Chapter I: Introduction

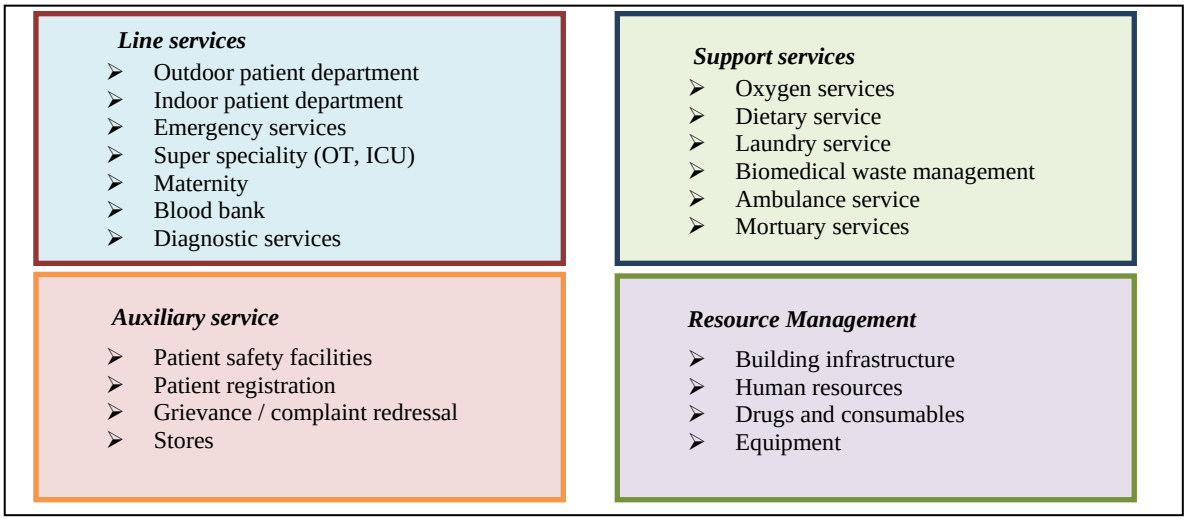
Health is one of the most important parameters for ascertaining the quality of human life. To keep people healthy and to upgrade their level of living, Central and State Governments are strengthening, modernising and expanding health infrastructure and medical services. Public health infrastructure provides communities, States and the nation with the capacity to prevent disease, promote health, and prepare for and respond to both acute (emergency) threats and chronic (ongoing) challenges to health. Infrastructure is the foundation for planning, delivering, evaluating, and improving public health. Ensuring healthy lives and promoting well-being at all ages is essential to sustainable development. The Health Goal-SDG 3 envisages to "ensure healthy lives and promote wellbeing for all at all ages". The SDG Declaration emphasises that universal health coverage and access to quality healthcare should be achieved for the overall health goal.

The National Health Mission (NHM) Framework for implementation and Indian Public Health Standards (IPHS) envisage a wide range of services to be provided by the health institutions, wherein it can provide all basic speciality services and gradually develop super-speciality services. However, the demand for services at the health institutions is not satisfactorily catered due to factors like inadequacy of human resources, critical equipment, infrastructure, etc. Consequently, the tertiary[1] care hospitals are burdened with high patient load due to less than desired number of functional specialities at primary[2] and secondary[3] healthcare institutions/hospitals.

1.1 Health services

Health services provided by hospitals can broadly be divided into the following categories viz., line services, support services, auxiliary services and resource management as shown in **Chart 1.1**.

Chart 1.1: Hospital services



1 Hospitals where specialised care is provided usually on referral basis.
2 Institutions which provide initial healthcare services to the people.
3 Patients requiring more serious healthcare attention are referred to the second tier of the healthcare system for providing preventive, promotive and curative healthcare services.

All public health services depend on the presence of basic infrastructure, including availability of skilled human resources. Every public health programme such as immunisation, infectious disease monitoring, cancer and asthma prevention, drinking water quality or injury prevention requires health professionals who are competent in synergising their professional and technical skills in public health and provide organisations with the capacity to assess and respond to community health needs. Public health infrastructure has been referred to as "the nerve centre of the public health system". While creation of a strong infrastructure depends on many organisations, public health agencies (Health Departments) are considered primary players.

The primary objective of the National Health Policy, 2017 is to improve health status through concerted policy action in all sectors and expand preventive, promotive, curative, palliative and rehabilitative services provided through the public sector. The policy also recognises the pivotal importance of Sustainable Development Goals to ensure healthy lives and promote well-being for all at all ages. At the global level, the Sustainable Development Agenda aims to ensure healthy lives and promote well-being for all at all ages by 2030 as per Sustainable Development Goal (SDG) 3.

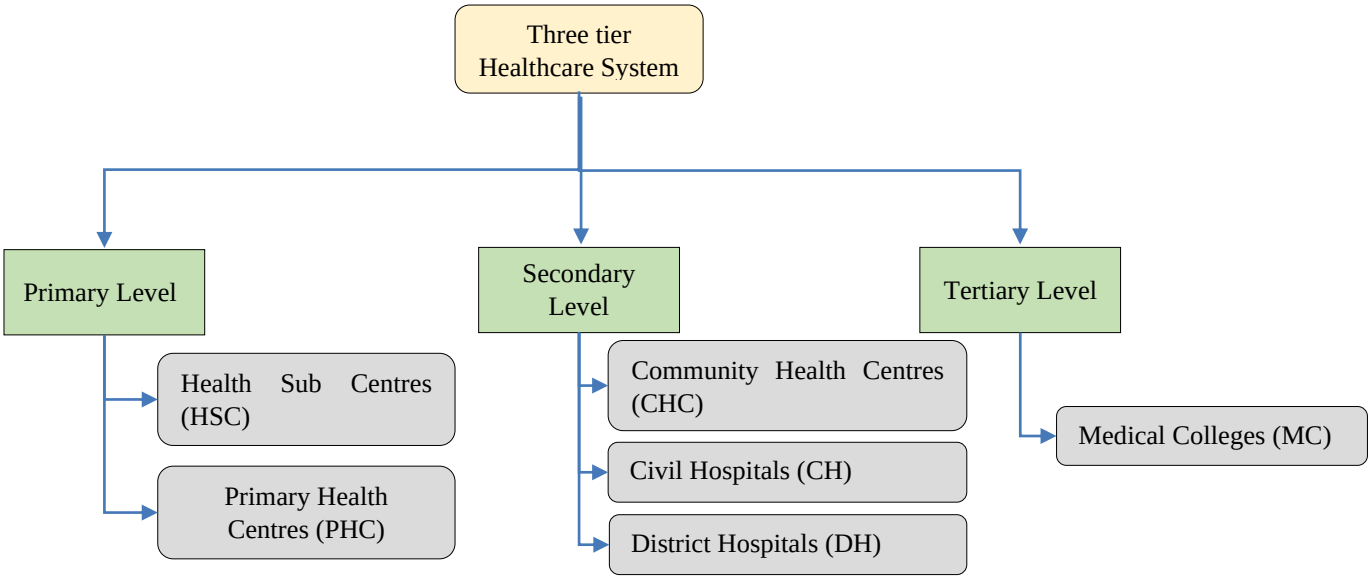
Indian Public Health Standards (IPHS) are a set of uniform standards envisaged to improve the quality of healthcare delivery in the country. The IPHS norms were introduced in 2007 and revised in 2012 keeping in view the changing protocols of the existing programmes and introduction of new programmes especially for Non-Communicable Diseases. However, the State has not adopted IPHS norms; instead it has its own norms for healthcare services.

India's public health system has developed over the years as a three-tier system, comprising primary, secondary and tertiary levels of healthcare. Health Sub-Centres (HSCs) and Primary Health Centres (PHCs) are primary level healthcare units which provide initial healthcare services to the people. Patients requiring more serious healthcare attention are referred to the second tier of the healthcare system consisting of Community Health Centres (CHCs), Sub-District/ Sub-Divisional Hospitals (SDH) and District Hospitals (DH), established in each district for providing preventive, promotive and curative healthcare services to the population. A tertiary referral hospital is a hospital that provides tertiary care, which is healthcare from specialists in a large hospital after referral from primary care and secondary care. Tertiary healthcare is provided by the hospitals associated with the Government Medical colleges.

1.2 Overview of healthcare facilities in the State

In Himachal Pradesh, public healthcare is structured into three levels for providing primary care, secondary care and tertiary care as indicated in **Chart 1.2**.

Chart 1.2: Healthcare System in Himachal Pradesh

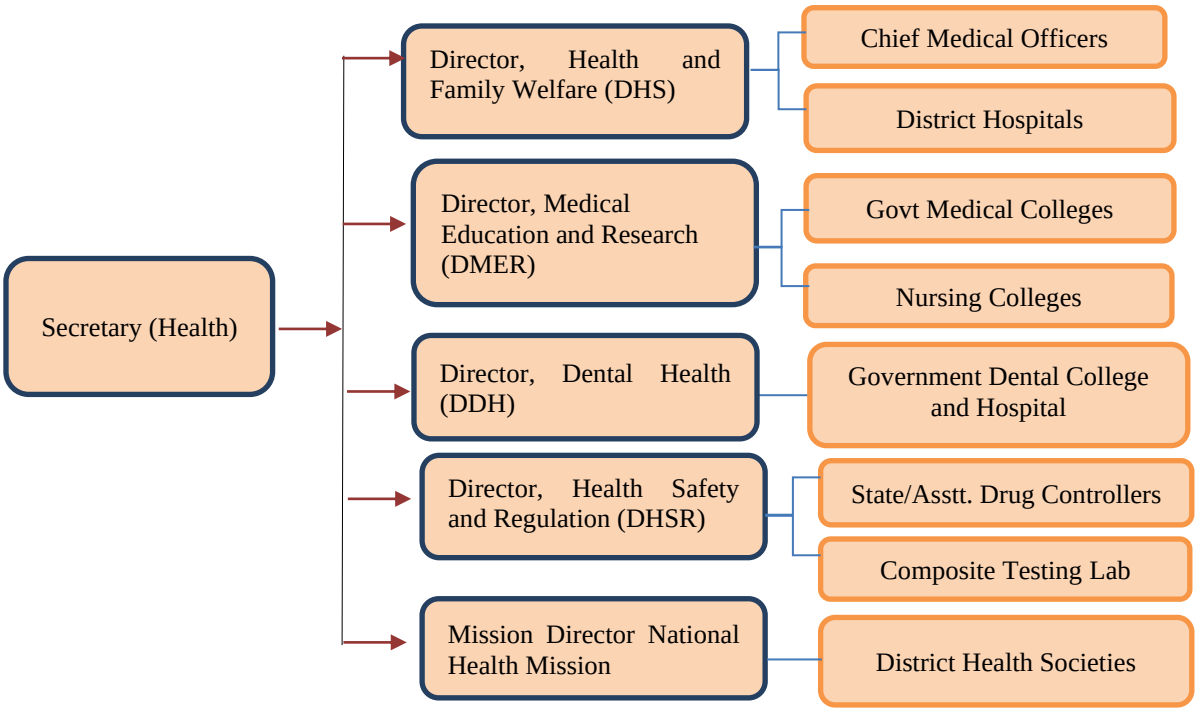


Himachal Pradesh has a population of 68.65 lakh (Census-2011). Public healthcare in the State is structured into three levels for providing primary care, secondary care and tertiary care as indicated in **Chart 1.2**, under the Department of Health and Family Welfare (Primary level: 2,114 HSCs and 580 PHCs; secondary level: 105 CHCs, 89 sub-divisional hospitals/ civil hospitals and 12 district/zonal/regional hospitals; tertiary level: six medical college hospitals and one super speciality Institute/ two nursing colleges and their associated hospitals).

1.3 Organisational set-up

The Department of Health and Family Welfare is headed by Secretary (Health), under whom there are five Directorates as shown in **Chart 1.3** below.

Chart 1.3: Organogram of Health and Family Welfare Department

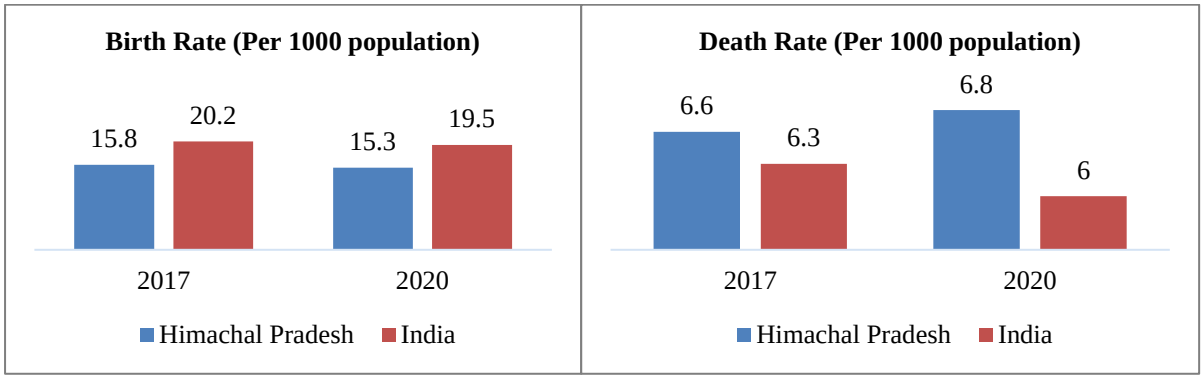


Each district has one Chief Medical Officer (CMO), one District Hospital (DH) and one District Health Society. There is only one Composite Testing Laboratory which is under the control of Director, Health Safety and Regulation.

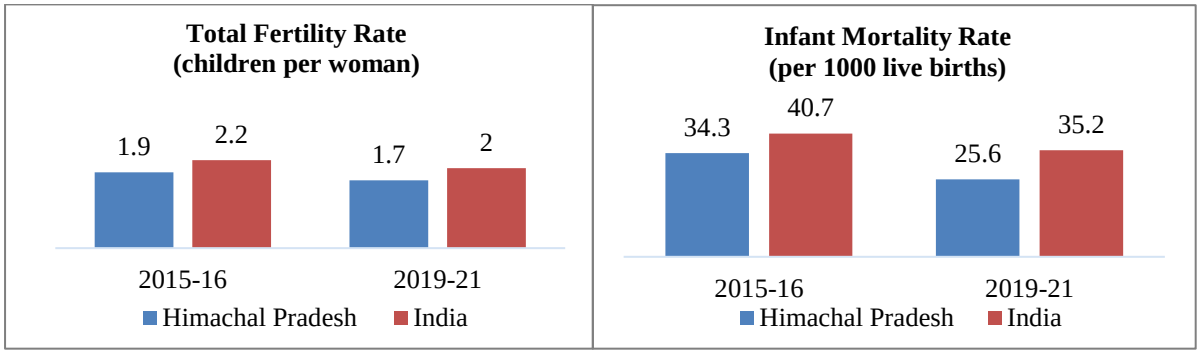
1.4 Status of Health Indicators in the State

The healthcare services in a State can be evaluated on the basis of the achievement against benchmarks of health indicators. The status of a few important health indicators of Himachal Pradesh vis-à-vis the national average are given in **Chart 1.4**.

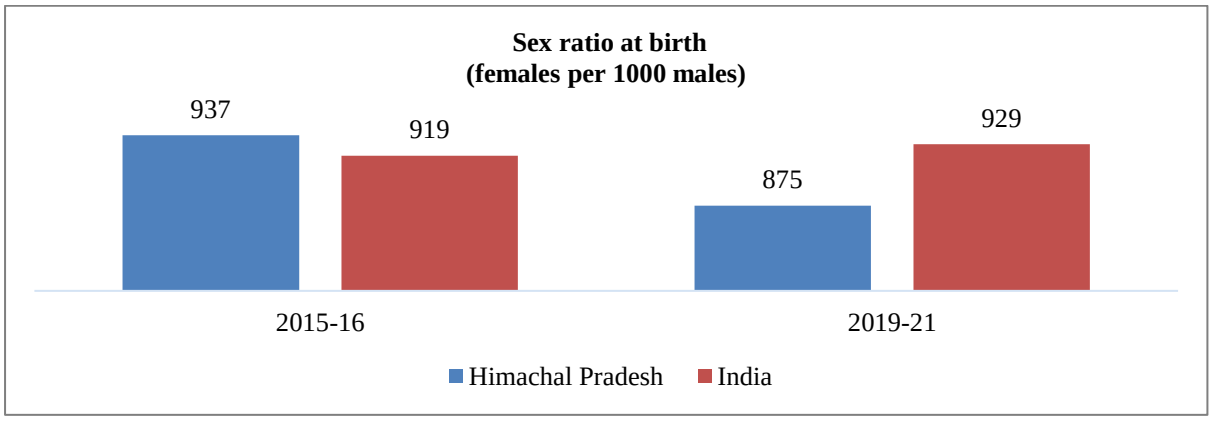
Chart 1.4: Health Indicators in the State



Source: Health and Family Welfare Statistics in India 2019-20 (for 2017 figures) and Sample Registration System bulletin May 2022 (for 2020 figures)



Source: NFHS-4 (2015-16), NFHS-5 (2019-21 for India and 2019-20 for Himachal Pradesh which was covered in Phase-I of the survey)



Source: NFHS-4 (2015-16), NFHS-5 (2019-21 for India and 2019-20 for Himachal Pradesh which was covered in Phase-I of the survey)

It was observed that the birth rate (per 1,000) in the State has decreased from 15.8 (2017) to 15.3 (2020) and remained less than the national figures. Death rate (per 1,000) in the State increased from 6.6 (2017) to 6.8 (2020) which is above the national figures. In case of total fertility rate, State figures decreased from 1.9 (2015-16) to 1.7 (2019-20) and were lower than the national figures. Infant mortality rate decreased from 34.3 to 25.6 and was less than the national figures. Sex ratio at birth decreased from 937 (2015-16) to 875 (2019-20).

Maternal mortality rate could not be calculated as number of births in the State were less than one lakh. However as per HMIS data, 71 maternal deaths took place in 2020-21.

The State fared poorly compared to the national indicators in terms of death rate and sex ratio at birth. The State indicators were lower than the national indicators in terms of birth rate and total fertility rate. However, the State fared better in terms of infant mortality rate.

1.5 Himachal Pradesh health indicators compared with National Health Indicators as per National Family Health Survey-5 (NFHS-5)

The National Family Health Survey conducted in 2015-16 (NFHS-4) and NFHS-5 conducted in 2019-21, provides information on population, health and nutrition for India and each state/union territory (UT). Some of the important health indicators of the State of Himachal Pradesh are given below:

Table 1.1: Himachal Pradesh Health Indicators as per NFHS-5

Indicator	NFHS- 4 (2015-16)	NFHS- 4 (2015-16)	NFHS- 5 (2019-20)	NFHS- 5 (2019-21)
	HP	India	HP	India
Sex ratio of the total population (females per 1,000 males)	1,078	991	1,040	1,020
Sex ratio at birth for children born in the last five years (females per 1,000 males)	937	919	875	929
Total fertility rate (children per woman)	1.9	2.2	1.7	2
Neonatal mortality rate (NNMR)	25.5	29.5	20.5	24.9
Infant mortality rate (IMR)	34.3	40.7	25.6	35.2
Under-five mortality rate (U5MR)	37.6	49.7	28.9	41.9
Mothers who had an antenatal check-up in the first trimester (percent)	70.5	58.6	72.4	70
Mothers who had at least four antenatal care visits (*per cent)*	69.1	51.2	70.3	58.1
Average out-of-pocket expenditure per delivery in a public health facility (₹)	3,329	3,197	3,760	2,916
Institutional births (*per cent*)	76.4	78.9	88.2	88.6
Births delivered by Caesarean section (*per cent*)	16.7	17.2	21	21.5

Source: State health indicators (i) Green: improved & (ii) Red: worsened/decreased

Health indicators (2019-20) of the State are better than national indicators except for sex ratio of children born in the last five years and average out-of-pocket expenditure per delivery in a public health facility. Sex ratio of total population declined from 1,078 to 1,040 but it remained above the national average of 1,020. Sex ratio at birth for children born in the last five years at 875 also remained below the national average of 929.

There has been improvement in neonatal mortality rate (NNMR), infant mortality rate (IMR), under-five mortality rate (U5MR), antenatal check-ups and institutional births in Himachal Pradesh.

There has been increase in births delivered by Caesarean section and average out-of-pocket expenditure per delivery in a public health facility in the State.

1.6 Audit Objectives

The new National Health Policy (NHP) adopted in 2017 builds on the progress made in 14 years since the last NHP 2002. The context had changed in four major ways. First, although maternal and child mortality have rapidly declined, there is growing burden on account of non-communicable diseases and some infectious diseases. The second important change is the emergence of a robust healthcare industry estimated to be growing at double digit. The third change is the growing incidences of catastrophic expenditure due to healthcare costs, which are presently estimated to be one of the major contributors to poverty. Fourth, a rising economic growth enables enhanced fiscal capacity. Therefore, the new health policy was adopted to respond to these contextual changes. The primary aim of the NHP 2017 is to inform, clarify, strengthen and prioritise the role of the Government in shaping health systems in all its dimensions.

Considering the goals laid down in the NHP 2017 and experience during COVID-19 pandemic, it has become crucial to assess the adequacy of financial resources, availability of health infrastructure, manpower, machinery and equipment in the health institutions as well as efficacy in the management of health services in the State through existing policy interventions and scope for further improvement. Thus, to ensure timely and systematic corrections, a performance audit on "Public Health Infrastructure and Management of Health Services" in the State of Himachal Pradesh was taken up. The objective of the Performance Audit (PA) was to provide a holistic view of the healthcare sector in the State i.e., a macro picture using State-level information and data and a micro picture arising from detailed audit analysis/findings on maintenance of infrastructure and delivery of healthcare services.

The objectives of the Performance Audit (PA) were to:

- assess the availability of necessary human resources at all levels e.g. doctors, nurses, paramedics etc.;
- assess the availability of drugs, medicines, equipment and other consumables;
- assess the availability and management of healthcare infrastructure;
- assess the adequacy of funding for healthcare;
- examine the funding and spending of various schemes of the Government of India;
- examine the adequacy and effectiveness of the regulatory mechanisms for ensuring that quality healthcare services are provided in the public/private healthcare institutions/ practitioners; and
- assess whether State spending on health has improved the health and well-being of the people as per SDG 3.

1.7 Scope of Audit and Methodology adopted

The audit was conducted for the period 2016-21. Wherever feasible, the data has been updated up to the year 2021-22 and in case of human resources upto March 2023. Districts were considered as the first unit of sampling and blocks were taken as the second level of selection. Selection of the field units were made since simple random sampling without replacement method using IDEA software.

The following components covered under NHM schemes/programmes were also selected based on expenditure:

(i) Reproductive, Maternal, Child Health

Objective: Improving maternal and child health and their survival along with focus on reducing maternal, new-born and child mortality.

(ii) Routine Immunisation

Objective: Immunisation of children against 12 preventable diseases[4] under universal immunisation programme (UIP).

(iii) National TB Control Programme

Objective: Control and elimination of Tuberculosis in India by 2025.

(iv) Health System Strengthening

Objective: Adoption of the Indian Public Health Standards, strengthen the public health system including upgradation of existing or construction of new infrastructure and strengthening the delivery of Primary Healthcare, through establishment of "Health and Wellness Centres".

(v) Infrastructure maintenance

Objective: Reimbursement of salary of regular staff under some of the schemes by GoI.

(vi) Covid-19

Objective: Due to the pandemic, to assess the adequacy of financial resources, availability of health infrastructure, manpower, machinery and equipment in the health institutions as well as efficacy in the management of health services in the State.

The audit sample is described below.

[4] Diphtheria, Pertussis, Tetanus, Polio, Measles, Rubella, severe form of Childhood Tuberculosis, Hepatitis B, Meningitis & Pneumonia caused by Haemophilus Influenzae type B, Rotavirus diarrhoea, Pneumococcal Pneumonia and Japanese Encephalitis.

All five Directorates

- Director, Health and Family Welfare
- Director, Medical Education and Research
- Director, Health Safety and Regulation
- Director, Dental Health
- Mission Director, National Health Mission

Three districts (Kinnaur, Solan and Kangra) for field study out of 12 districts selected using Simple Random Sampling method

- All three District Hospitals/Chief Medical Officers (CMO) of selected districts.
- Eight out of 20 Block Medical Officers (BMOs)
- Six out of 10 Civil Hospitals (CHs)
- Seven out of 10 Community Health Centres (CHCs) were selected as in one BMO there was no CHC.
- 17 out of 50 Primary Health Centres* (PHCs). To compensate the deficit of one CHC, one additional PHC was selected
- 32 out of 221 Health Sub-Centres** (HSCs)
- Two out of Six Medical Colleges i.e. IGMC Shimla and RPGMC Kangra
- Two Nursing colleges-Shimla and Mandi
- Two out of four training centres for health staff in Shimla and Kangra
- State Drug Controller, Baddi, Solan district and two out of four Assistant Drug Controllers, Baddi and Dharamshala
- Composite Testing Laboratory, Kandaghat
- Five out of six specialised hospitals including one Dental college

* *There were 580 Primary Health Centres (PHCs) in Himachal Pradesh, out of which 431 PHCs were designated as HWCs.*

** *There were 2,114 Health Sub-Centres (HSCs) in Himachal Pradesh, out of which 1,321 HSCs were designated as HWCs.*

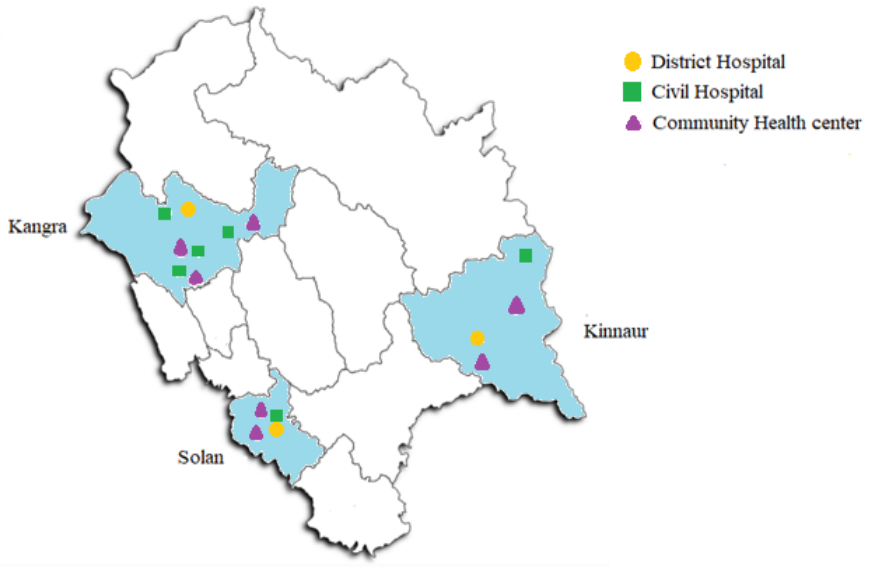
Sustainable Development Goals (SDGs) were analysed and mapped with Himachal Pradesh Vision 2030 Document. Moreover, the records pertaining to assistance/grants/equipment received for COVID-19 were scrutinised. Funding by Local Bodies and private sector on healthcare was excluded. However, the regulatory aspects/information available with the Health Department were reviewed during the Performance Audit.

Apart from scrutiny of records in the aforementioned offices, joint physical verification with the departmental officers to verify the existing healthcare infrastructure and services in public/private health institutions, progress of construction works and joint physical verification of drug testing through the Drug Controller was also carried out. Interview/survey of the beneficiaries/stakeholders was carried out to assess the effectiveness of delivery of medical and other services and existence of required infrastructure. Documentary and photographic evidences were also collected to support the audit observations.

An entry conference with Secretary (Health) was held on 7th December 2021, wherein the audit objectives, audit criteria, scope of audit, etc. were discussed.

Audit findings were discussed with the Secretary (Health) in an Exit Conference held on 19th January 2023 and views of the Government have been incorporated at appropriate places in the report.

Districts for selection of field units in Himachal Pradesh are depicted on the map below:



1.8 Audit Criteria

Criteria adopted for the performance audit include:

i. National Health Policy 2017 and NHM Assessor Guidebook 2013

ii. Indian Public Health Standards, 2012

iii. Sustainable Development Goals (SDG) -3

iv. The Indian Medical Council Act, 1956 replaced by National Medical Commission in 2019

v. Clinical Establishment Act, 2010 (as adopted by Himachal Pradesh in December 2012)

vi. Drugs & Cosmetics Act, 1940

vii. Drugs and Cosmetics Rules, 1945

viii. The Pre-Natal Diagnostic Techniques (Regulation and Prevention of Misuse) (PNDT) Act, 1994

ix. Bio-Medical Waste Management Rules, 2016

x. Atomic Energy Act, 1962 & Atomic Energy (Radiation Protection) Rules, 2004

xi. GOI/State scheme guidelines

xii. Himachal Pradesh Financial Rules, 1971 and 2009 and notifications/ orders issued by the State Government.

1.9 Consideration of Ayushman Bharat in this report

Ayushman Bharat (AB), the flagship health scheme of the Government of India, was launched in September 2018 to achieve Universal Health Coverage as recommended in the National Health Policy, 2017. AB adopts a continuum of care approach, comprising two inter-related components, which are:

Health and Wellness Centres (HWCs)

- Creation of 1,50,000 HWCs by transforming the existing Sub Centres and Primary Health Centres in February 2018.
- Aim to deliver Comprehensive Primary Health-Care (CPHC) covering maternal and child health services and non-communicable diseases, including free essential drugs and diagnostic services.

PM-Jan Arogya Yojana (PM-JAY)

- Aims to provide a cover of ₹ five lakh per family per year for secondary and tertiary care hospitalisation across public and private empanelled hospitals in India.
- Over 10.74 crore poor and vulnerable entitled families (approximately 50 crore beneficiaries) are eligible for these benefits.
- Provides cashless access to healthcare services for the beneficiary at the point of service, that is, the hospital.
- Benefits of the scheme are portable across the country i.e., a beneficiary can visit any empanelled public or private hospital in India to avail cashless treatment.
- Services include approximately 1,350 procedures covering all the costs related to treatment, including but not limited to drugs, supplies, diagnostic services, physician's fees, room charges, surgeon charges, OT and ICU charges etc.
- Public hospitals are reimbursed for the healthcare services at par with the private hospitals.

In Himachal Pradesh 4,78,985 families were eligible for enrolment under PM-JAY as per Rashtriya Swasthya Bima Yojana which were targeted to be enrolled under PM-JAY. Around 11,13,526 beneficiaries of 4,32,182 families have been verified and provided with Ayushman cards under the scheme as of 31st March 2022, leaving 46,803 eligible families yet to be covered under PM-JAY.

PM-JAY cards are being issued against each household identity document (ID). The district-wise households with size are mentioned in **Table 1.2**.

Table 1.2: Coverage of Households and Beneficiaries across districts under PMJAY

Name of District	Number of households with size			Total
	1 to 10 members	11 to 20 members	21 and above members	
Bilaspur	26,808	39	0	26,847
Chamba	35,983	11	0	35,994
Hamirpur	31,991	10	0	32,001
Kangra	90,418	15	0	90,433
Kinnaur	6,067	0	0	6,067
Kullu	27,858	21	0	27,879

Name of District	Number of households with size			Total
	1 to 10 members	11 to 20 members	21 and above members	
Lahaul-Spiti	2,154	0	0	2,154
Mandi	85,214	28	0	85,242
Shimla	40,394	24	0	40,418
Sirmaur	31,921	94	0	32,015
Solan	25,800	29	0	25,829
Una	24,775	15	0	24,790
Others#	2,513	0	0	2,513
Total	**4,31,896**	**286**	**0**	**4,32,182**

Source: State data warehouse

 # Families for which district is not mentioned in identity

An all-India Performance Audit of PMJAY was conducted for the period up to March 2021, in which Himachal Pradesh was one of the sampled States. The results of the said audit have been included in Report No. 11 of 2023 (Performance Audit of Ayushman Bharat-Pradhan Mantri Jan Arogya Yojana). In the current report, findings related to Health & Wellness Centres have been included in a separate chapter and implementation of Ayushman Bharat has also been considered while making recommendations in various areas of the health sector.

1.10 Audit Findings

The audit findings are given in the succeeding chapters:

Chapter No.	Subject
II	Human Resources
III	Healthcare Services
IV	Drugs, Equipment and other Consumables
V	Healthcare Infrastructure
VI	Financial Management
VII	Centrally Sponsored Schemes
VIII	Regulatory Mechanism
IX	Specialised Hospitals
X	Sustainable Development Goals (SDGs)-3