 March 2023 as shown in **Chart 5.1.**

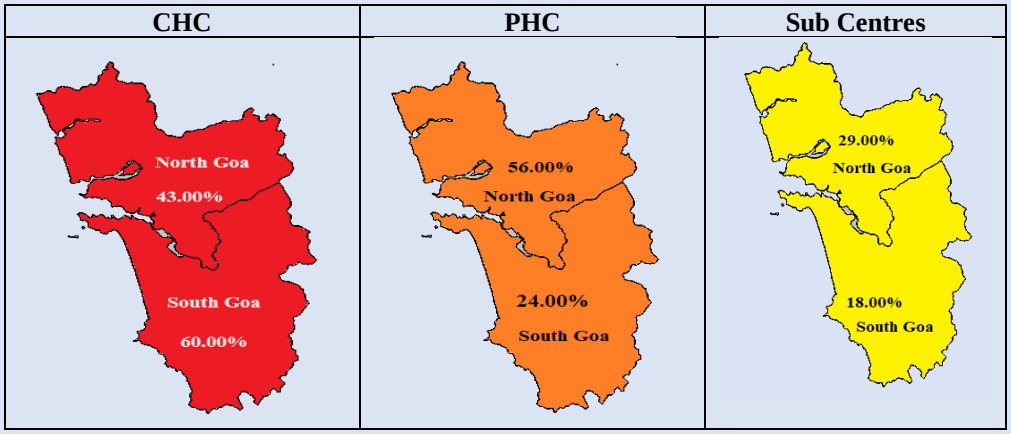
Chart 5.1: Shortfall in Health Centres in the State as on 31 March 2023



(*Source: Figures of health centres provided by DHS*)

There was 50 *per cent* shortage of CHCs, 42 *per cent* shortage of PHCs/UHCs and 24.40 *per cent* shortage of SCs in the State.

Figure 5.1: District wise shortage of CHCs, PHCs, and SCs of North and South Goa districts



(Source: Information provided by Directorate of Health Services)

The Director, DHS stated (February 2023) that necessary proposal will be worked out to address the short falls of SCs, PHCs and seven CHCs as per IPHS norms.

Recommendation 10: The State Government may ensure the availability of healthcare centres as per IPHS norms, by addressing the shortfall in the number of CHCs, PHCs and SCs in the State.

5.2.2 Delay in execution of projects

The State proposed and initiated projects in collaboration with GoI for creation of specialised health infrastructure in the State. Audit noticed delays in execution of healthcare infrastructure as follows:

- ***Delay in construction of Tertiary Care Cancer Centre***

The Ministry of Health and Family Welfare (MoH&FW), GoI launched (December 2013) a scheme to provide financial assistance for strengthening of Tertiary Care Cancer Centre (TCCC) facilities under the National Programme for Prevention and Control of Cancer, Diabetes, Cardiovascular Diseases and Stroke

(NPCDCS), with a view to develop tertiary care capacities for cancer in all States and to provide universal access for comprehensive cancer care.

The State sent a proposal (February 2014) to MoH&FW for setting up a TCCC in GMCH. MoH&FW approved the proposal[1] in July 2017 and released grant-in-aid of ₹ 20.25 crore during 2017-19. Originally, the target for completion was set for March 2019 and subsequently extended to March 2020. In the meantime, the Government decided to enhance the project scope and Hospital Services Consultancy Corporation India Ltd. (HSCC) was awarded (October 2018) the consultancy for setting up the TCCC facility in GMCH. The HSCC submitted a Detailed Project Report (DPR) at a total cost of ₹ 247 crore (including consultancy charges) in May 2019, which was approved by the Expenditure Finance Committee (EFC) in April 2021. The HSCC floated tender in May 2021 and GMCH approved Technical bids in July 2021 and forwarded (November 2021) the financial bids of technically qualified bidders to PHD for approval. However, the work was sanctioned in November 2022, but was yet to be awarded (October 2023).

Thus, even after a lapse of more than nine years from the launch (2013) of the scheme and also more than six years from the approval (2017) of proposal by MoH&FW, GoI with receipt of Central share of funds, the work of setting up of TCCC facility is yet to commence in Goa due to delays on the part of GMCH and the State Government.

The Dean, GMCH in his reply stated (October 2023) that the TCCC was a Central project and initially the State Government was awarded only the Radiation Oncology unit with a total cost of ₹ 45.00 crores in the ratio 40:60. Thereafter, the State Government of Goa revived the project and proposed a separate 200 bedded State Cancer Institute for a total cost of ₹ 256 crore. Due to the change in scope of work, there was a delay in construction of the centre.

The fact remains (March 2024) that the project was supposed to be completed by March 2020, but the TCCC could not be established even after a lapse of more than six years from the approval of the proposal by GoI (July 2017).

- ***Delay in up-gradation of Trauma Care Facility***

The MoH&FW, GoI launched the scheme "Capacity Building for developing Trauma Care Facilities on National Highways" during the 11th Five Year Plan (2007-12) with a 100 *per cent* Central Grant-in-aid. The objective of the scheme was to bring down preventable deaths because of road accidents to 10 *per cent* by developing a Pan-India trauma care network in which no trauma victim has to be transported for more than 50 kilometres (km) and a designated trauma centre is available every 100 km.

[1] After being intimated by MoH&FW of deficiencies in their proposal in May 2014 the State submitted the revised proposal in July 2017 with a delay of more than 3 years.

The proposal for up-gradation of Trauma Care Facility (TCF) in GMCH was approved (March 2017) by the MoH&FW and the 1st instalment of ₹ 8.40 crore was released (March 2018). However, even after lapse of more than four years from the receipt of 1st instalment of Grant-in-aid, the State did not transfer the amount to GMCH as revealed from the records and consequently, the process for up-gradation of trauma care facility has not commenced.

The Dean, GMCH stated (October 2023) that the trauma care facilities were already commissioned in 2016-17 with three operation theatres, 20 dedicated trauma beds and a trauma ward with High Dependency Bed (HDB).

The reply furnished by the GMCH is not tenable because the funds were released for the up-gradation of Trauma Care Centre. However, Trauma Care Centre was not upgraded, and the funds remained unutilised with the GoG. Further, this non-utilisation of the grant deprived GMCH of subsequent installments from the Central Government.

Recommendation 11: The State Government may take measures for improved planning and preparation of public health infrastructure projects and ensure that they are executed expeditiously.

5.3 Status of Infrastructure in PHIs in the State

To deliver quality health services in the public health facilities, adequate and properly maintained infrastructure in PHIs is of critical importance.

Gaps in availability of infrastructure in GMCH as per NMC and in PHIs under DHS as per IPHS norms are shown below:

5.3.1 Infrastructural gaps in GMCH against NMC norms

Insufficient infrastructure in test-checked 27 (out of 45) wards:

- Clinical demonstration rooms were not available in 15 wards (56 *per cent*).
- Examination and treatment rooms were not available in four wards (15 *per cent*).
- Resident doctors and student duty room were not available in two wards (11 *per cent*).
- Stores room for linen and other equipment were not available in four wards (15 *per cent*).
- Only 34 (14.2 *per cent*) out of 240 beds in Surgery and Orthopedic departments had oxygen line against requirement for all beds.
- In Ophthalmology department, oxygen lines were provided to only four beds against requirement of at least five beds.

Insufficient infrastructure in Operation Theatres (OT):

- GMCH functions with two OTs (with 6 Tables each). In both, only one post-operative recovery bed for each OT table, was provided against the requirement of two beds as per NMC norms.

The Dean, GMCH agreed to the observation regarding oxygen line and stated (October 2023) that the work of connecting supply line of oxygen in Orthopaedic, Ophthalmology and Surgery wards was allotted to Goa State Infrastructure Development Corporation (GSIDC) and the work was under progress.

Further, the Dean also stated that in the Super-Speciality Block, the facility in OT, wards, beds and student gallery has been constructed as per NMC norms.

Reply of the Dean is silent about insufficient infrastructure in test-checked wards in the old building.

5.3.2 Infrastructural gaps in PHIs under DHS

5.3.2.1 PHCs and SCs in dilapidated condition

IPHS stipulates that PHCs and SCs should have a building of their own with clean surroundings. The area chosen should have facilities for electricity, all weather road communication, adequate water supply and telephone. The entrance to the SC should be well lit and easy to locate.

Test-check of four PHCs (June/July 2022) revealed that one (PHC, Chimbel) was functioning in a rented building and three (Veling, Siolim and Colva) out of 10 SCs were functioning in rented buildings. Some of these PHCs/SCs were in dilapidated conditions with unclean /water-logged surroundings as shown below:

Photo No 5.1: Dilapidated PHC, Chimbel

Photo No 5.2: Water seepage inside the building of PHC, Chimbel

Photo No 5.3: Dilapidated Sub-centre, Colva

Photo No 5.4: Water-logged Sub-centre, Siolim

The Director, DHS stated (November 2023) that the PHC, Chimbel was shifted to new premises in April 2023. However, the reply is silent on other centres pointed out by Audit.

5.3.2.2 Non-availability of Operation Theatre Services

IPHS norms provide that DHs should have minimum three[2] Operation Theatres (OTs), SDHs should have minimum two OTs[3] and CHCs should have minimum one OT[4] equipped with all instruments and facilities like preparation room, pre-operative and post-operative resting rooms.

In three (Sub-district Hospital, Chicalim, CHC, Pernem and CHC Canacona) out of four test-checked hospitals/health centres, despite the availability of OT room and equipment, the OT was not functional.

During joint inspection (May 2022), Audit observed that CHC, Pernem utilised the OT room for storing drugs and other items. Photographs taken during the inspection are shown below:

Photo No.5.5 and 5.6: Operation Theatre in CHC, Pernem used as store room

CHCs stated (August 2022) that non-deployment of surgeon and anaesthetist were the reasons for non-functional OTs.

The Deputy Director, DHS stated (February 2023) in the exit meeting that ICU and OT was functional in SDH, Chicalim.

However, the OT was made operational in July 2022 after the issue of non-operational OT was brought to the notice of the Department by Audit.

5.3.2.3 Non-availability of Intensive Care Unit (ICU) Services

IPHS prescribes the availability of ICU services in DH. ICU is an essential service for critically ill-patients requiring highly skilled life-saving medical aid and nursing care. Audit scrutiny revealed that despite the availability of

[2] Three OTs in DH: Elective OT, Emergency OT/Family Welfare (FW) OT and Ophthalmology/ENT OT.
[3] Two OTs in SDH: Elective OT and Emergency OT/Family Welfare (FW) OT.
[4] One OT: Operation Theatre.

equipment[5], ICU was non-functional in North Goa District Hospital, Mapusa (NGDH).

Photo No.5.7 and 5.8 Non-functional ICU with beds in NGDH, Mapusa

NGDH, Mapusa replied (September 2022) that the ICU could not be made operational for want of trained staff.

However, no evidence of any action taken were furnished to Audit by the NGDH, Mapusa.

Thus, gaps in availability of infrastructure in PHIs *vis-à-vis* IPHS/NMC norms, including instances of dilapidated buildings, impacted the healthcare services in the State. Further, as Goa sees heavy tourist footfall[6], there is a risk that these infrastructure gaps could have aggravated impact.

Recommendation 12: Infrastructural gaps in PHIs may be addressed on priority by the State Government by making adequate budgetary provisions and ensuring their effective utilisation. Specifically, urgent action may be taken regarding PHIs functioning in dilapidated buildings.

[5] Ventilator, O2 therapy devices, suction infusion pumps and eight beds since the inception of the hospital.

[6] The population of Goa as per Census of India 2011 was 14.59 lakh. Tourist arrival statistics as per Dept. of Tourism: 77.86 lakh (2017), 80.15 lakh (2018) and 80.64 lakh (2019).

Chapter VI
Financial Management

Chapter 6 – Financial Management

The State allocated only 19.94 per cent of its total health care allocation to primary health care as against 66 per cent envisaged in the National Health Policy (NHP) to reduce morbidity/mortality at lower costs and to reduce the burden for secondary and tertiary care. The State could utilise only 26 to 41 per cent of total capital allocation during 2016-22 for creation of health infrastructure in the State.

Delays in transfer of funds were observed for Centrally Sponsored Schemes (CSS) to implementing agencies by the State Government, affecting their timely utilisation.

6.1 Introduction

Health is a State subject in India. Strategic planning and commensurate resource allocation by the State Government plays a crucial role in shaping and strengthening the State's health systems. Government spending on healthcare impacts how much protection citizens get against financial hardships due to Out of Pocket Expenditure (OOPE) for healthcare. The NHP, 2017 recommends increase in health expenditure by the Government as a percentage of GDP to 2.5 *per cent*.

Audit findings with regard to resource allocation and expenditure towards health sector in the State are discussed in this chapter.

6.2 Allocation of resources to health sector

Adequacy and timely availability of funds is a fundamental pre-requisite for the delivery of efficient health care services. Audit scrutiny of the health sector allocations and expenditure of the State revealed the following:

6.2.1 Health sector allocations and expenditure

The State Government makes budgetary allocations for the functioning of primary, secondary and tertiary level healthcare facilities in the State. The budget of PHD comprises allocations to seven horizontal departments[1] with separate demands for grants. Budgetary allocations and utilisation by the State and PHD during the period 2016-22 is detailed below in **Table 6.1.** The comparison of budget allocation, expenditure and percentage of savings is given in **Chart 6.1.**

[1] The budget allocation under PHD under the major head (2210 & 2211/4210) comprises seven separate Demand for grants viz. Goa Medical College and Hospital (Demand No.47), Directorate of Health Services (Demand No.48), Institute of Psychiatry and Human Behaviour (Demand No.49), Goa College of Pharmacy (Demand No.50), Goa Dental College (Demand No.51), Labour Department (Demand No.52) and Food and Drug Administration (Demand No. 53).

Table 6.1: Allocation and utilisation of State Government funds during 2016-22

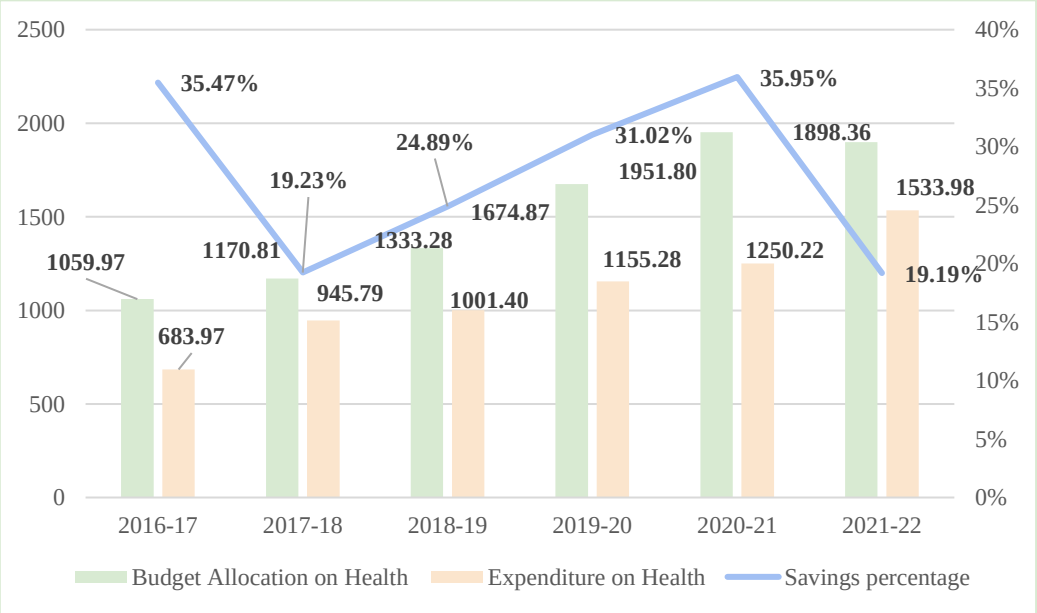
(₹ *in crore*)

Particulars	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	Total
Overall Budget Allocation of State	15899.61	18244.66	19024.43	21557.25	22147.69	26745.90	**123619.50**
Overall Expenditure in State	12848.37	14718.23	16728.80	15525.88	18043.93	19654.20	**97519.41**
Budget Allocation on Health	1059.97	1170.81	1333.28	1674.87	1951.80	1898.36	**9089.09**
Expenditure on Health	683.97	945.68	1001.40	1155.28	1250.22	1533.98	**6570.53**
Savings *w.r.t* Budget Allocation	376	225.14	331.88	519.60	701.58	364.38	**2518.58**
Percentage of Savings *w.r.t* Budget Allocation	35.47	19.23	24.89	31.02	35.95	19.19	27.71
Percentage of Health Sector Budget outlay against State Budget	6.67	6.42	7.01	7.77	8.81	7.10	7.35
Percentage of Expenditure on Health to Total Expenditure	5.32	6.43	5.99	7.44	6.93	7.80	6.74

(Source: Detailed Appropriation Accounts of the State)

Chart 6.1: Budget allocation, expenditure and percentage of savings in Health Sector

(₹ *in crore*)



(Source: Detailed Appropriation Accounts of the State)

As per the above table and chart, against the total budget allocation of ₹ 9,089.09 crore during the period 2016-22, the PHD could utilise ₹ 6,570.53 crore (72.29 *per cent*) only with savings of ₹ 2,518.58 crore. As already discussed in Para 1.4.1, the health expenditure as a percentage of the

State GDP ranged between 1.09 and 1.72 *per cent* during the period 2016-22.

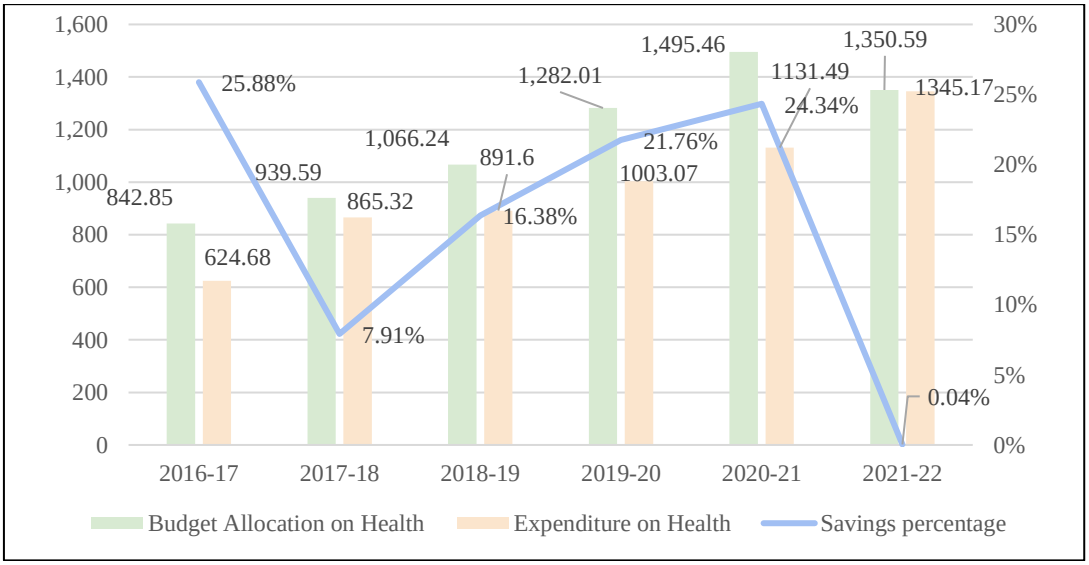
6.2.2 Revenue and Capital expenditure trends in health sector

Out of the total expenditure of ₹ 6,570.53 crore during the period 2016-22, revenue expenditure was ₹ 5,861.33 crore (89.21 *per cent*) while capital expenditure was ₹ 709.20 crore (10.79 *per cent*).

- **Revenue expenditure in healthcare:** Savings under revenue head of healthcare sector ranged between 0.04 and 25.88 *per cent* during 2016-17 to 2021-22 as shown in **Chart 6.2:**

Chart 6.2: Budget Allocation, Expenditure and Savings under Revenue head during 2016-22

(₹ *in crore*)



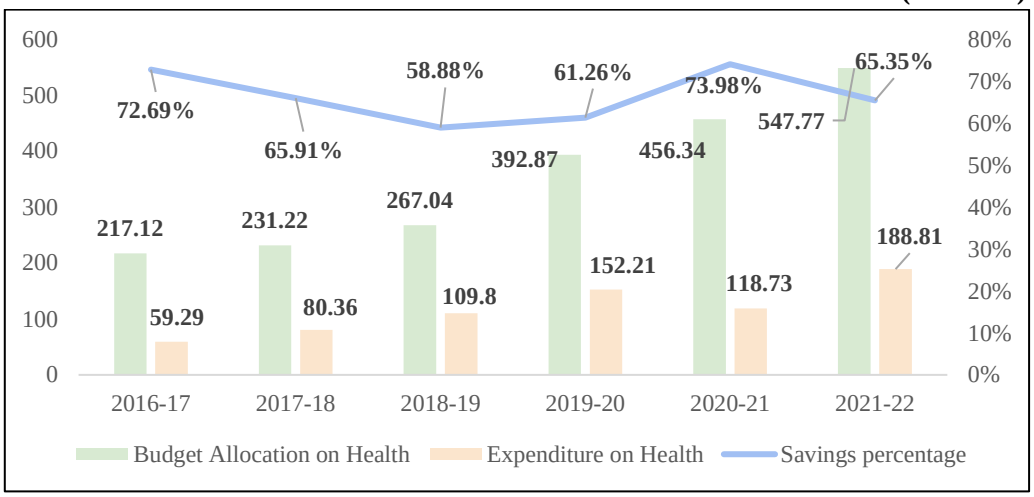
(Source: Detailed Appropriation Accounts of the State)

There was a total saving of ₹ 1,115.41 crore (15.99 *per cent*) during 2016-17 to 2021-22 under revenue heads of healthcare sector in the State.

- **Capital expenditure in healthcare**: Savings under capital head of healthcare sector ranged between 59 and 74 *per cent* during 2016-17 to 2021-22 as shown in **Chart 6.3:**

Chart 6.3: Budget allocation, expenditure and savings under Capital head during 2016-22

(₹ *in crore*)



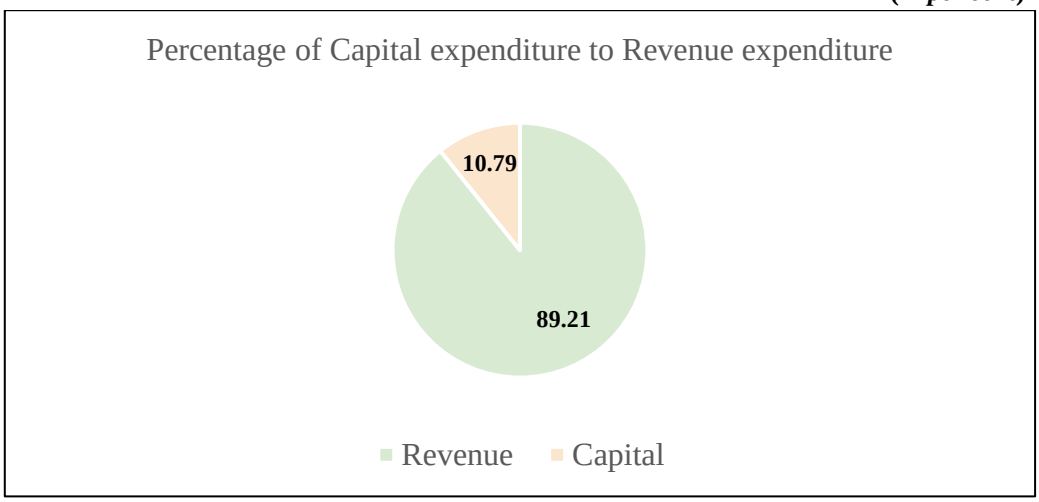
(Source: Detailed Appropriation Accounts of the State)

There was a total saving of ₹ 1403.16 crore (66.43 *per cent*) during 2016-17 to 2021-22 under capital expenditure of healthcare sector in the State.

- **Capital Expenditure *vis-à-vis* Revenue Expenditure:** As against the total expenditure of ₹ 6570.53 crore incurred during 2016-17 to 2021-22, ₹ 5861.33 crore (89.21 *per cent*) was incurred on revenue expenditure and ₹ 709.20 crore (10.79 *per cent*) was incurred on capital expenditure as shown in **Chart 6.4:**

Chart 6.4: Capital Expenditure *vis-à-vis* Revenue Expenditure

(*in per cent*)



(*Source: Detailed Appropriation Account of the State)*

The above chart indicates low priority on the creation and augmentation of existing infrastructure facilities in the state.

The Secretary, Health stated (February 2023) that the allocation would be looked into and creation of health infrastructure would be monitored.

6.2.3 Allocation of health budget towards primary care

Robust primary health care reduces morbidity and mortality at much lower costs and significantly reduces the need for secondary and tertiary care. The NHP, 2017 (Para 12) advocates allocating a major proportion (up to 66 *per cent* or more) of financial resources to primary care followed by secondary and tertiary care.

Scrutiny of budgetary allocations during 2016-22 revealed that the State allocated only ₹ 1812.08[2] crore (19.94 *per cent*) of total allocation on health (₹ 9089.09 crore) towards primary health care during the period as against the benchmark of 66 *per cent* envisaged in the NHP.

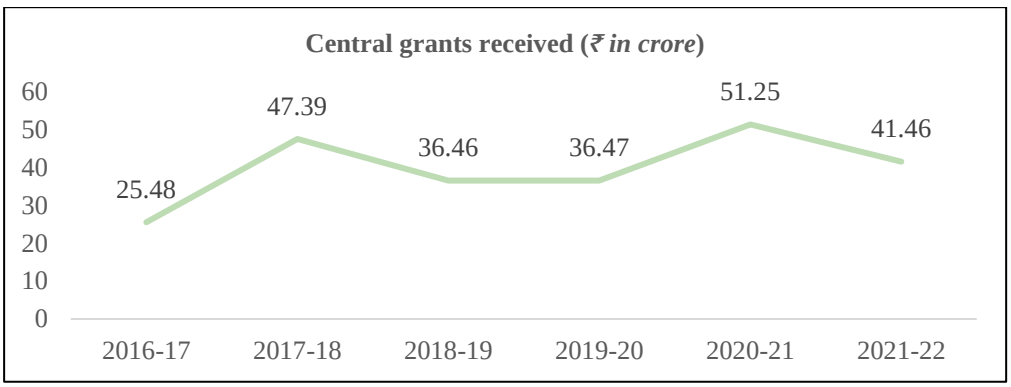
The Secretary, Health stated (February 2023) that the allocation would be looked into.

Recommendation 13: The State Government may review its budgetary allocations to health sector for strengthening health systems in the State as envisaged in the NHP.

6.3 Central assistance for State health sector

Public Health being a State subject, it is the responsibility of State Governments to provide medical assistance to patients of all income groups. MoH&FW also supports the States to strengthen their health care systems so as to provide universal access to equitable, affordable and quality health care services through its flagship missions. Central assistance received by the State for the health sector during 2016-22 is as given below in **Chart 6.5:**

Chart 6.5: Central assistance received for health sector during 2016-22



(Source: Finance Accounts, Government of Goa)

6.3.1 Delay in transfer of Central Assistance to implementing agencies

The funds received from GoI as grants-in aid by the State are routed through the State treasury to the Implementing Agencies, *viz.* Mission Director, NHM and State AYUSH Society.

[2] Figures provided by Directorate of Health Services.

Scrutiny of DHS records revealed that there were considerable delays in transfer of funds by the State treasury to the Implementing Agencies during the period 2016-22. Delay in transfer of National AYUSH Mission (NAM) funds ranged between 194 and 725 days while the delay in transfer of NHM funds ranged between 54 and 458 days during the period 2016-22, affecting their timely utilisation.

The Secretary, Health assured (February 2023) that delay in transfer of CSS funds to the implementing agencies would be resolved.

Recommendation 14: The State Government may ensure timely transfer of central funds to implementing agencies, to facilitate effective utilisation.

Chapter VII
Implementation of Centrally Sponsored Schemes

Chapter 7 – Implementation of Centrally Sponsored Schemes

Three Centrally Sponsored Schemes (CSS), viz. Ayushman Bharat, National AYUSH Mission and National Health Mission (NHM) were reviewed in this Performance Audit.

Under Ayushman Bharat Scheme, the unspent balances ranged between 60.26 and 95 per cent during 2018-22. Against the reported up-gradation of 201 Health Centres to Health and Wellness Centres (HWCs) during 2018-22, non-compliance with the norms was noticed vis-à-vis the availability of infrastructure, health care services and required equipment, consumables and miscellaneous supplies in the test-checked centres. Non-availability of required manpower was noticed in Sub-Centres (HWCs).

Under National AYUSH Mission, the unspent balances ranged between 51 and 88 per cent of the total grants available during the period 2017-22.

Under the National Health Mission, there was underutilisation of funds allotted.

7.1 Centrally Sponsored Schemes

The Central Government supplements the efforts of State Governments in strengthening health systems through various schemes. Audit selected three Centrally Sponsored Schemes (CSS), *viz*. Ayushman Bharat, National AYUSH Mission and National Health Mission (NHM) to assess their implementation in the State.

The receipt of central grants for CSS has shown an increasing trend during 2016-21 except during 2018-19 and 2019-20. However, the grants decreased from ₹ 51.25 crore in 2020-21 to ₹ 41.46 crore in 2021-22 as detailed in **Chart 6.5** of previous chapter. Observations on implementation of selected CSS in the State are discussed in the succeeding paragraphs.

7.2 Ayushman Bharat

Ayushman Bharat (AB) was launched in 2018 to deliver a comprehensive range of services under primary health care spanning preventive, promotive, curative, rehabilitative and palliative care. AB has two components - (i) Creation of Health and Wellness Centres (HWCs) and (ii) Pradhan Mantri Jan Arogya Yojana. AYUSH Society is chaired by the Secretary, Health and led by a Mission Director who is responsible for implementation of Ayushman Bharat Scheme in the State.

The year wise details of funds received, and expenditure incurred for Ayushman Bharat-Health and Wellness Centre (AB-HWC) is as given below in **Table 7.1.**

Table 7.1: Details of funds received for AB-HWC during 2018-22

(₹ in crore)

Year	Opening Balance	Funds Received		Total Funds Received	Expenditure	Closing Balance (% of total funds)
		Central	State			
2018-19	0	1.20	0	1.20	0.06	1.14 *(95.00)*
2019-20	1.14	0.90	0.30	1.20	0.93	1.41 *(60.26)*
2020-21	1.41	0.61	0	0.61	0.80	1.22 *(60.39)*
2021-22	1.22	0.91	0	0.91	0.45	1.68 *(78.87)*
Total		3.62	0.30	3.92	2.24	

(*Source: Information furnished by DHS*)

As per the above table, during 2018-22, out of ₹ 3.92 crore funds received, only ₹ 2.24 crore (57.14 *per cent*) was spent and the annual savings ranged from 60.26 to 95 *per cent.*

7.2.1 Ayushman Bharat Health and Wellness Centres

Operational guidelines for AB-HWC (Para 6.1.1) required the States to develop a road map for creation of HWCs over a five-year period 2018-23, as well as annual plans with specific targets for the State and district level to improve access to comprehensive Primary Health Care (PHC) facilities.

Audit observed that DHS achieved the target of up-gradation of 201 healthcare facilities into HWCs in the State by March 2023.

Audit test checked 10[1] Sub-Centres and four[2] Primary Health Centre (PHCs) of these upgraded HWCs to assess the availability of infrastructure, services, equipment, drugs and medicines and manpower mandated for implementation of AB-HWCs. The following deficiencies were noticed:

i) Non availability of required infrastructure in HWCs: Operational Guidelines for AB (Para 6.2) stipulate norms for infrastructure for PHCs and SCs. Audit noticed the following shortfall in the test-checked units audited during June/July 2022.

- Three[3] selected HWCs (SCs) did not have the required space as per norms to accommodate 20-25 chairs in the waiting area.
- Designated space for lab/diagnostic tests was not available in any of the 10 HWCs (SCs).

[1] Sub-centres: Ambelim, Betalbatim, Colva, Veling, Cola, Nanoda, Sal, Nagargao, Piligao and Siolim.
[2] Primary Health Centres: Porvorim, Chimbel, Chinchinim and Balli.
[3] Sub-Centre: Veling, Siolim and Colva.

- Separate male and female toilets were not available in eight out of 10 HWCs (SCs).

(ii) Non availability of required services in HWCs: Operational Guidelines of AB (Para 3.1.4) define the service delivery framework with the list of services to be provided by HWCs. The availability of services (test-checked during June/July 2022) against the requirement is shown below in **Table 7.2.**

Table 7.2: List of available services in test-checked HWCs during June to July 2022

Particulars	Primary Health Centres (HWCs)				Sub-Centres (HWCs)									
	Porvorim	Chimbel	Chinchinim	Balli	Ambelim	Betalbatim	Colva	Veling	Cola	Nanoda	Sal	Nagargao	Piligao	Siolim
No. of required services	66	66	66	66	75	75	75	75	75	75	75	75	75	75
Available services	9	9	8	25	39	41	41	29	27	43	20	34	14	33
***Per cent* of unavailable services**	***86***	***86***	***88***	***62***	***48***	***45***	***45***	***61***	***64***	***43***	***73***	***55***	***81***	***56***

(*Source: Information furnished by PHCs and SCs*)

As evident from the above table, the four test-checked upgraded HWCs (PHCs) did not provide the required healthcare services ranging between 62 and 88 *per cent* and the 10 test-checked upgraded HWCs (SCs) did not provide the prescribed healthcare services ranging between 43 and 81 *per cent*.

(iii) Non availability of required equipment, consumables and miscellaneous supplies in HWCs: Annexure 4 of Operational Guidelines of AB provide for equipment for SCs. Audit noticed shortage of equipment, consumables and miscellaneous supplies required in 10 test-checked HWCs (SCs) (test checked during June/July 2022) as given below:

- Shortage of required clinical materials, tools and equipment ranging from 51 to 82 *per cent.*
- Non availability of linen, consumables and miscellaneous items ranging from 32 to 54 *per cent*.
- Shortage of diagnostic material and reagents ranging from 63 to 79 *per cent*.

Details are given in **Appendix 7.1.**

(iv) Non availability of required manpower in HWCs (SCs): As per Operational Guidelines of AB (Para 2.2.1), the manpower required at upgraded SCs shall consist of a team comprising of at least three service providers

{one Mid-level health provider (MLHP[4]) and at least two (preferably three) Multi-Purpose Workers (MPW[5])-two female and one male}.

Audit observed shortfall in manpower availability in the 10 test-checked HWCs (SCs) as given below:

- MLHPs were not available in any of the 10 test-checked HWCs (SCs);
- MPW (Male) were available in eight out of 10 test-checked HWCs (SCs); and
- MPW (Female) were not available in one out of 10 test-checked HWCs (SCs).

Details are given in **Appendix 7.2.**

(v) Non-availability of drugs in HWCs: Operational Guidelines of AB (Para 7.1) prescribe the availability of 171 drugs in HWCs (PHCs) and 104 drugs in HWCs (SCs). The four test-checked HWCs (PHCs) and 10 HWCs (SCs) revealed significant shortage of availability of drugs (test checked during June/July 2022) as detailed below in **Table 7.3:**

Table 7.3: Availability of drugs in sampled PHCs and SCs

Particulars	Name of PHC				Name of Sub-centres									
	Porvorim	Chimbel	Chinchinim	Balli	Ambelim	Betalbatim	Colva	Veling	Cola	Nanoda	Sal	Nagargao	Piligao	Siolim
Total drugs required	171	171	171	171	104	104	104	104	104	104	104	104	104	104
Available Drugs	44	57	100	52	31	32	30	34	20	29	19	52	19	24
Drugs not available	127	114	71	119	73	72	74	70	84	75	85	52	85	80
Per cent unavailable	***74.27***	***66.67***	***41.52***	***69.59***	***70.19***	***69.23***	***71.15***	***67.31***	***80.77***	***72.12***	***81.73***	***50.00***	***81.73***	***76.92***

(*Source: Information furnished by Primary Health Centres and Sub-Centres*)

As evident from the above table, non-availability of drugs and medicines ranged between 41.52 *and* 74.27 *per cent* in four test-checked HWCs (PHCs) and between 50 and 81.73 *per cent* in 10 test-checked HWCs (SCs).

The Dy. Director, DHS stated (February 2023) in the exit meeting that corrective action will be initiated in areas with shortcomings.

Recommendation 15: The State Government may make efforts to comply with all norms for Health and Wellness Centres as prescribed in the Ayushman Bharat Scheme.

[4] MLHP is the Community Health officer at the SC who is in-charge of public health functions, ambulatory care management and provide leadership at the HWCs.

[5] MPW function as paramedics, ophthalmic technicians, dental hygienists, physiotherapists, *etc*.

7.2.2 Ayushman Bharat PM-Jan Arogya Yojana (PMJAY)

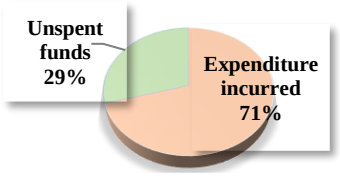
Ayushman Bharat Pradhan Mantri Jan Arogya Yojana (AB-PMJAY) was launched in September 2018. The objective of the scheme is to reduce catastrophic health expenditure to the deprived rural families and identified occupational categories of urban workers' families by providing health care treatment through a network of Empaneled Health Care Providers (EHCP) with a health cover of ₹ five lakh per family per annum[6] on cashless payment facility.

The funds received for AB-PMJAY during the period 2018-19 to 2021-22 is shown below in **Table 7.4:**

Table 7.4: Details of funds received for AB-PMJAY during 2018-22

(₹ in crore)

Year	Funds received		Total funds received	Expenditure incurred	Unspent funds	Utilisation of funds in 2018-22
	Central Share	State Share				
2018-19	0.58	0.39	0.97	0.00	0.97	
2019-20	0.00	0.00	0.00	0.06	0.91	
2020-21	0.00	0.00	0.00	0.84	0.07	
2021-22	0.50	0.78	1.28	0.69	0.66	
Total	**1.08**	**1.17**	**2.25**	**1.59**	**0.66**	



(*Source: Information furnished by DHS*)

As per the table above, out of ₹ 2.25 crore grants received during the period 2018-22, the Mission Director, PMJAY utilised ₹ 1.59 crore (71 *per cent*)[7] with the unspent balance being ₹ 0.66 crore (29 *per cent*).

Based on the Socio-Economic Caste Census (SECC)-2011, the National Health Authority identified 36974 people as eligible for the scheme in the State. However, the State could enroll only 8551 beneficiaries during 2018-22. Further, only 360 (four *per cent*) beneficiaries availed treatment in EHCP empanelled hospital under AB-PMJAY scheme during the period 2018-22.

7.3 National AYUSH Mission

National AYUSH Mission (NAM) is a flagship scheme of GoI launched in September 2014 to provide cost effective and equitable AYUSH[8] health care throughout the country by improving access to services. State AYUSH Society governs the State level NAM which is headed by a Mission Director.

AYUSH facilities in the State were co-located in PHCs, CHCs, SDHs and DHs.

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6 The beneficiaries were identified from the Socio-Economic Caste Census 2011 (SECC). The beneficiary families covered under AB-PMJAY are eligible for secondary, tertiary and day care procedures.

7 Major expenditure of ₹88.39 lakh (57 *per cent*) for implementation of AB-PMJAY scheme was towards payment to Implementing Support Agency and only ₹65.41 lakh (43 *per cent*) was paid towards beneficiary claims out of the total allotment of ₹2.25 crore.

8 Ayurveda, Yoga & Naturopathy, Unani, Siddha, and Homeopathy.

State AYUSH Society received ₹ 9.29 crore between 2015 and 2018 under NAM for construction of 50 bedded Integrated AYUSH hospitals in North and South Goa districts. However, the Integrated AYUSH Hospital in North Goa district was not set up and the State AYUSH Society was in the process of refunding the central grants received for the same. The work of Integrated AYUSH Hospital in South Goa was scheduled for completion in September 2022, but it was not yet complete (December 2022).

The Director, DHS informed (November 2023) that the site of the AYUSH Hospital in North Goa was changed with the approval of Government and Goa State Infrastructure Development Corporation (GSIDC) has started the work. It was further stated by DHS (February 2024) that the work of AYUSH Hospital in South Goa is expected to be completed by March 2024 as per GSIDC.

Audit observed poor utilisation of funds in the implementation of the scheme in the State as detailed below.

7.3.1 Utilisation of funds received under National AYUSH Mission

The GoI sanctions grants-in-aid based on the State Annual Action Plan (SAAP) under NAM and funds are released in the ratio of 60:40 between GoI and GoG to the Mission Director, NAM, GoG. Receipt of funds and expenditure during the period 2017-22 was as shown below in **Table 7.5.**

Table 7.5: Year wise Receipts and Expenditure of NAM Funds during 2017-22

(₹ *in crore*)

Year	Opening Balance	Receipt during the year			Total Grants Available	Expenditure	Unspent balance (% of total available Grants)
		GOI	GOG	Other Receipts[9]			
	1	2	3	4	5 (1+2+3+4)	6	(5 - 6)
2017-18	0.00	4.20	2.80	0.08	7.08	0.84	6.24 *(88)*
2018-19	6.24	4.64	3.09	0.53	14.50	4.41	10.09 *(70)*
2019-20	10.09	3.85	2.57	0.60	17.11	3.90	13.21 *(77)*
2020-21	13.21	0.33	0.22	0.41	14.17	2.62	11.55 *(82)*
2021-22	11.55	2.52	1.68	0.32	16.07	7.80	8.27 *(51)*
Total		**15.54**	**10.36**	**1.94**		**19.57**	

(Source: Figures provided by DHS)

As per the above table, out of ₹ 27.84[10] crore grants available during the period 2017-22, the Mission Director, NAM utilised ₹ 19.57 crore (70 *per cent*) with unspent balance being ₹ 8.27 crore. The unspent balances ranged between 51 and 88 *per cent* of the total grants available during the period 2017-22. Audit

[9] Interest earned.
[10] ₹15.54 + ₹10.36 + ₹1.94

noticed the following regarding poor utilisation of funds for activities under NAM:

- ₹ 0.52 crore allotted during 2017-21 for School Health Programme and AYUSH Gram Village was not utilised.
- There was total allocation of ₹ 4.87 crore for AYUSH Health & Wellness Centre, Yoga Wellness Centre and AYUSH Tribal Mobile Unit. But there was no expenditure during the period 2017-21 and only ₹ 0.52 crore was spent during 2021-22.

The Director, DHS stated (November 2023) that funds under the School Health Programme and AYUSH Gram were duly re-appropriated and fully utilised in 2021-22. Further, it was stated that while funds under AYUSH Health & Wellness Centre and AYUSH Tribal Mobile Unit were utilised in 2022-23, those under Yoga Wellness Centre were only partly utilised.

However, the reply does not offer any reason for non-utilisation of funds in the prior period.

7.4 National Health Mission (NHM)

The vision of the NHM is the attainment of universal access to equitable, affordable and quality health care services, accountable and responsive to people's needs, with effective inter-sectoral convergent action to address the wider social determinants of health.

The National Health Mission[11] (NHM) comprises two sub-missions: National Rural Health Mission (NRHM) and National Urban Health Mission (NUHM). State Health Society (SHS) headed by the Mission Director (Secretary, Health) is the implementation agency for NHM.

7.4.1 Utilisation of NHM funds

Based on the State Programme Implementation Plan (SPIP), GoI sanctions funds under NHM to the State in the form of grants-in-aid and the same are released to the Mission Director, NHM, GoG. The funding pattern of NHM was in the ratio of 60:40 between GoI and GoG. Year-wise receipt of funds and expenditure during the period 2016-17 to 2021-22 is as shown below in **Table 7.6:**

[11] The National Urban Health Mission, (NUHM) was launched in May 2013 and was subsumed with NRHM as a sub-Mission of the overarching National Health Mission. (NHM).

Table 7.6: NHM funds received during the period 2016-22

(₹ *in crore*)

Year	Opening Balance	Receipt during the year			Total Grants Available	Expend -iture	Refund of SD and transfer to other funds	Unspent balance (% of total available grants)
		GOI	GOG	Other Receipt[12]				
	1	2	3	4	5 (1+2+3+4)	6	7	8 {5 - (6+7)}
2016-17	16.66	8.21	9.97	1.53	36.37	18.28	0.00	18.09 (*50*)
2017-18	18.09	14.90	23.76	0.84	57.59	25.86	0.11	31.62 (*55*)
2018-19	31.62	14.03	16.17	0.98	62.80	31.23	2.54	29.03 (*46*)
2019-20	29.03	18.05	26.16	1.49	74.73	43.12	3.60	28.01 (*37*)
2020-21	28.01	34.85	29.24	0.40	92.50	60.53	4.23	27.73 (*30*)
2021-22	27.73	24.78	40.87	0.29	93.67	61.72	2.07	29.88 (*32*)
Total		**114.82**	**146.17**	**5.53**		**240.74**	**12.55**	

(Source: Figures provided by Directorate of Health Services)

NHM grants worth ₹ 283.18[13] crore were available to the State during the period 2016-22. Out of the total grant received, the Mission Director, NHM utilised ₹ 240.74 crore (85 *per cent*) and transferred ₹ 12.55 crore to other schemes.

The Director, DHS confirmed (November 2023) that the amount of ₹ 12.55 crore in the above table is towards refund of Security Deposit and reimbursement/ transfers to the other programme.

7.4.2 Implementation of NHM scheme in the State

Four Programme Heads (PH) under NHM, *viz*. National Programme for Prevention and Control of Cancer, Diabetes, Cardio-vascular disease and Stroke (NPCDCS), Reproductive and Child Health (RCH), National Mental Health Programme (NMHP) and National Programme for Health Care of the Elderly (NPHCE) were selected to review the implementation of NHM in the State. Audit findings are stated below:

7.4.2.1 National Programme for Prevention and Control of Cancer, Diabetes, Cardio-vascular disease and Stroke

NPCDCS programme envisages to prevent and control Non-Communicable Diseases (NCD) especially cancer, diabetes and CVDs and stroke through health promotion, behavioural change with involvement of community, IEC[14] activities, opportunistic screening and outreach camps. Operational guidelines for NPCDCS programme, 2013 stipulate the preparation of State Action Plan to prevent and control NCD.

During the period 2016-22, the funds utilised under NPCDCS programme was ₹ 3.48 crore (55 *per cent)* against the allocation of ₹ 6.33 crore. Audit observed

[12] Including other receipts and interest earned on the funds.
[13] ₹16.66 + ₹114.82 + ₹146.17 +₹ 5.53.
[14] Information, Education Communication.

that no State Action Plan to prevent and control NCD was prepared by the State.

The Director, DHS stated (November 2022) that the State Action Plan was prepared for opportunistic screening, population-based survey, community awareness, counselling activities, referral mechanism, *etc*., to address the NCD diseases.

The reply is not acceptable as the action plan document shared along with the reply by the Department was just a status report of activities undertaken for NCD between 2018 and 2022 and there was neither an action plan nor targets set for prevention and control of NCDs in the State.

7.4.2.2 Reproductive and Child Health

RCH is a comprehensive programme for reduction of maternal and infant mortality rate and total fertility rate. It further aims to comprehensively address the issues related to maternal health and child health.

The funds utilised under RCH programme head was ₹ 10.63 crore (38 *per cent*) against an allotment of ₹ 28.20 crore during the period 2016-22.

Allotment, expenditure and utilisation percentage under RCH during 2016-22 is shown in the **Table 7.7.**

Table 7.7: Allotment and expenditure under Components of RCH for 2016-22

(₹in crore)

Year		Components under RCH						Total
		Maternal Health	Child Health	Family Planning	Adolescent Health/ RKSK[15]	RBSK[16]	Training	
2016-17	Allotment	1.62	0.48	0.45	0.19	0.67	0.74	4.15
	Expenditure	0.72	0.13	0.11	0.006	0.10	0.07	1.136
	Utilisation Percentage	***44.44***	***27.95***	***24.44***	***3.16***	***14.92***	***9.46***	
2017-18	Allotment	0.97	0.38	0.49	0.08	0.77	0.32	3.01
	Expenditure	0.48	0.12	0.13	0.007	0.17	0.08	0.987
	Utilisation Percentage	***49.48***	***31.58***	***26.53***	***8.75***	***22.08***	***25.00***	
2018-19	Allotment	1.32	0.35	0.31	0.11	0.58	3.16	5.83
	Expenditure	0.73	0.15	0.11	0.02	0.24	0.34	1.59
	Utilisation Percentage	***55.30***	***42.86***	***35.48***	***18.18***	***41.38***	***10.76***	
2019-20	Allotment	1.37	0.38	0.25	0.13	0.50	3.30	5.93
	Expenditure	0.92	0.24	0.12	0.07	0.44	1.09	2.88

[15] Rashtriya Kishor Swasthya Karyakram (RKSK) programme envisions enabling all adolescents in India to realise their full potential by making informed and responsible decisions related to their health and well-being and by accessing the services and support they need to do so.

[16] Rashtriya Bal Swasthya Karyakram (RBSK) is a scheme to improve the overall quality of life of children enabling all children achieve their full potential and also provide comprehensive care to all the children in the community.

Year		Components under RCH						Total
		Maternal Health	Child Health	Family Planning	Adolescent Health/ RKSK[15]	RBSK[16]	Training	
	Utilisation Percentage	***67.15***	***63.15***	***48.00***	***53.85***	***88.00***	***33.03***	
2020-21	**Allotment**	0.84	0.59	0.31	0.09	1.16	1.50	4.49
	Expenditure	0.56	0.12	0.04	0.02	0.18	0.79	1.71
	Utilisation Percentage	***66.67***	***20.34***	***12.90***	***22.22***	***15.52***	***52.67***	
2021-22	**Allotment**	2.08	1.19	0.33	0.31	0.88	0.00	4.79
	Expenditure	1.31	0.61	0.04	0.10	0.27	0.00	2.33
	Utilisation Percentage	***62.98***	***51.26***	***12.12***	***32.26***	***30.68***	***0.00***	

(Source: Figures provided by DHS)

It is evident from the above table that the fund utilisation ranged between 3.16 and 88 *per cent* under the components of RCH programme.

7.4.2.3 National Mental Health Programme

NMHP envisages to provide mental health services and augment institutional capacity for infrastructure, equipment and human resource. Operational guidelines for NMHP stipulate the provision of Out-Patient services in District Hospitals, CHCs and Taluka hospital. Further, the guidelines provide for deployment of manpower in District hospital, CHC[17] and Taluka level hospital for implementing the programme. Each district hospital should have an exclusive 10-bedded psychiatry ward. Mission Director, NHM could utilise funds only to the extent of 40 *per cent* (₹ 0.69 crore) against allotment of ₹ 1.73 crore for NMHP program head during 2016-22.

Audit observed that there was lack of infrastructure and manpower in four[18] of the test-checked hospitals as stated below:

- In the test-checked NGDH, Mapusa, only one Psychiatrist and one Psychologist were deployed. Other supporting manpower (Counselor, Medico-Social Workers and Multi Rehabilitation Worker) were not available. In the test checked SDH, Chicalim, Psychiatrist and Psychologist were not available.
- Exclusive 10-bedded psychiatry ward stipulated in the operational guidelines of the scheme was also not available in NGDH, Mapusa.
- Manpower[19] for management of mental health stipulated in the operational guidelines were not available in both the test-checked CHCs.
- Out of four test-checked PHIs, psychiatry services for Out-Patients were not available in two PHIs (SDH, Chicalim and CHC, Canacona).

[17] Medical Officer and Clinical Psychologist or Psychiatric Social worker.
[18] North Goa District Hospital, Mapusa, SDH, Chicalim, CHC, Pernem, CHC, Canacona
[19] Medical Officer and Clinical Psychologist or Psychiatric Social worker.

Reply from the State Government on the above audit observation is awaited (March 2024).

7.4.2.4 National Programme for Health Care of the Elderly

The vision of NPHCE is to provide accessible, affordable and high quality long-term comprehensive dedicated services to the ageing population. Audit noticed poor fund utilisation to the extent of 30 *per cent* only (₹ 0.63 crore) against allocation of ₹ 2.13 crore under NPHCE programme head during the period 2016-22.

The Director, DHS accepted the observation and stated (November 2023) that there were instances of savings in all the years. For instance, in 2016-17, ₹ 17.40 lakh allocated for human resources and ₹ 20 lakh towards renovation work remained unutilised. In 2017-18, only ₹ 3.45 lakh out of ₹ 49.40 lakh was utilised towards renovation works and trainings and in 2018-19, out of ₹ 34.60 lakh approved for machinery, training, renovation and furniture only ₹ 14.59 lakh was utilised. For 2019-20, out of ₹ 29.80 lakh approved for machinery, training, renovation and furniture works only ₹ 11.99 lakh was utilised. While an amount of ₹ 22.50 lakh was approved for machinery, only ₹ 5.32 lakh was utilised. In 2020-21 out of ₹ 13.34 lakh approved for procurement of equipment and trainings, ₹ 10.87 lakh was utilised for machinery and equipment, aids and appliances for DH/PHC/CHC/SDH and trainings. Further, an amount of ₹ 3.24 lakh was approved under training, of which only ₹ 0.27 lakh was utilised. In 2021-22, out of ₹ 27.30 lakh approved for drugs, IEC, training, ₹ 22.34 lakh was utilised. Further, an amount of ₹ 2 lakh of a recurring grant remained unutilised under equipment during the year.

It is evident that the major portion of funds available under the programme remained unutilised.

Recommendation 16: The State Government may review the implementation of NHM to identify reasons for under-utilisation of funds and devise strategies to address the same.

Chapter VIII
Adequacy and Effectiveness of Regulatory Mechanisms

Chapter 8 –Adequacy and Effectiveness of Regulatory Mechanisms

Goa enacted the Goa Clinical Establishments (CE) Act, 2019, nine years after the enactment of the Central Act and notified the Goa CE Rules with a further delay of two years in July 2021. The Council of Clinical Establishments and the District Registering Authorities were constituted in April 2022 with a delay of three years from the enactment of the Goa CE Act.

Audit of the Food and Drug Administration (FDA) Department, the State Drug regulator indicated shortfall in the number of mandated inspections of establishments, shortages in drawal of drug samples for testing, absence of National Accreditation Board of Laboratories (NABL) certification of FDA's laboratory and follow up action where drugs were found to be sub-standard. Thirty seven out of 38 Public Health Institutions (PHIs) did not apply for National Quality Assurance Standards (NQAS) certification. None of the four test-checked public health institutions' laboratories had obtained NABL certification.

The Goa Medical Council, Goa Pharmacy Council and Goa Nursing Council, responsible for the regulation of medical practitioners, pharmacists and nurses in the State did not publish the list of the respective professionals registered with them in the public domain as mandated. Pharmacy Council had not appointed inspectors as a result of which licensed premises where drugs are compounded and dispensed remained uninspected in the State.

Several health facilities were functioning in the State without authorisation from Goa State Pollution Control Board (GSPCB) for handling of Bio-Medical Waste (BMW) showing poor monitoring by GSPCB. Gaps were noticed in Bio-Medical Waste Management (BMWM) by the test-checked Public Health Institutions relating to constitution of BMWM Committee and its working.

8.1 Introduction

Regulation is an important aspect of the healthcare sector, as public health needs to be safeguarded, healthcare consumers need protection from health risks and medical professionals need a safe working environment. Regulatory bodies are responsible for compliance of medical facilities and medical professionals with public health policies, guidelines and standards to ensure that appropriate and safe healthcare to all patients is provided.

8.2 Regulatory mechanisms in the State

In Goa, Goa Medical Council, Goa Pharmacy Council, Goa Nursing Council and State Drug Controller are among the important health sector regulatory bodies. Apart from examining the functioning of these regulatory bodies, Audit

also examined aspects related to Bio-Medical Waste Management, Quality Certification from NABL and other mandatory requirements. Audit findings on aspects related to regulation and regulatory bodies in the State are discussed below.

8.3 Implementation of the Clinical Establishments Act and Rules in the State

The Clinical Establishments (CE) Act was enacted by the Parliament in August 2010 to provide for registration and regulation of all clinical establishments in the country with a view to prescribing minimum standards of facilities and services in pursuance of the directive under Article 47 of the Constitution for improvement of public healthcare. Clinical Establishments Rules were framed by the Government of India in May 2012. The NHP, 2017 (Para 14.2) advocated the regulation of clinical establishments by the States through the adoption of the Clinical Establishments (Registration and Regulation) Act, 2010.

8.3.1 Inordinate delay in enactment of State Clinical Establishments Act and Rules

The CE Act prescribed Minimum Standards Requirement (MSR)[1] to be complied with for grant of license for establishment and operation of clinical establishments. Section 3 of the Goa Clinical Establishments (Registration and Regulation) Act, 2019 stipulated the constitution of 'Goa Council for Clinical Establishments' (GCCE) to monitor, compile and update the State Register of clinical establishments, furnishing monthly returns for updating the National Register of clinical establishments and ensuring implementation of minimum standards by the clinical establishments. Further, Section 7 of the Act requires the constitution of 'District Registering Authority' (DRA) for each district to carry out the registration of clinical establishments.

The Goa Clinical Establishments (Registration and Regulation) Act was enacted in September 2019 after a delay of nine years from the date of enactment of the Central CE Act, 2010. The Goa Clinical Establishments (GCE) Rules, which prescribed minimum standards for clinical establishments was notified only in July 2021.

Further, the Council for Clinical Establishments and the DRA were not constituted even after the notification of GCE Rules. The GCCE and DRA were constituted only in April 2022 after a lapse of three years from the enactment of the CE Act. Hence, none of the private clinical establishments could be registered or brought under the ambit of the Goa Clinical Establishment Act, 2019, between October 2019 and April 2022.

[1] MSR provides for an exhaustive list of the scope of services, infrastructure, medical equipment, drugs and medicines, human resources, support services, legal/statutory requirements, record maintenance and reporting requirements.

The Secretary, Health directed (February 2023) the concerned officials for corrective action.

The Director, DHS accepted the audit observation (November 2023).

8.4 Functioning of Regulatory bodies in the Health Sector

Regulatory bodies in the State are established under Central/State Acts for registration, regulation of medical practitioners, nursing personnel, pharmacists, *etc*., practicing in the State for ensuring safety standards and quality control.

8.4.1 State Drug Controller

The Directorate of Food and Drugs Administration (FDA) is the State drug controller responsible for regulation of manufacturing and sales of drugs in the State and for implementation and enforcement of Drugs and Cosmetics Act, 1940 and Rules, 1945. The vision and mission of FDA is to ensure the availability of safe food and drugs to the general public at large. Audit noticed the following shortfalls in the functioning of FDA.

8.4.1.1 Shortfall in conducting inspections as per norms

Section 22 of the Drugs and Cosmetics Act, 1940 provides for the Drug Inspector to inspect any premises and take samples of drugs which are being sold or stocked or exhibited or offered for sale or distributed. Further, Rules 51 and 52 of Drugs and Cosmetics Rules, 1945 provide that the Drug Inspector shall inspect not less than once a year all establishments licensed for the sale and manufacture of drugs respectively, within the area allotted to him.

Audit observed that during 2016-22 there was shortage in the inspection of manufacturing and sale units by the Drug Inspectors as shown in **Table 8.1** below:

Table 8.1: Details of coverage of inspections of manufacturing and sale units

Year	Manufacturing units	Sale units	Total units in the State to be inspected	Inspections carried out by the Drug Inspectors	*Shortfall in inspection carried out (in per cent)*
2016-17	165	993	1158	741	*417 (36.01)*
2017-18	148	1019	1167	725	*442 (37.87)*
2018-19	144	1077	1221	626	*595 (48.73)*
2019-20	139	1111	1250	650	*600 (48.00)*
2020-21	139	1201	1340	626	*714 (53.28)*
2021-22	146	1310	1456	827	*629 (43.20)*

(Source: Information provided by FDA)

As per the table above, the shortfall in the inspections ranged from 36 to 53 *per cent* during 2016-22.

8.4.1.2 Non-achievement of targets for samples drawn as per norms

FDA norms stipulate (November 2016) drawing a minimum of three samples per month by the Drugs/Assistant Drugs Inspectors from Government establishments supplying drugs and medicines. Further, FDA revised (April 2019) its norms for drawing of minimum of ten samples per month of drugs from retail stores, wholesale dealers, doctors' clinic and Government establishments (minimum three should be from Government establishments) supplying drugs and medicines. Also, FDSI guidelines stipulate that the drug samples shall be tested by the empanelled laboratories within a reasonable time frame of 30 days for stopping the distribution of sub-standard drugs to patients.

Audit observed shortfall in number of samples drawn by FDA as shown below in **Table 8.2:**

Table 8.2: Details of shortfall in number of samples drawn by the FDA

Year	No. of Drugs/Asst. Drugs Inspectors	Minimum no. of samples of drugs and medicines to be drawn for testing during the year[2]	Actual samples of drugs and medicines drawn during the year[3]	*Shortfall in number of samples drawn (in per cent)*
2017-18[4]	09	324	116	*208 (64.20)*
2018-19	08	288	78	*210 (72.92)*
2019-20	06	720	560	*160 (22.22)*
2020-21	10	1200	476	*724 (60.33)*
2021-22	10	1200	852	*348 (29.00)*
Total		**3732**	**2082**	***1650 (44.21)***

(*Source: Information furnished by FDA*)

Shortfall in the drawal of sample of drugs and medicines during the period 2017-22 was on an average 44.21 *per cent* against the FDA norms.

Further, FDA tested 3,768 samples of batches of drugs during the period 2016-22 of which 85 drugs were found to be Not of Standard Quality (NOSQ) and details of such drugs which were found to be NOSQ required to be intimated to the centre concerned immediately to stop the sale. But FDA took 06 days to 126 days from the date of receipt of such NOSQ reports from the laboratory in intimating the test reports to the centre concerned.

FDA replied (November 2022) that the shortfall in drawing of samples was due to shortage of vehicles/drivers for enforcement purposes and corrective action has been taken to upload the NOSQ results immediately on their website. It was further stated that department has purchased five new vehicles for

[2] 3 per month upto 2018-19, 10 from 2019-20 to 2021-22.

[3] 2017-18 and 2018-19 actual samples taken only for Government establishments due to non-availability of norms for other establishments and for 2019 to 2022, total samples taken for all establishments.

[4] 2016-17 is not considered as the FDA norms were issued in November 2016.

enforcement purpose and the Drugs Inspectors are drawing samples as the per the plan submitted to them.

However, no evidence of the action taken were furnished to Audit by the Department.

8.4.1.3 Absence of NABL certification for FDA laboratory

MoH&FW, GoI, had proposed providing financial assistance to strengthen the State Drugs Regulatory System across the country. The funding pattern was in the ratio of 60:40 between GoI and the State. MoH&FW sanctioned grants amounting to ₹ 4.05 crore (₹ 2.43 crore for GoI and ₹ 1.62 crore for State) in July 2018 to the FDA for the up-gradation of Microlab (₹ 1.50 crore), procurement of equipment (₹ 1.41 crore), National Accreditation Board for Testing and Calibration Laboratories (NABL) accreditation, recurring costs (₹ 0.75 crore) *etc.*

Audit observed that FDA incurred an expenditure of ₹ 1.51 crore for civil work and ₹ 0.02 crore for NABL accreditation up to September 2022. The process for procurement of equipment and other work for strengthening its testing capacity[5] has not been initiated even after a lapse of four years from receipt of the grant.

The absence of NABL certification raises concerns regarding reliability of testing, measurement and calibration of equipment in the FDA and the results therefrom.

The Secretary, Health directed (February 2023) the concerned officials for corrective action during the exit meeting.

8.4.2 Goa Medical Council

Goa Medical Council was established in 1993 under the Goa Medical Council Act, 1991. It is vested with powers, duties and functions of regulating the practice of modern scientific system of medicine in the State of Goa. The Goa Medical Council provides for registration of Medical Practitioners (MPs) and maintains the State Register for MPs.

Rule 21 of Goa Medical Council Rules, 1995 prescribes the publishing of list of registered practitioners annually. Audit observed that the Council did not publish the list as required, in the public domain.

8.4.3 Goa Pharmacy Council

Goa Pharmacy Council (GPC) was constituted in the year 1994 for regulation of the profession and practice of pharmacy in the State under the Pharmacy Act, 1948 (Central Act). As per Section 29 of the Pharmacy Act, 1948, the State Government shall cause to be prepared a register of pharmacists for the State and publish the same. Further, as per Rule 52 of Goa State Pharmacy

[5] Samples tested 770 (2018-19), 585 (2019-20), 389 (2020-21) and 774 (2021-22).

Council Rules, 1990, the Executive Committee shall superintend the publication of the said register.

Audit noticed that such a register was not published in the public domain.

Further, sub-section (2) of Section 26A of the Pharmacy Act, 1948 stipulates that the State Pharmacy Council may with the previous sanction of the Government appoint Inspectors who may inspect premises where drugs are compounded or dispensed, enquire whether a person who is engaged in compounding or dispensing of drugs is a registered pharmacist and investigate any complaint made in writing for contravention of the provision of the Act.

However, the GPC did not appoint Inspectors as stipulated under sub-section (2) of Section 26 (A) of Pharmacy Act, 1948. As a result, the GPC did not carry out any inspection of premises where drugs are compounded or dispensed during the period 2016-21.

8.4.4 Goa Nursing Council

Goa Nursing Council (GNC) is a statutory body constituted under the Goa Nursing Council Act, 2012. As per Section 24 of the GNC Act, a Register shall be printed and published once in every three years with a list of all nursing personnel in the State.

However, the list of registered nurses was not published in the public domain.

The Secretary, Health (February 2023) while accepting the observations *(Para 8.4.2, 8.4.3 and 8.4.4)* stated that the Goa Medical Council was instructed to take appropriate action and directed others for taking corrective action.

Recommendation 17: PHD may ensure that the Councils comply with the requirement of publishing the list of registered medical practitioners, nurses and pharmacists in the public domain. They may be advised to make these databases available online as per regulation.

8.5 Quality Certification

IPHS norms stipulate that public healthcare facilities should obtain certification/accreditation for quality assurance from quality assurance institutions. National Quality Assurance Standards (NQAS) framework developed by National Health Systems Resource Centre is for quality assurance of services in public healthcare facilities and National Accreditation Board for Testing and Calibration Laboratories (NABL) certification provides a ready means for customers to identify and select reliable testing, measurement and calibration services that are able to meet their needs.

Audit noticed the following:

- Out of the two District hospitals, two Sub-district hospitals, four UHCs, six CHCs and 24 PHCs where IPHS norms were applicable, 37 public health

institutions (except CHC, Sankhali-certified in May 2022) did not apply for NQAS certification.

- None of the test-checked public health institutions' laboratories had obtained NABL certification.

After being pointed out by Audit (June 2022), seven out of 37 PHIs have acquired NQAS certificate between March and December 2023. But the fact remains that such certificate is yet to be obtained by the remaining 30 PHIs while no progress has been reported by DHS regarding acquiring NABL certification.

Recommendation 18: The State may ensure validation and certification of its health centres and laboratories as per IPHS norms.

8.6 Regulation of Bio-Medical Waste

As per the Bio-Medical Waste Management (BMWM) Rules, 2016, hospital should ensure that BMW is handled without any adverse effect to human health and the environment. The Goa State Pollution Control Board (GSPCB) is responsible for enforcement of the provisions of BMWM Rules, 2016. 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 Facility (CBWTF).

8.6.1 Absence of authorisation to handle BMW

As per BMW Management Rules, 2016 (Rule 10), the health facilities established in Goa should take authorisation[6] from GSPCB. The details of health facilities and authorisations granted are shown below for the six years (as per annual report-calendar year) from 2017-22[7] in **Table 8.3**.

Table 8.3: Table on number of applications received for the year 2017-22

Year	Total applications received for authorisation	Total authorisations granted	No. of health facilities whose application were neither approved nor rejected*	Applications rejected
2017	603	601	02	0
2018	141	76	65	0
2019	407	121	286	0
2020	401	139	177	85
2021	159	90	69	0
2022	405	241	164	0

(Source: Annual report submitted by GSPCB)
**Such application pending authorisation, lapses at the end of the calendar year and further processed on receipt of fresh application.*

[6] for the generation, collection, reception, storage, transportation, treatment, processing, disposal or any other form of handling of bio-medical waste in accordance with these rules and guidelines issued by the Central Government or Central Pollution Control Board as the case may be.

[7] BMW rules were notified in March 2016, hence 2016 data is not available. Health facilities submit annual report for calendar year.

As evident from the above table, out of 2116 applications received for authorisation during the period, only 59.93 *per cent* were authorised. While 4.01 *per cent* applications were rejected, the remaining 36.06 *per cent* applications were pending for reasons such as non-payment of fee, applications being incomplete or non-receipt of compliance to further clarification sought by the GSPCB.

GSPCB issued Show Cause Notices[8] (SCN) to facilities functioning without authorisation for BMW, but no further action was taken on defaulting facilities.

No reply on this matter has been received from the Government.

8.6.2 Bio-Medical Waste Management by test-checked PHIs

BMWM Rules (Rule 4 (r)), stipulates that occupier[9] should constitute a BMWM Committee for reviewing and monitoring the activities related to BMWM which shall meet every six months and the record of the minutes of the meetings of this committee shall be submitted along with the annual report to the prescribed authority.

Audit observed the following discrepancies related to BMWM in test-checked hospitals:

- North Goa District Hospital (NGDH), Mapusa constituted BMWM Committee in March 2022 *i.e.* six years after the notification of BMWM Rules, 2016.
- Sub-District Hospital, Chicalim did not constitute the Committee during the audit period 2016-22 and stated (August 2022) that the Committee was constituted recently.
- Eight[10] out of 20 test checked PHIs[11] had submitted annual report for the year 2021.
- The BMWM Committee in Goa Medical College and Hospital (GMCH) did not meet every six months as per the rules.
- In SDH, Chicalim, the appointed agency did not collect BMW regularly during the period from February to November 2021 despite repeated reminders by SDH, Chicalim, exposing patients to health hazards.

[8] 582 in 2018, 582 in 2019, 419 in 2020 and 346 in 2021.

[9] a person having administrative control over the institution and the premises generating bio-medical waste, which includes a hospital, nursing home, clinic, dispensary, veterinary institution, animal house, pathological laboratory, blood bank, health care facility and clinical establishment, irrespective of their system of medicine and by whatever name they are called.

[10] GMCH, NGDH Mapusa, SDH Chicalim, CHC Canacona, PHC Porvorim, PHC Chimbel, PHC Chinchinim, PHC Balli.

[11] 10 SCs, 4PHCs, 2 CHCs, 1 SDH, 1 DH, T.B Hospital and GMCH.

The Director, DHS stated (November 2023) that in NGDH, Mapusa Inspection Control Committee/Bio-Medical Waste Committee is constituted and meets regularly and disposes off Bio-Medical Waste as per the Waste Disposal Act, 2016. As far as SDH, Chicalim is concerned, Health Officer has stated that the BMWM committee was constituted in June 2022 and meets every six months.

The Dean, GMCH accepted the observation and stated (October 2023) that BMWM Committee meetings would be conducted as per norms.

Recommendation 19: The State Government may ensure compliance with the BMW Management Rules for monitoring the collection and disposal of Bio-Medical Waste in the State at the earliest.

Chapter IX
Sustainable Development Goal-3

Chapter 9 - Sustainable Development Goal-3

The requirements for time-bound achievement of Sustainable Development Goal-3, such as formation of SDG Cell to ensure quality and timely flow of data with regard to SDG indicator framework, mapping of SDG-3 indicators with schemes/departments, dovetailing of health sector plans with SDG-3 targets and assessment of financial resources necessary for achieving SDG-3 targets were not undertaken.

The SDG Core Committee set up for monitoring the SDGs was not functional and the State did not set up any High Level Technical Committee for reviewing the State Indicator framework.

9.1 Introduction

Sustainable Development Goal (SDG)-3 seeks to "ensure healthy lives and promote well-being for all at all ages". The National Health Policy (NHP), 2017 was framed in the context of achieving goals set out in SDG-3.

Government of India (GoI) entrusted (September 2015) NITI Aayog[1] with the responsibility of coordinating and overseeing the implementation of the 2030 Agenda of SDGs.

The State Government set up (November 2017) a State Level 'SDG Core Committee' under the chairmanship of Chief Secretary, Government of Goa. This Committee is responsible for regularly monitoring the implementation and progress of SDGs and its targets.

9.2 Performance of the State pertaining to SDG-3

SDG India Index report by NITI Aayog stipulates a mechanism[2] with the objective of measuring the progress of SDGs and develop competitiveness among States and UTs. Based on the results of the SDG India Index, States and Union Territories (UTs) have been classified into four categories: Achiever, Front Runner, Performer and Aspirant, where the 'Achiever' category represents the highest rank, and the 'Aspirant' category represents the lowest rank.

Performance of Goa relating to SDG-3 in the SDG India Index and Dashboard Reports 2018, 2019-20 and 2020-21 are shown in **Table 9.1**.

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1 National Institution for Transforming India (NITI Aayog) is the policy think tank of the Government of India, providing both directional and policy inputs.

2 As per NITI Aayog's SDG India Index: Baseline Report 2018 (21 December 2018)- Aspirant: 0-49; Performer: 50-64; Front Runner: 65-99; Achiever: 100.

Table 9.1: Composite SDG and SDG-3 scores of State

Report	Composite SDG Score of India	Composite SDG Score of Goa	SDG-3 Score of India	SDG-3 Score of Goa
SDG India Index 1.0[3] 2018	57 (Performer)	64 (Performer)	52 (Performer)	65 (Front Runner)
SDG India Index 2.0[4] 2019-20	60 (Performer)	65 (Front Runner)	61 (Performer)	60 (Performer)
SDG India Index 3.0[5] 2020-21	66 (Front Runner)	72 (Front Runner)	74 (Front Runner)	72 (Front Runner)

As per the above table, Goa is in the "Front Runner" category as per the SDG India Index 3.0 (2020-21).

9.3 Key steps for adoption of Sustainable Development Goals

NITI Aayog reviewed (January-February 2018) progress of implementation of SDGs in six steps *i.e.*, establishment of unit/cell centre on SDGs, mapping of department/schemes, formulation of vision/roadmap/strategy on SDGs, alignment of budget with SDGs, constitution of monitoring framework and consultations/orientations/training. As per this review, Goa displayed no progress under all six steps. Observations of Audit on the steps taken for implementation of SDG-3 are as follows.

9.3.1 Non-Constitution of SDG cell by Nodal department

The Director, Directorate of Planning, Statistics and Evaluation (DPSE) was appointed (November 2017) as the State Nodal officer and the Department of Health and Family Welfare as the Nodal Department for implementation and monitoring the progress of SDG-3. The Government further directed to constitute a SDG Cell and depute officers (including statistical personnel of nodal department) to ensure quality and timely flow of data and other aspects with regard to SDG indicator framework.

However, the DHS failed to constitute (August 2022) the SDG Cell even after a lapse of four years from the issue of the Government notification (November 2017) which could affect the planning and decision making pertaining to attainment of SDG-3.

[3] SDG India Index 1.0: The first version of the Index i.e. SDG India Index Baseline Report, 2018. (SDG India Index 1.0) was released in December 2018. The Index tracks the progress of all the States and UTs on a set of 62 indicators covering 13 SDGs

[4] SDG India Index 2.0: The second version of the Index builds upon its first version and was launched in December 2019. The Index has been constructed using 100 indicators that covers 54 targets across 16 goals.

[5] SDG India Index 3.0: SDG India Index 3.0 launched in March, 2021 in which Goa improved its overall SDG score from 65 in 2019-20 to 72 in 2020-21, albeit retaining its position in the Front Runner category.

The Director, DHS accepted (November 2022) that the SDG Cell was not created; however, it was stated that HIB[6] section was attending to all SDG related assignments.

Further, the Director also replied (November 2023) that the Department has established a committee to review the progress of SDG.

The reply is not acceptable as the SDG Cell was not set up (March 2024) and the details available with HIB in regard to SDG progress was not provided to Audit.

9.3.2 Mapping of SDG-3 indicators with associated departments/ schemes

The State constituted (October 2020) three working groups to monitor the performance of SDG indicators at regular intervals. The working groups were responsible to monitor the expenditure of all schemes including Centrally Sponsored Schemes (CSS)/Central Schemes in order to improve performance for better rankings with a view to become front runners in all the SDGs. The working group of health sector was tasked with the mapping of schemes with SDG indicators.

However, no such activity has been undertaken by the health working group in the State.

The Director, DHS accepted the observation and stated (November 2023) that it has requested Directorate of Planning, Statistics and Evaluation to provide technical details on mapping of SDG-3 indicators with associated department/schemes.

9.3.3 Dovetailing Health Sector plans with SDG-3 targets

Non-alignment of health sector plan with SDG-3 could impact achievement of SDG-3 in a time bound manner. The DHS prepared (October 2020) a "Vision Document 2025" for the health sector including Strategic Plan and Action Plan for the delivery of quality health care to citizens. The Vision Document prepared does not specifically refer to SDG-3 targets but covers planned interventions in key areas relating to the health sector and spells out specific health targets to be achieved by 2025.

Thus, dovetailing of health sector plans with defined milestones aligned with SDG-3 targets was yet to be prepared in the State.

[6] Health Intelligence Bureau (HIB) is a section under DHS which collects data from all peripheral health institutions and periodically provides information pertaining to SDG to the Directorate of Planning, Statistics & Evaluation.

The Director, DHS agreed with the observation and stated (November 2023) that the dovetailing of the Health Sector plan with SDG-3 targets is being taken up on priority.

Recommendation 20: The State Government may dovetail health sector plans with SDG-3 targets for achieving the targets in a time bound manner.

9.4 Monitoring of implementation of SDG-3 targets

The State set up (November 2017) a State Level SDGs Core Committee under the chairmanship of the Chief Secretary. The SDG Core Committee was responsible for regularly monitoring the implementation and progress of SDGs and its targets. The committee was required to meet at least once in three months or more often at the convenience of the Chairman.

No records of minutes of any meetings held for monitoring the implementation and progress of SDGs were made available to Audit by the Department.

Further, Ministry of Statistics and Programme Implementation (MOSPI), GoI issued (July 2019) guidelines for institution of High Level Technical (HLT) Committee under the chairmanship of Planning Department to develop, review and refine the State Indicator Framework (SIF). The guidelines also envisaged the states to make efforts to bring out a State SDG Index (district wise) in line with SDG India Index to promote healthy competition among the districts.

The Director, Planning, Statistics and Evaluation regarding preparation of SIF replied (November 2023) that SIF was developed, reviewed and refined in consultation with the concerned Departments and other stakeholders and was published in March 2022. The Director further (February 2024) stated that the State SDG Index in line with India SDG Index has been prepared and placed in Goa Legislative Assembly on 8 February 2024. In respect to the constitution of HLT Committee, it was informed that State has already constituted HLT Committee *i.e.,* State Level SDGs Core Committee under the chairmanship of the Chief Secretary.

However, reply of the Directorate of Planning, Statistics and Evaluation, GoG (February 2024) regarding formation of HLT Committee considering the SDGs core committee as HLT Committee is not tenable as both the Committees should be separate entities with different set of objectives as per MOSPI guidelines.

9.5 Achievement of targets for SDG-3

MOSPI, GoI developed NIF for each SDG to assist the Government in monitoring and tracking the progress of SDGs at the national level. There are 41 indicators in NIFs developed for SDG- 3 "Good Health and Well-Being". In

accordance with MOSPI guidelines, the SIF for the State of Goa was published in March 2022.

Subsequently, the Directorate of Planning, Statistics and Evaluation, Government of Goa prepared the Goa SDG Index, 2023, which was tabled before the State Legislature in February 2024. Performance of the State against 24 indicators reported are detailed in **Appendix 9.1** As per Goa SDG Index, 2023, the State has achieved the targets in nine out of 24 indicators.

Recommendation 21: The State Government may strengthen the monitoring and reporting mechanism to track the achievement of SDG targets.

Panaji **(Anitha Balakrishna)**
The 04 July 2024 **Principal Accountant General**

Countersigned

New Delhi **(Girish Chandra Murmu)**
The 08 July 2024 **Comptroller and Auditor General of India**

APPENDICES

Appendix 2.1

(Referred to in Paragraph 2.4.2)

District wise manpower position for doctors, nurses, paramedics and other staff in both the districts as on 31 March 2022

			Doctors				
Hospitals	**Name of District**	**No. of Hospitals**	**Required as per IPHS**	**Sanctioned Strength**	**Person in Position**	**Vacancy**	**Filled By Contract**
District Hospitals	**North Goa**	1	50	80	61	19	44
	South Goa	1	58	90	66	24	48
Sub-District Hospitals	**South Goa**	2	48	93	59	34	30
Community Health Centres	**North Goa**	4	42	73	39	34	34
	South Goa	2	22	30	16	14	11
Primary Health Centres	**North Goa**	12	12	52	43	9	79
	South Goa	16	16	84	72	12	88
			Nurses				
Hospitals	**Name of District**	**No. of Hospitals**	**Required as per IPHS**	**Sanctioned Strength**	**Person in Position**	**Vacancy**	**Filled By Contract**
District Hospitals	**North Goa**	1	135	149	139	10	21
	South Goa	1	180	217	205	12	22
Sub-District Hospitals	**South Goa**	2	82	140	127	13	18
Community Health Centres	**North Goa**	4	44	60	52	8	10
	South Goa	2	22	38	33	5	7
Primary Health Centres	**North Goa**	12	36	31	28	3	14
	South Goa	16	48	55	52	3	30
			Paramedics				
Hospitals	**Name of District**	**No. of Hospitals**	**Required as per IPHS**	**Sanctioned Strength**	**Person in Position**	**Vacancy**	**Filled By Contract**
District Hospitals	**North Goa**	1	66	51	36	15	65
	South Goa	1	81	65	41	24	36
Sub-District Hospitals	**South Goa**	2	108*	34	21	13	45
Community Health Centres	**North Goa**	4	44	150	122	28	51
	South Goa	2	22	66	60	6	21
Primary Health Centres	**North Goa**	12	60	191	155	36	106
	South Goa	16	80	313	247	66	123
			Others				
Hospitals	**Name of District**	**No. of Hospitals**	**Required as per IPHS##**	**Sanctioned Strength**	**Person in Position**	**Vacancy**	**Filled By Contract**
District Hospitals	**North Goa**	1	21	238	190	48	15
	South Goa	1	26	270	189	81	18

Hospitals	Name of District	No. of Hospitals	Required as per IPHS	Sanctioned Strength	Person in Position	Vacancy	Filled By Contract
Sub-District Hospitals	**South Goa**	2	30	186	132	54	4
Community Health Centres	**North Goa**	4	52	209	170	39	14
	South Goa	2	26	99	66	33	5
Primary Health Centres	**North Goa**	12	48	360	305	55	45
	South Goa	16	64	442	342	100	53

(Source: Directorate of Health Services)

*Includes 14 posts of electrician (2), plumber (2) and safai karamchari (10)
Only administrative posts included.

Appendix 2.2

(Referred to in Paragraph 2.4.4)

Department wise manpower position for doctors, nurses, paramedics and other staff in GMCH as on 31 March 2022

Departments	Doctors						Nurses			
	SS	MIP	Vacancy	*Vacancy Percentage*	Vacancy filled up by Contract	*Total Vacancy Percentage*	SS	MIP	Vacancy	*Vacancy Percentage*
ENT	10	5	5	*50.00*	1	*40.00*	11	11	0	*00.00*
General Medicine	34	20	14	*41.18*	0	*41.18*	240	232	8	*03.33*
Paediatrics	22	13	9	*40.91*	0	*40.91*	108	108	0	*00.00*
General Surgery	30	17	13	*43.33*	4	*30.00*	380	373	7	*01.84*
Ophthalmology	14	5	9	*64.29*	2	*50.00*	15	15	0	*00.00*
Obstetrics and Gynaecology	23	11	12	*52.17*	2	*43.48*	103	94	9	*08.74*
Orthopaedics	21	12	9	*42.86*	0	*42.86*	45	37	8	*17.78*
Dermatology & Venereology	8	4	4	*50.00*	0	*50.00*	10	10	0	*00.00*
Anaesthesia	31	13	18	*58.06*	3	*48.39*	130	125	5	*03.85*
Radiology	30	10	20	*66.67*	2	*60.00*	0	0	0	*NA*
Pathology	40	16	24	*60.00*	2	*55.00*	0	0	0	*NA*
Microbiology	23	11	12	*52.17*	3	*39.13*	0	0	0	*NA*
Forensic Specialists	25	11	14	*56.00*	1	*52.00*	0	0	0	*NA*
Biochemistry	26	10	16	*61.54*	4	*46.15*	5	5	0	*00.00*
Geriatric Medicine	3	1	2	*66.67*	0	*66.67*	24	20	4	*16.67*
Transfusion Medicine	8	3	5	*62.50*	0	*62.50*	0	0	0	*NA*
Physiology	23	13	10	*43.48*	0	*43.48*	0	0	0	*NA*
Pharmacology	18	11	7	*38.89*	0	*38.89*	0	0	0	*NA*
Community Medicine	34	15	19	*55.88*	4	*44.12*	0	0	0	*NA*
Respiratory Medicine	13	9	4	*30.77*	2	*15.38*	16	10	6	*37.50*
Neurosurgery	11	9	2	*18.18*	0	*18.18*	26	16	10	*38.46*
Neurology	9	3	6	*66.67*	1	*55.56*	18	10	8	*44.44*
Nephrology	9	3	6	*66.67*	1	*55.56*	18	10	8	*44.44*
Endocrinology	10	3	7	*70.00*	1	*60.00*	4	4	0	*00.00*
Paediatric Surgery	16	3	13	*81.25*	2	*68.75*	18	10	8	*44.44*
Plastic Surgery	15	4	11	*73.33*	0	*73.33*	12	12	0	*00.00*
CVTS	14	0	14	*100.00*	5	*64.29*	30	20	10	*33.33*
Cardiology	20	0	20	*100.00*	7	*65.00*	30	20	10	*33.33*
Medical Oncology	7	0	7	*100.00*	1	*85.71*	16	6	10	*62.50*
Surgical Oncology	3	1	2	*66.67*	0	*66.67*	16	6	10	*62.50*
Radiation Oncology	6	0	6	*100.00*	1	*83.33*	16	6	10	*62.50*
Anatomy	23	9	14	*60.87*	2	*52.17*	0	0	0	*NA*
Urology	15	2	13	*86.67*	2	*73.33*	28	18	10	*35.71*
Emergency Medicine	33	14	19	*57.58*	0	*57.58*	20	6	14	*70.00*
Cardiac Anaesthesia	12	1	11	*91.67*	3	*66.67*	6	2	4	*66.67*
Phy. Medical. Rehab.	3	0	3	*100.00*	0	*100.00*	4	0	4	*100.00*

Departments	Doctors						Nurses			
	SS	MIP	Vacancy	*Vacancy Percentage*	Vacancy filled up by Contract	*Total Vacancy Percentage*	SS	MIP	Vacancy	*Vacancy Percentage*
Medical Gastroent.	4	0	4	*100.00*	0	*100.00*	4	0	4	*100.00*
Surgical Gastr Ento	4	0	4	*100.00*	0	*100.00*	4	0	4	*100.00*
TOTAL	**650**	**262**	**388**	***59.69***	**56**	***51.08***	**1357**	**1186**	**171**	***12.60***

Departments	Paramedics						Other staff			
	SS	MIP	Vacancy	*Vacancy Percentage*	Vacancy filled up by Contract	*Total Vacancy Percentage*	SS	MIP	Vacancy	*Vacancy Percentage*
ENT	2	1	1	*50.00*	1	*0.00*	6	6	0	*0.00*
General Medicine	15	12	3	*20.00*	3	*0.00*	105	105	0	*0.00*
Paediatrics	2	1	1	*50.00*	1	*0.00*	24	20	4	*16.67*
General Surgery	0	0	0	*NA*	0	*NA*	95	90	5	*5.26*
Ophthalmology	0	0	0	*NA*	0	*NA*	12	10	2	*16.67*
Obstetrics and Gynaecology	4	4	0	*0.00*	0	*0.00*	60	55	5	*8.33*
Orthopaedics	20	20	0	*0.00*	9	*(-)45.00*	60	42	18	*30.00*
Dermatology & Venereology	1	1	0	*0.00*	0	*0.00*	8	6	2	*25.00*
Anaesthesia	19	1	18	*94.74*	9	*47.37*	40	32	8	*20.00*
Radiology	35	35	0	*0.00*	0	*0.00*	42	30	12	*28.57*
Pathology	16	16	0	*0.00*	0	*0.00*	63	56	7	*11.11*
Microbiology	31	31	0	*0.00*	0	*0.00*	32	26	6	*18.75*
Forensic Specialists	5	5	0	*0.00*	0	*0.00*	15	15	0	*0.00*
Biochemistry	0	0	0	*NA*	0	*NA*	43	34	9	*20.93*
Geriatric Medicine	0	0	0	*NA*	0	*NA*	24	22	2	*8.33*
Transfusion Medicine	0	0	0	*NA*	0	*NA*	5	0	5	*100.00*
Physiology	0	0	0	*NA*	0	*NA*	6	6	0	*0.00*
Pharmacology	0	0	0	*NA*	0	*NA*	6	6	0	*0.00*
Community Medicine	0	0	0	*NA*	0	*NA*	12	8	4	*33.33*
Respiratory Medicine	0	0	0	*NA*	0	*NA*	32	28	4	*12.50*
Neurosurgery	0	0	0	*NA*	0	*NA*	42	38	4	*9.52*
Neurology	0	0	0	*NA*	0	*NA*	32	27	5	*15.63*
Nephrology	0	0	0	*NA*	0	*NA*	40	34	6	*15.00*
Endocrinology	0	0	0	*NA*	0	*NA*	8	6	2	*25.00*
Paediatric Surgery	0	0	0	*NA*	0	*NA*	32	27	5	*15.63*
Plastic Surgery	0	0	0	*NA*	0	*NA*	40	36	4	*10.00*
CVTS	0	0	0	*NA*	0	*NA*	52	46	6	*11.54*
Cardiology	0	0	0	*NA*	0	*NA*	56	49	7	*12.50*
Medical Oncology	0	0	0	*NA*	0	*NA*	5	4	1	*20.00*
Surgical Oncology	0	0	0	*NA*	0	*NA*	5	1	4	*80.00*
Radiation Oncology	0	0	0	*NA*	0	*NA*	5	1	4	*80.00*
Anatomy	0	0	0	*NA*	0	*NA*	5	5	0	*0.00*

Departments	Paramedics						Other staff			
	SS	MIP	Vacancy	*Vacancy Percentage*	Vacancy filled up by Contract	*Total Vacancy Percentage*	SS	MIP	Vacancy	*Vacancy Percentage*
Urology	0	0	0	*NA*	0	*NA*	42	38	4	*9.52*
Emergency Medicine	0	0	0	*NA*	0	*NA*	32	28	4	*12.50*
Cardiac Anaesthesia	0	0	0	*NA*	0	*NA*	24	22	2	*8.33*
Phy. Medical. Rehab.	0	0	0	*NA*	0	*NA*	8	2	6	*75.00*
Medical Gastroent.	0	0	0	*NA*	0	*NA*	8	2	6	*75.00*
Surgical Gastr Ento	0	0	0	*NA*	0	*NA*	8	2	6	*75.00*
Other Departments										
(i) Medical Rec. Dept.	0	0	0	*NA*	0	*NA*	148	125	23	*15.54*
(ii) DEAN Office	0	0	0	*NA*	0	*NA*	176	142	34	*19.32*
(iii) Med. Supd. Office	0	0	0	*NA*	0	*NA*	110	109	1	*0.91*
(iv) Administration GMCH	0	0	0	*NA*	0	*NA*	130	107	23	*17.69*
TOTAL	**150**	**127**	**23**	***15.33***	**23**	***0.00***	**1698**	**1448**	**250**	***14.72***

(Source: Information provided by Goa Medical College and Hospital)
(The contract staff details in Nurses and Other Staff cadres was not provided by GMCH)

Appendix 3.1

(Referred to in Paragraph 3.3.1)

Details of Patient per day per Registration Counter and OPD cases per day per Doctor in North Goa District Hospital (NGDH) and selected CHCs

Year	NGDH								
	Total number of Patients	Increase/ decrease in number of patients wrt 2016-17	Percentage of increase/ decrease wrt 2016-17	No of registration Counters	Patients to be registered per counter per day, (NHM Assessors' Guidebook, 2013[1])	No of Working days in the Year	Patient per day per Registration Counter	No of Doctors	Patients per day per Doctor
2016-17	109437	-	-	4	54 to 90	310	88.26	19	18.58
2017-18	234295	124858	114.09	4	54 to 90	310	188.95	19	39.78
2018-19	233152	123715	113.05	4	54 to 90	310	188.03	19	39.58
2019-20	256522	147085	134.40	4	54 to 90	310	206.87	19	43.55
2020-21	101955	-7482	-6.84	4	54 to 90	310	82.22	19	17.31
2021-22	105627	-3810	-3.48	4	54 to 90	310	85.18	19	17.93
Total	**1040988**	**-**	**-**	**4**	**-**	**1860**	**139.92**	**19**	**29.46**

(Source: Information furnished by the NGDH, Mapusa)

Details of Patient per day per Registration Counter and OPD cases per day per Doctor in Selected CHCs

Year	CHC Canacona								
	Total number of Patients	Increase/ decrease in number of patients wrt 2016-17	Percentage of increase/ decrease wrt 2016-17	No of registration Counters	Patients to be registered per counter per day, (NHM Assessor's Guidebook, 2014[2])	No of Working days in the Year	Patient per day per Registration Counter	No of Doctors	Patients per day per Doctor
2016-17	53244	-	-	1	54 to 90	310	171.75	3	57.25
2017-18	58031	4787	8.99	1	54 to 90	310	187.20	3	62.40
2018-19	56608	3364	6.32	1	54 to 90	310	182.61	3	60.87
2019-20	52036	(-)1208	(-)2.27	1	54 to 90	310	167.86	3	55.95
2020-21	37093	(-)16151	(-)30.33	1	54 to 90	310	119.65	3	39.88
2021-22	45324	(-)7920	(-)14.87	1	54 to 90	310	146.21	3	48.74
Total	**302336**	**-**	**-**	**1**	**-**	**1860**	**162.55**	**3**	**54.18**

(Source: Information furnished by the CHC Canacona)

[1] (Case paper registration counter open hours in a day) 4 hours and 30 minutes X 12 (NHM Assessors' Guidebook, 2013, average time taken for registration, 12-20 patients per hour/counter) = 54-90.

[2] (Case paper registration counter open hours in a day) 4 hours and 30 minutes X 12 (NHM Assessors' Guidebook, 2014, average time taken for registration, 12-20 patients per hour/counter) = 54-90.

Year	CHC Pernem								
	Total number of Patients	**Increase/ decrease in number of patients wrt 2016-17**	**Percentage of increase/ decrease wrt 2016-17**	**No. of registration Counters**	**Patients to be registered per counter per day (NHM Assessors' Guidebook, 2014)**	**No of Working days in the Year**	**Patient per day per Registration Counter**	**No of Doctors**	**Patients per day per Doctor**
2016-17	46350	-	-	1	54 to 90	310	149.52	3	49.84
2017-18	47259	909	1.96	1	54 to 90	310	152.45	3	50.82
2018-19	54171	7821	16.87	1	54 to 90	310	174.75	3	58.25
2019-20	35365	(-)10985	(-)23.70	1	54 to 90	310	114.08	3	38.03
2020-21	37593	(-)8757	(-)18.89	1	54 to 90	310	121.27	3	40.42
2021-22	50792	4442	9.58	1	54 to 90	310	163.85	3	54.62
Total	**271530**	**-**	-	**1**	**-**	**1860**	**145.98**	**3**	**48.66**

(Source: Information furnished by the CHC, Pernem)

Appendix 3.2

(Referred to in Paragraph 3.3.4)

Details of Maternity and Childcare Services along with availability of Beds in both North Goa and South Goa Districts Hospitals

Neonatal Intensive Care Unit of North Goa District Hospital

Year	No. of cases	No. of Beds
2016-17	114	5
2017-18	116	5
2018-19	100	5
2019-20	89	5
2020-21	65	5
2021-22	63	5

Maternity cases of North Goa District Hospital

Year	No. of Cases	No. of Beds
2016-17	3280	59
2017-18	3538	59
2018-19	3724	59
2019-20	3742	59
2020-21	2314	59
2021-22	1992	59

Neonatal Intensive Care Unit of South Goa District Hospital

Year	No. of cases	No. of Beds
2016-17	361	5
2017-18	377	5
2018-19	400	5
2019-20	377	5
2020-21	323	5
2021-22	378	6

Maternity cases of South Goa District Hospital

Year	No. of cases	No. of Beds
2016-17	3552	57
2017-18	3879	49
2018-19	3763	51
2019-20	3641	51
2020-21	3382	67
2021-22	3877	88

(Source: - Information furnished by the Hospitals)

Appendix 4.1

(Referred to in Paragraph 4.3.2)

10 test-checked medical equipment procurements.

Sl. No.	Year & Month of tender	Year & Month of installation	Name of the equipment	Amount (*₹ in crore*)	No. of bidders
1	November 2016	August 2017	CT scanner	2.11	Two
2	June 2020	July 2021 to January 2022	Bio-medical waste automatic auto clave (4 numbers)	0.65	Two (one bidder was disqualified as the specifications were not matching)
3	September 2019	August and September 2020	Color Doppler (2 number)	0.75	One
4	-*	March 2020	200 ICU Ventilators at GMCH	16.31	For COVID-19 through direct purchase.
5	-#	February 2020	High end echocardiography	0.57	One
6	February 2019	July 2021	LAB scan 3D system	0.76	One
7	October 2018	May 2020	Multipara monitors (7 numbers)	0.61	One
8	August 2018	January 2020	New advanced ventilators under buyback offer	2.17	Two
9	November 2016	July 2018	Conventional and high frequency neonatal ventilators	1.36	Two (one bidder was disqualified as the EMD amount was not deposited in ITCGL account)
10	August 2018	March 2020	Operating microscope	0.78	One

(Source: Information collected from GMCH and DHS)

** No tender date as it was a direct purchase.*

 # No tender date as the purchase order was issued as additional order to the previous supplier/vendor.

Appendix 7.1

(Referred to in Paragraph 7.2.1(iii))

Availability of equipment, consumables and miscellaneous supplies in test-checked HWCs (SCs)

Type of equipment, consumables and miscellaneous supplies	IPHS Norms	Name of Sub-Centres									
		Ambelim	**Betalbatim**	**Colva**	**Veling**	**Nanoda**	**Sal**	**Nagargao**	**Piligao**	**Siolim**	**Cola**
Clinical material, Tools and Equipment	Required	65	65	65	65	65	65	65	65	65	65
	Available	19	25	22	20	30	32	22	12	15	20
	***Per cent* unavailable**	71	62	66	69	54	51	66	82	77	69
Linen, Consumables and Misc.	Required	37	37	37	37	37	37	37	37	37	37
	Available	19	19	20	20	22	21	25	20	19	17
	***Per cent* unavailable**	49	49	46	46	41	43	32	46	49	54
Diagnostic material and reagents for screening	Required	19	19	19	19	19	19	19	19	19	19
	Available	06	07	07	05	07	05	05	05	05	04
	***Per cent* unavailable**	68	63	63	74	63	74	74	74	74	79

(Source: Information furnished by Sub-centres)

Appendix 7.2

(Referred to in Paragraph 7.2.1(iv))

Shortfall in manpower in test-checked HWCs (Sub-centres)

Name of the post	IPHS Norms	Name of Sub Centres									
		Ambelim	**Colva**	**Betalbatim**	**Veling**	**Cola**	**Sal**	**Nanoda**	**Nagargao**	**Piligao**	**Siolim**
ASHA	Required	7	8	4	7	3	3	3	3	8	8
	MIP	0	0	0	0	0	0	0	0	0	0
	Shortfall	**7**	**8**	**4**	**7**	**3**	**3**	**3**	**3**	**8**	**8**
Mid-Level Health Provider	SS	1	1	1	1	1	1	1	1	1	1
	MIP	0	0	0	0	0	0	0	0	0	0
	Shortfall	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**
Multi-purpose Worker (Male)	SS	1	1	1	1	1	1	1	1	1	1
	MIP	1	1	1	1	1	1	1	1	0	0
	Shortfall	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**	**1**
Multi-purpose Worker (Female)	SS	2	2	2	2	2	2	2	2	2	2
	MIP	1	1	0	1	2	1	1	1	2	2
	Shortfall	**1**	**1**	**2**	**1**	**0**	**1**	**1**	**1**	**0**	**0**

(*Source: Information furnished by the sampled Sub-Centres*)

Appendix 9.1

(Referred to in Paragraph 9.5)

Performance of Goa

SDG Target No.	No. of Indicators	Indicators	Target	Achievement
3.1 By 2030, reduce the global maternal mortality ratio to less than 70 per 1,00,000 live births	1	3.1.1 Maternal Mortality Ratio (Per 1,00,000 live births)	70	73.64
	2	3.1.2 Percentage of births attended by skilled health personnel (Period 5 years)	100	99.10
	3	3.1.3 Percentage of births attended by skilled health personnel (Period 1 year)	100	99.96
3.2 By 2030, end preventable deaths of new borns and children under 5 years of age, with all countries aiming to reduce neonatal mortality to at least as low as 12 per 1000 live births and U-5 mortality to at least as low as 25 per 1000 live births	4	3.2.1 Under-five mortality rate (per 1000 live births)	25	10.60
3.3 By 2030, end the epidemic of AIDS, TB, malaria and neglected tropical disease and combat hepatitis, water-borne diseases and other communicable diseases	5	3.3.1 Number of new HIV infections per 1000 uninfected population	0.0007	0.07
	6	3.3.2 Tuberculosis incidence per 1,00,000 population by 2025	242	134.00
	7	3.3.3 Malaria incidence per 1000 population	0.00064	0.001
	8	3.3.5 Dengue: Case Fatality Ratio	0.23	0.23
	9	3.3.6 Proportion of grade-2 cases amongst new cases of Leprosy, (Per million population)	0.00	0.00
	10	3.3.7 Percentage of blocks reporting < 1 Kala Azar case per 10,000 population out of the total endemic blocks	100	100.00
	11	3.3.8 Percentage of districts reporting < 1% Microfilaria rate (MF) out of Targeted endemic districts	100	100.00
3.4 By 2030, reduce by one third premature mortality from non-communicable diseases through prevention and treatment and promote mental health well being	12	3.4.1 Suicide mortality rate (per 1,00,000 population)	3.50	19.50
3.5 Strengthen the prevention and treatment of substance abuse, including narcotic drug abuse and harmful use of alcohol	13	3.5.2 Number of persons treated in de-addiction centres (in number)	500.00	500.00
3.6 By 2020, halve the number of global deaths and injuries from road traffic accidents	14	3.6.1 People killed/injured in road accidents (per 1,00,000 population) (similar to 11.2.2) by 2020	5.81	14.49
3.7 By 2030, ensure universal access to sexual and reproductive health-care services, including	15	3.7.1 Percentage of currently married women aged 15-49 years who have their need for family planning satisfied with modern methods, 2015-16	100	60.10

SDG Target No.	No. of Indicators	Indicators	Target	Achievement
for family planning, information and education, and the integration of reproductive health into national strategies and programmes	16	3.7.3 Percentage of institutional Births (5 years/1 year) 2015-16	100	99.95
	17	3.7.4 Percentage of currently married women (15-49 years) who use any modern family planning methods	100	60.10
	18	3.7.5 Percentage of women aged 15-19 years who were already mothers or pregnant	0.01	2.80
3.8 Achieve universal health coverage, including financial risk protection, access to quality essential healthcare services and access to safe, effective, quality and affordable essential medicines and vaccines for all	19	3.8.1 Percentage of currently married women (15-49 years) who use any modern family planning methods	100.00	60.10
	20	3.8.3 Percentage of people living with HIV currently receiving ART among the detected numbers of adults and children living with HIV	100.00	83.44
	21	3.8.7 Percentage of TB cases successfully treated (cured plus treatment completed) among TB cases notified to the national health authorities during a specified period	100.00	80.30
	22	3.8.8 Total physicians, nurses and midwives per 10,000 population	45.00	57.54
3.b Support the research and development of vaccines and medicines for the communicable and non-communicable diseases that primarily affect developing countries, provide access to affordable essential medicines and vaccines	23	3.b.1 Percentage of children aged 12-23 months fully immunised (BCG, Measles and three doses of Pentavalent vaccine)	100.00	91.00
3.c Substantially increase health financing and the recruitment, development, training and retention of the health workforce in developing countries, especially in least developed countries and small island developing states	24	3.c.1 Total physicians, nurses and midwives per 10,000 population, in percentage	45.00	57.54

(Source: GOA SDG INDEX-2023 published by DPS&E, Government of Goa)

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