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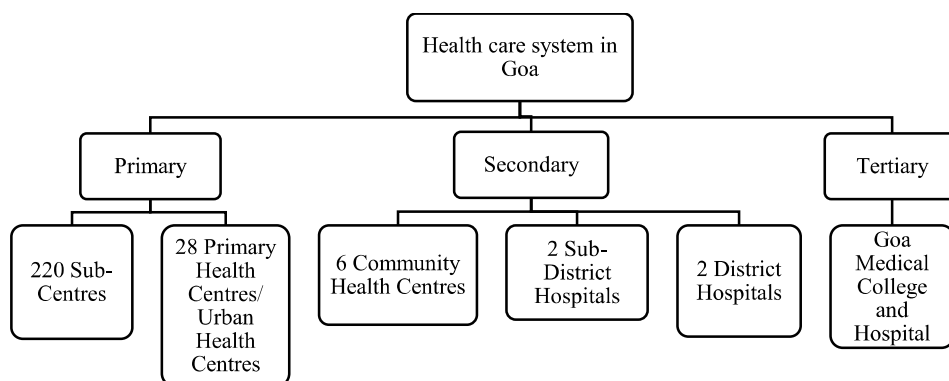
Robust Public Health Infrastructure and effective management of health services are of vital importance to ensure good health of citizens. Public Health Infrastructure comprises hospitals and other health care institutions while the health services can be broadly divided into three categories namely:

(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]

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                        Health care system in
                                Goa

        Primary                 Secondary               Tertiary

  220 Sub-   28 Primary    6 Community   2 Sub-     2 District   Goa
  Centres    Health        Health        District   Hospitals   Medical
             Centres/      Centres       Hospitals              College
             Urban                                              and
             Health                                             Hospital
             Centres
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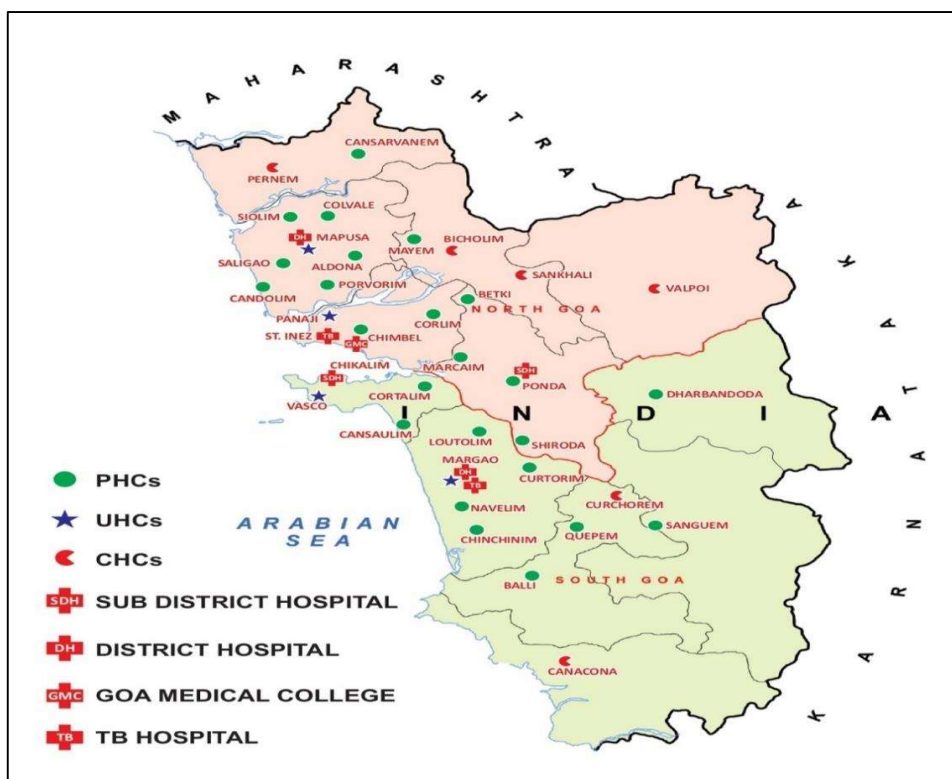*(Source: Data compiled from information received from DHS and GMCH)*

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**

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[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.**

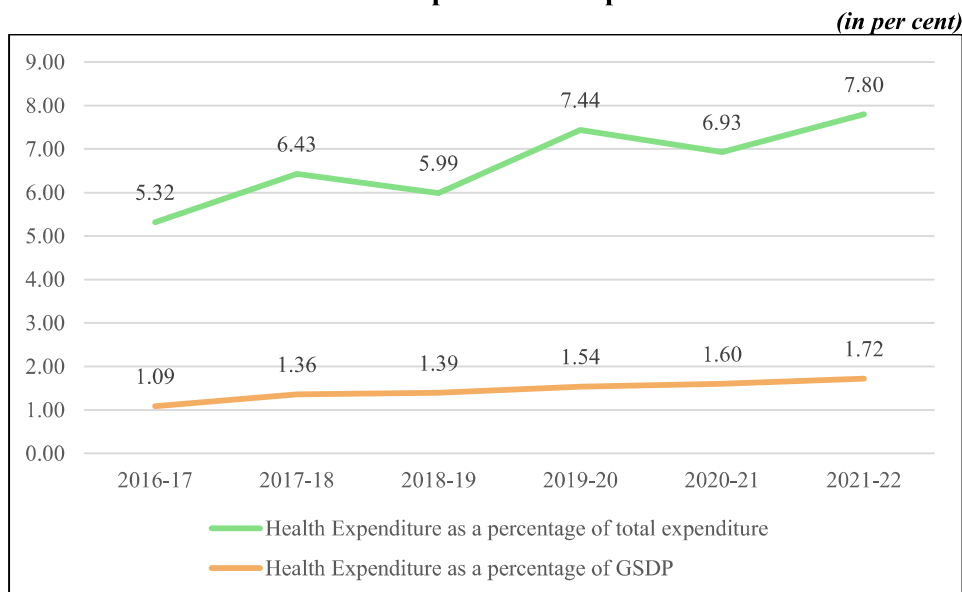**Table 1.3: Public expenditure on healthcare**

(₹ 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*)

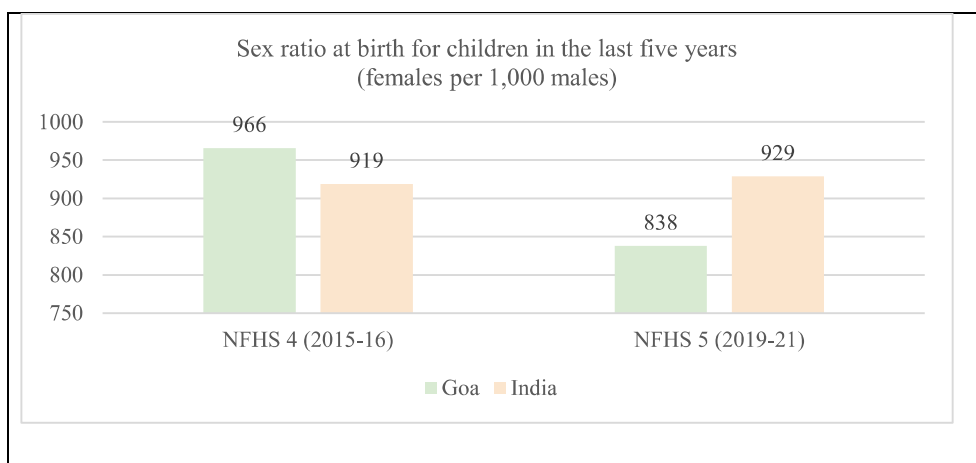It can be seen that out of six indicators, four indicators[2] are better than the All India average in the State.

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

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[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.

Sex ratio at birth for children in the last five years (females per 1,000 males)

	NFHS 4 (2015-16)	NFHS 5 (2019-21)
Goa	966	838
India	919	929

(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.