Sattva Knowledge Institute SKI primer

HEALTHCARE IN INDIA

November 2022

Acknowledgements

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EXECUTIVE SUMMARY

Status of health indicators in India

India has displayed significant commitment towards improving its health indicators and achieving the United Nations' Sustainable Development Goals (SDGs) by 2030. Although India's efforts to reduce noncommunicable diseases are in their infancy, it has managed to make significant strides in its fight against communicable diseases. These efforts – along with gaps in the availability of healthcare facilities – deeply influence India's performance with respect to SDG 3, 'Good Health and Well-being.'

Service delivery of healthcare in India

Public and private stakeholders including the government, non-governmental organisations (NGOs) and social enterprises have made the provision of healthcare in India possible through a number of rigorous national programmes, systemic innovations and connected public healthcare delivery touchpoints, with the private sector having a larger market share. Since health is a state subject, the central government implements policies while the states are tasked with delivering services. This is accomplished with a three-tiered model of primary, secondary and tertiary healthcare.

Systemic challenges impeding efficient care

India's healthcare system faces deep-rooted challenges such as poor delivery of care, infrastructural shortages, low government spending, lack of technology and poor health-seeking behaviour. Thus, there is a need for a foundational shift in the healthcare delivery ecosystem.

Priority areas likely to shape healthcare in India

To achieve universal healthcare, there is a need for health systems to prioritise these key areas: digital health; data-led decision-making; strengthening of primary health care; human workforce reforms; health financing reforms; increased public-private partnerships; driving innovations in drugs, vaccines and medical devices; and an intersectoral approach to health.

STATUS OF HEALTH INDICATORS IN INDIA

India has consistently improved its health indicators over the years.

		2005-06	2015-16	2020 -21	2030 SDG Targets
Reproductive, Maternal, Newborn, Child and Adolescent Health (RMNCH+A)	**Maternal Mortality Rate** [deaths per 100,000 live births]	254 (MoHFW 2022a)	176 (MoHFW 2022a)	113 (MoHFW 2022a)	70 (MoHFW 2022a)
	Infant Mortality Rate [deaths per 1,000 live births]	56 (World Bank n.d.d)	35 (World Bank n.d.d)	32 (NHM n.d.a)	28 (NHM n.d.a)
	Under-5 Mortality Rate [deaths per 1,000 live births]	74 (World Bank n.d.a)	50 (World Bank n.d.a)	36 (MoHFW 2022a)	23 (NHM n.d.a)
Communicable diseases	**Tuberculosis Incidence Rate** [incidence per 100,000 people]	279 (World Bank n.d.c)	217 (World Bank n.d.c)	188 (MoHFW 2022a)	44 (MoHFW n.d.d)

India's health policy has evolved from focusing mainly on infrastructure to emphasising a variety of levers in the effort to achieve Universal Health Coverage (UHC).

Establishing healthcare infrastructure → **Inclusion of para-professionals and semi-professionals** → **Commitment to Universal Health Coverage**

1952

Community Development Programme – Bhore Committee (Duggal 2002)

- A multipurpose programme covering health and sanitation through establishment of primary health centres (PHCs) and subcentres.
- Suggested one PHC for a population of 40,000.
- **Target**: Setting up Primary Health Units with 75 bedded hospitals for 10,000-20,000 population.
- Inclusion of three-month-long social medicine training for medical students.

1975

Srivastava Committee (MoHFP n.d.)*

- Suggested creation of bands of para-professional and semi-professional workers from within the community, capable of providing small curative services and trained for promotional and preventive health services.
- Recommended referral linkage system through internships for junior residents.
- Instrumental in the institution of Rural Health Service (1977).

1983

National Health Policy 1983 (MoHFW 1983)

- The first ever National Health Policy for realisation of Alma-Ata Declaration commitments.
- **Target**: Achieving UHC by 2000.
- Commitments could not be realised due to systemic and infrastructural shortcomings.

* Ministry of Health and Family Welfare (MoHFW) was previously named the Ministry of Health and Family Planning (MoHFP).

India's health policy has evolved from focusing mainly on infrastructure to emphasising a variety of levers in the effort to achieve Universal Health Coverage (UHC).

Focused programmes to reduce disease burden

Focus on providing quality healthcare through primary touchpoints

2002

National Health Policy (NHP) (MoHFW 2002)

- Increased investment toward infrastructural development with special focus on tackling polio, Human immunodeficiency virus (HIV), Acquired Immune Deficiency Syndrome (AIDS) and lymphatic filariasis (elephantiasis).
- Sets out allocation of increased sectoral share of total health spending to primary healthcare.

2017

National Health Policy (MoHFW 2017)

- Advocates a progressively incremental assurance-based approach towards realising healthcare as a fundamental right in the future.
- Echoes the previous commitments of NHP 2002 with additions such as recognition of noncommunicable diseases (NCD) or lifestyle diseases.
- Expands the scope of services of primary healthcare package to geriatric, palliative and rehabilitative care, enabling accessibility and reducing burden on district hospitals.
- Proposes strategic partnerships with private sector for purchasing, capacity building, skill development, awareness generation, and sustainable networks for communities to strengthen mental health services.

India has achieved several milestones in the fight against communicable diseases.

HIV

Awareness generation through large-scale campaigns

The National AIDS Control Programme, Project Pehchan, Avahan, Sonagachi Project, Project Kavach, Link Worker Scheme, Red Ribbon Express, and The Condom Social Marketing Programme focused on raising awareness and fighting the taboo against HIV (Department of Health and Medical Education n.d.).

Drug research and delivery at low cost

National HIV/AIDS Research Plan (NHRP) formed the backbone of quality service delivery under NACP-IV. The National AIDS Control Organization (NACO) manufactured and provided quality-assured antiretroviral drugs at low prices (NACO 2017).

Tuberculosis (TB)

Nationwide strategic plan involving all stakeholders

The TB Elimination plan brings together all health and non-health stakeholders, including the national and state governments, development partners, civil society organisations (CSOs), international agencies, research institutions, and the private sector, amongst others (MoHFW 2016).

Data collection and monitoring using digital tool, Nikshay

Rolled out an electronic recording and reporting system, 'Nikshay,' across the country in 2012 to consolidate case-based reporting of TB patients (MoHFW 2016).

COVID-19

Digitalisation of vaccine delivery

COWIN, the Covid Vaccine Intelligence Work, is an app introduced by the central government of India for the real-time monitoring of the COVID-19 vaccine. It facilitated the vaccine delivery of over two billion vaccines in India (COWIN n.d.).

Global recognition for vaccine development (ICMR 2021)

Covaxin by the indigenous Bharat Biotech Ltd. and Covishield by the Serum Institute of India became effective vaccines against COVID-19 in India, with their demand prevalent across the globe (ICMR 2021).

The success of India's polio eradication programme proves the country's capability of implementing large scale immunisation campaigns.

- The campaign used celebrities to promote the programme and ran print media and radio advertisements to encourage people to get vaccines (Gautam 2017).
- To ensure that the vaccine target was met, almost two million health workers worked from a network of more than 5,000 stations, visiting millions of homes to administer vaccinations (Global Polio Eradication Initiative n.d.)

However, India now faces a dual burden of existing communicable disease and increasing noncommunicable diseases...

Communicable Diseases

Number of cases (per 100,000 population) (MoHFW 2022a)

TB
188
(2020)

HIV/AIDS
1,721
(2019)

Notified cases (MoHFW 2022a)

TB
15,82,000
(till 31st September, 2021)

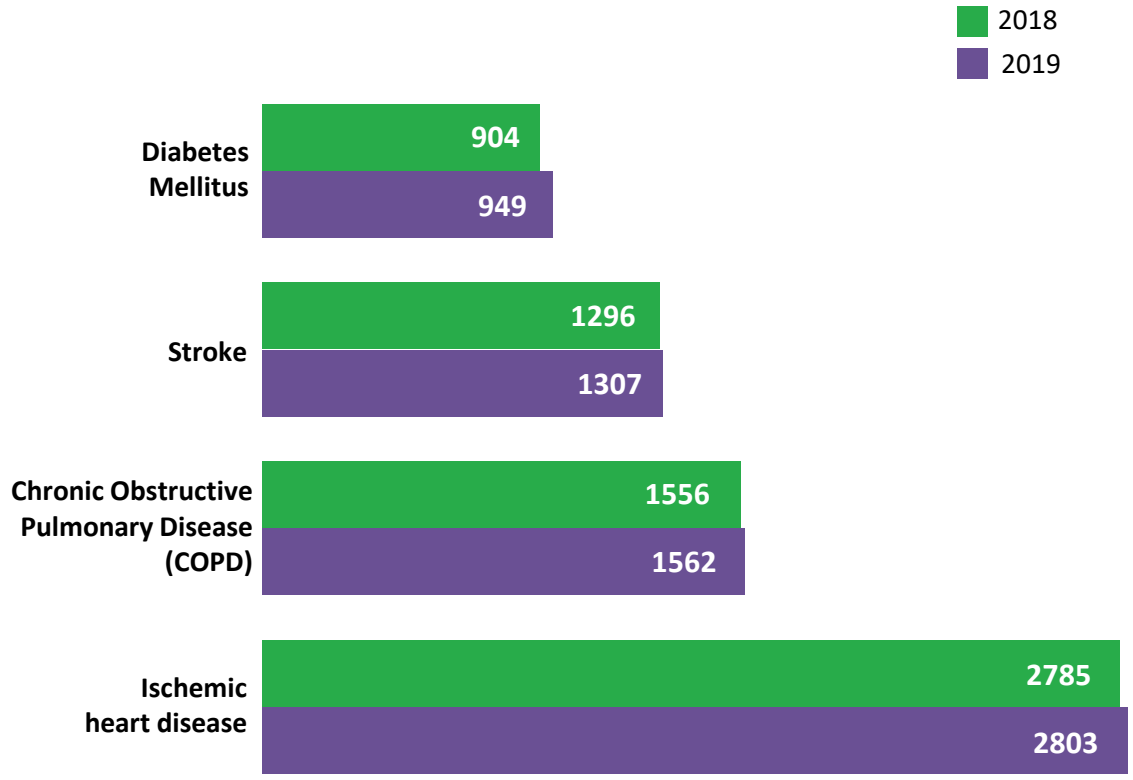
New HIV Infections
57,548
(2020)

Malaria
89,776
(till 31st July, 2021)

Dengue
60,112
(till 31st September, 2021)

Noncommunicable Diseases

Disability Adjusted Life Years (DALYs)
per 100,000 population (WHO n.d. a)



...exacerbated by gaps in the availability and quality of healthcare infrastructure that continue to result in poor health outcomes.

Gaps across the healthcare sector in India...

0.5
beds per 1,000 population in 2017
(Far below the WHO standards of 3 per 1000)
(World Bank n.d.b)

29%
shortfall of PHCs across the country in 2020
(NHM n.d.b)

2.1%
of GDP spent on healthcare in 2021-22
(US spent 18.8% in 2020 while Canada and Germany spent 13%)
(India Budget n.d.)

1.96*
nurses per 1,000 population in 2022
(far below the WHO standards of 3 per 1000)
(PIB 2022c)

41%
households with one member covered by a health scheme in 2019
(MoHFW n.d.a)

US $26
Out-of-pocket Expenditure (OOPE) per capita in 2018–2019
(National Health Systems Resource Centre 2022)

...leading to poor outcomes.

119 – 208 deaths
per 100,000 people
are due to poor-quality healthcare in India (Kruk et al. 2018).

34%
of the global combined total number of TB deaths
among HIV-negative and HIV-positive people, in 2020, were in India (WHO n.d.b).

1 in 4
Indians risks death due to an NCD
before they reach the age of 70 (NHP 2019).

Thus, India still ranks poorly in SDG 3 in comparison to other countries.

SDG 3. 'Ensure healthy lives and promote well-being for all at all ages,' emphasises the need to 'achieve universal health coverage and access to quality healthcare' to achieve the overall health goal.

Figure 1: India's performance in SDG 3 (Sustainable Development Report 2022)

Country Rank for Goal 3:

122 / 177

Achievement level and score trend

Major challenges remain

Moderately increasing

Country Score for Goal 3:

Universal Health Coverage is essential to improve health indicators.

Outcomes

Universal Health Coverage
(WHO 2021)

Access
Improved access to care

Affordability
Reduced OOPE

Quality
Delivery of standardised, evidence-based care

Impact

Improved Health indicators

RMNCH+A
(Reproductive, Maternal, Newborn, Child and Adolescent Health)

Communicable Diseases
(Tuberculosis, pneumonia, HIV, dengue, malaria, COVID-19 etc.)

Noncommunicable Diseases
(Cancer, cardiovascular diseases, diabetes, chronic respiratory and liver diseases, neurological disorders, mental health etc.)

SERVICE DELIVERY OF HEALTHCARE IN INDIA

Several actors in the public (government, regulatory bodies, healthcare institutions) and private sectors (investors, NGOs, social enterprises) are involved in the delivery of healthcare in India.

Stakeholder	Type	Role	Description	Key Players
Government and apex bodies	Public	Regulator, Policymaker, Provider	The apex body that controls the official healthcare market in India, supports healthcare systems and generates resources such as workforce and finance (WHO 2006).	स्वास्थ्य एवं परिवार कल्याण मंत्रालय MINISTRY OF HEALTH AND FAMILY WELFARE; NABH; NITI Aayog
Private hospitals, clinics, pharmacies	Private	Provider	Instrumental for coordination, integration and implementation of healthcare across the country as a parallel system to public healthcare (WHO n.d.c).	Fortis; Apollo Hospitals; MAX Healthcare; Small clinics; Nursing homes
NGOs	Private	Enabler	Integral bodies for health advocacy, provision of medical services, financial support and healthcare training (Piotrowicz & Cianciara 2013).	Doctors For You; SEARCH; HelpAge India
Multilateral organisations and philanthropy	Public and private	Enabler	Promote and assist the testing, development, and dissemination of social innovations to close the gap in healthcare delivery (Halpaap et al. 2019).	Bill & Melinda Gates foundation; unicef; MacArthur Foundation; ADB
Products and solutions	Private	Innovator	Aid in improving the efficiency and sustainability of health systems by allowing institutions to provide high-quality, cost effective, and equitable healthcare (WHO n.d.d).	practo; meddo ONE STOP CARE; noccarc
Research institutes	Public and private	Research	Study and generate high-quality evidence to advance clinical practice and policy changes (WHO n.d.e).	icmr INDIAN COUNCIL OF MEDICAL RESEARCH; NIMR; AHERF
Insurance companies	Public and private	Payer	Combine risks and resources of a large number of individuals to safeguard medical expenditures brought on by disease, injury, or disability for each individual (Institute of Medicine 2001).	नेशनल इन्श्योरेन्स National Insurance; care HEALTH INSURANCE

Health in India is a state subject; policy development and research are carried out centrally, while implementation and service delivery is the state's responsibility.

Major bodies and responsibilities of the Centre

- Design and anchor national level schemes and policies.
- Set up and manage large healthcare infrastructure and institutions.
- Design budget allocation to overall healthcare and specific schemes.

Major bodies and responsibilities of the State

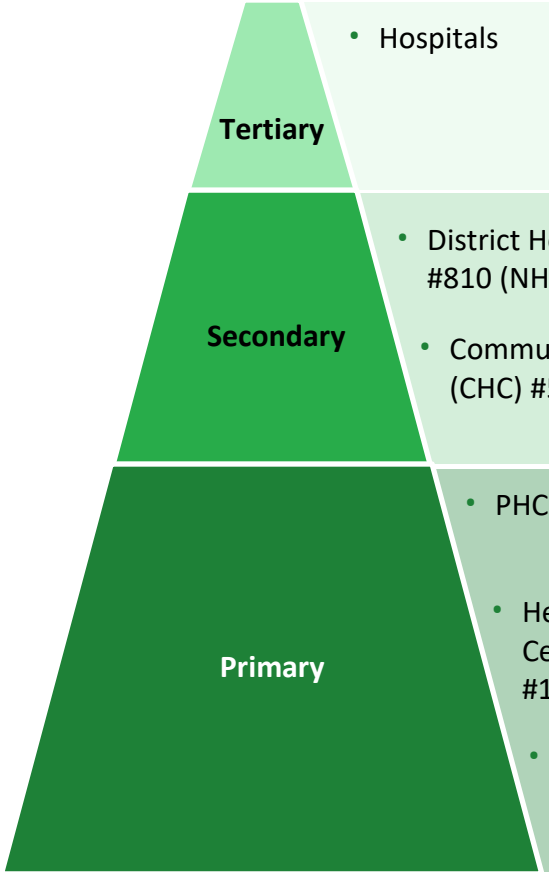
- Primary agents tasked to deliver healthcare-related services.
- Responsible for programme implementation on ground.
- Responsible for the bulk of healthcare spending*.

*The Empowered Action Group (EAG) states qualify for additional central funding to strengthen their weak health outcomes and infrastructure (Berman et al. 2017).

Both the private and public sectors implement service delivery, with the former holding a significantly larger market share.

Private Healthcare			Public Healthcare	
51.8% of urban population	**46.4%** of rural population	**Treatment**	**46.9%** of urban population	**51.7%** of rural population
availed treatment at **private facilities** (private hospitals, private doctors or clinics, paramedics and others) in 2019 (NFHS 2019-21).			availed treatment at **public hospitals** (government or municipal hospitals, PHC, community health centre, sub-centre and others) in 2019 (NFHS 2019-21).	
40.5% women in urban areas	**21.1%** women in rural areas	**Institutional Deliveries**	**52.6%** women in urban areas	**65.3%** women in rural areas
delivered in **a private health facility** (excluding NGO and trusts) in 2019-21 (NFHS 2019-21).			delivered in a **public health facility** in 2019-21 (NFHS 2019-21).	
62.4%		**Hospital Beds**	**37.6%**	
of **hospital beds** in India are estimated to be in the **private sector** as of 2020 (Kapoor et al. 2020).			of **hospital beds** in India are estimated to be in the **public sector** as of 2020 (Kapoor et al. 2020).	

Public healthcare is delivered through a three-tiered model with a network of sub-centres, Health and Wellness Centres (HWCs) and PHCs at the base and specialised medical hospitals at the apex of the pyramid.



Healthcare unit (NITI Aayog n.d.a)	Role
• Hospitals	• Providing effective healthcare to population throughout the country. • Providing teaching programmes in medical and para-medical courses. • Ensuring quality diagnosis and research.
• District Hospitals (DH) #810 (NHM n.d.c) • Community Health Centres (CHC) #5,649 (NHM n.d.c)	• Providing specialist curative and preventive healthcare services as the First Referral Unit. • Providing technical administrative support and training of health workers for primary healthcare. • Making provisions for medical assistance as well as comprehensive family welfare services, prevention and control of endemic diseases, collection of vital statistics in the area, and education and training of various health personnel.
• PHC #30,813 (NHM n.d.b) • Health and Wellness Centres (HWC) #1,15,64 (MoHFW n.d.b) • Sub Health Centres (SHC) #88,798 (MoHFW n.d.b)	• Ensuring people receive comprehensive care, ranging from promotion and prevention to treatment, rehabilitation and palliative care. • Making provisions for early identification, basic management, counselling, adherence to treatment, follow-up care, promotion of health, and prevention of diseases for the expanded range of services. • Engendering behavioural change through interpersonal communication; providing services in relation to maternal and child health, family welfare, nutrition, immunisation; and maintaining control over programmes for communicable diseases.

To achieve **effective delivery of services**, programmes are designed to enable convergence between functionaries such as Anganwadis to provide child care support.

On the other hand, the private sector is highly fragmented, with the majority of providers being small hospitals and clinics.

	Large hospital chains*	Mid-sized private hospitals*	Small hospitals and clinics*
Demographic	Urban Peri-urban	Urban Semi-urban	Urban Peri-urban Rural
	>100 beds	50-100 beds	<50 beds
Services	• Offer specialised diagnosis and treatment for major and complicated diseases. • Provide highly equipped critical care and emergency services. • Render tests and curative services through latest technologies.	• Offer specialist and referral services. • Provide laboratory diagnosis and blood services. • Provide highly equipped critical care and emergency services.	• Mostly offer general consultations and early diagnosis. • Provide medicine prescription for common diseases. • Offer services in alternative medicines such as ayurveda and homeopathy.
Examples	MAX HEALTHCARE, Apollo HOSPITALS, Fortis, RAMAIAH Memorial Hospital	GLOCAL, Fernandez Hospitals	CLINIKK HEALTH HUB, asian CLINIC, healthyGO An Initiative By CORPHEALTH PLUS PVT LTD

**Adapted from National Accreditation Board for Hospitals & Healthcare Providers (NABH) classification of hospitals into Small Healthcare Organisations (SHCO)(< 50 beds) and hospitals (>50 beds)* (NABH n.d.).

SYSTEMIC CHALLENGES IMPEDING EFFICIENT CARE

India's healthcare system faces deep-rooted challenges across core systemic areas (1/2).

Delivery of care

Poor implementation of continuum of care approach:
Poor patient referrals across different points of care (primary, secondary, tertiary).

Lack of adherence to standardised process guidelines: Gaps in implementation of guidelines and limited focus on quality of care (Gopal 2019).

Low affordability of medicines:
Medicines and others charges accounted for more than 25% of health expenses (MOPSI 2019).

Human workforce and infrastructure

Shortage of staff and facilities, especially at a primary level:
Only 3% of India's doctors live in rural areas where 70% of India's population is concentrated (Tata Trusts 2021).

Overburdened workforce: India has one medical doctor for every 1,404 people and 1.9 nurses per 1,000 people (MoHFW 2022a.)

Poor adherence to medical standards:
Scarcity of essential drugs in public health institutions, shortage of diagnostic services, and poor staff behaviour toward patients are drivers of poor quality (Selvaraj et al. 2018).

Finance

Government spending on healthcare is significantly lower, 80% less than global standards (OECD n.d.).

Underutilisation of health budgets:
Between policy and action without a defined plan and major changes to the public financial management system, it is doubtful that increasing public investments in health will close the gap (Jha & Bhawalkar 2020).

Low coverage of healthcare insurance:
At least 30% of the population, or 400 million individuals are devoid of any financial protection for health (Kumar & Sarwal 2021).

India's healthcare system faces deep-rooted challenges across core systemic areas (2/2).

Technology

Inequitable access to technology-based care: Only 43% of India's population uses the internet (Candola 2022).

Limited consolidation of data and siloed implementation across systems.

Lack of uniform guidelines to support systematic implementation and integration of technology with existing systems.

Health-seeking behaviour

Limited awareness of health and well-being: Poor functional literacy, a lack of emphasis on education within the healthcare system, and a society that places little value on health have a negative impact on health-seeking behaviour (Kasthuri 2018).

Poor perceptions about the effectiveness and safety of health treatments at public health institutions (specifically at the primary level) lead to high reliance on high cost private care (Selvaraj et al. 2018).

Limited awareness of government schemes and health insurance: According to studies, there is a range of 13.6% awareness of the different aspects of insurance schemes, with the population holding a Below Poverty Line (BPL) card and the eligibility requirement of five people per household receiving the most focus. Less than 15% of people said that healthcare professionals helped raise awareness (Prinja et al. 2017).

Foundational shifts in the design and delivery of healthcare will be important to address the challenges.

PRIORITY AREAS LIKELY TO SHAPE HEALTHCARE IN INDIA

Several key areas are likely to shape the delivery of healthcare in India.

1. Digital health
2. Data-led decision-making
3. Strengthening of primary healthcare
4. Human workforce reform
5. Health financing reforms
6. Public-private partnerships
7. Innovations in drugs, vaccines and medical devices
8. Intersectoral approach to health

Focus on digital health solutions has increased, with the aim to leapfrog access to care, supported by policy and industry tailwinds.

1 Digital health

Enabling last mile access and delivery of care by leveraging digital technologies for health

Digitisation of public and private healthcare service delivery

US $200 million
allocated to Ayushman Bharat Digital Mission (ABDM) over five years to leverage digital solutions for bridging the gaps between citizens and other stakeholders in the healthcare delivery mechanism (PIB 2022a).

995
integrators to provide digital services like teleconsultation, ambulance and diagnostic services are active, however **only 69 have been successful** (NHA n.d.).

US $2.2 billion
funding raised by 131 deals in healthcare startups in India (N.S 2022).

29.6%
is the expected Compound Annual Growth Rate (CAGR) for the digital health market to reach US $504.4 billion by 2025 (Global Market Insights n.d.).

Creation and adoption of digital solutions like teleconsultation and e-pharmacies

US $2 billion+
vaccines facilitated through the government's COWIN platform (COWIN n.d.).

7,598
health-tech startups populate the Indian digital healthcare ecosystem (Tracxn 2022).

50 million
Indians accessed telemedicine services during the lockdown in 2020 (McKinsey 2020a).

70 million
households in India are estimated to be served by e-pharmacies by 2025 (FICCI 2020).

Use of data for early detection of diseases, decision making, and streamlining of processes is being recognised.

2 Data-led decision-making

Enabling automation and direct investments toward innovative research and development

Streamlining multi-stakeholder processes and interactions through the use of an integrated health data system

246.8 million

health IDs created as of 2022 (NHA n.d.a)

164,606

health facilities have been registered under Ayushman Bharat Digital Health Mission (ABDM) as of 2022 (NHA n.d.a)

- The ABDM aims to create a management mechanism (NHA n.d.a):
  - to process digital health data and facilitate seamless exchange;
  - to develop registries of public and private facilities, health service providers, laboratories and pharmacies and
  - to support clinical decision making as well as offer services like telemedicine.
- The four key building blocks for ABDM are the health ID, personal health records, Digi Doctor, and health facility registry (NHA n.d.a).

Increasing investments in data-driven predictive analytics and early detection of diseases

- The healthcare analytics market in India is expected to reach a value of US $572 million by 2025, expanding at a CAGR of 20.5% during the 2020-2025 period (Kenneth Research 2021).
- Healthcare technology deals worth US $40 billion by incumbents (payers, providers, healthcare services, and technology firms) to extend data and analytics capabilities and engage with patients longitudinally from 2014 to 2018 (McKinsey 2020b).
- US $504 million were raised by healthtech startups between 2014 and 2018 (Soni 2019).

Improving primary health infrastructure through Ayushman Bharat HWCs to provide comprehensive and quality primary healthcare.

3 Strengthening of primary healthcare

Solving for systemic strengthening of primary health care

9,231
PHCs in 2020
(NHM n.d.b)

46,140
sub-centres in 2020
(NHM n.d.b)

9.6%
of the PHCs are without doctors in 2019
(NHM 2019a)

24 beds
per 0.1 million population is the national average in district hospitals
(Sarwal et al. 2021)

Converting PHCs to HWCs to provide comprehensive care

- 80,764 AB-HWCs have been operational across India to deliver Comprehensive Primary HealthCare (CPHC) (PIB 2021a).
- HWCs deliver care with the principle that the "time to care" be less than 30 minutes (MoHFW n.d.c).
- A US $238 million budget allocated for HWCs in FY 2021-22 (Centre for Policy Research 2022).

Mainstreaming Ayurveda, Yoga, naturopathy, Unani, Siddha and homeopathy (AYUSH) practitioners at primary and community levels of healthcare level (NHM n.d.c)

- Addressing the shortage of doctors in PHCs, especially in high focus states, by integrating AYUSH personnel and offering 24-hour care in 50% of PHCs.
- Through National AYUSH Mission, an amount of US $3.2 million was sanctioned for strengthening of drugs quality control system in 15 states for the year 2018-19 (Ministry of AYUSH 2020).

Increasing employment and skill development of health workforce.

4 Human workforce reform

Strengthening human resources for health

1.96 nurses per 1,000 in 2022
(far below the WHO standards of 3 per 1000) (PIB 2022c)

968,483
number of ASHAs in position as of 2019
(NHM 2019b)

Increasing employment and training in healthcare sector in India

- The Health Ministry has proposed multidisciplinary public health management cadres at state, district and block levels through four verticals, specialist cadre, public health cadre, health management cadre, and teaching cadre (MoHFW 2022b).
- NITI Aayog's Strategy for "New India@75" aims to generate 1.5 million jobs in the public health sector by 2022–23 (NITI Aayog 2018).
- India and the United Kingdom (UK) sign a framework for the training of healthcare professionals in India to bridge the skill gap (PIB 2022b).
- The agreement also facilitates the recruitment and training of Indian nurses and allied health professionals (AHPs) by the UK in a streamlined manner (PIB 2022b).

Launch of insurance schemes and an increasing interest to look at financing for outcomes over transactions has the potential to improve health outcomes and reduce OOPE.

5 Health financing reforms

Incentivising health outcomes and reducing OOPE

US $35,000

was the OOPE on health by households in India in 2018-19
(National Health Systems Resource Centre 2022)

54.78%

of current health expenditure in India in 2019 was OOPE
(World Bank 2022)

Government focus on providing universal healthcare insurance coverage through Pradhan Mantri-Jan Arogya Yojana (PM-JAY)

- To reduce the high OOPE and ensure UHC, PM-JAY was adopted in 2018 as a health insurance scheme aimed at providing access to quality inpatient secondary and tertiary care to poor and vulnerable families (NHA n.d.b).
- In the 2021-22 Union Budget, the government allocated approximately US $778 million to PM-JAY (Centre for Policy Research 2022).

Increasing focus on innovative financing models such as development and social impact bonds

- UBS Optimus, MSD for Mothers, United States Agency for International Development (USAID) and Palladium came together to launch the Utkrisht Development Impact Bond (DIB) in Rajasthan, India, with the aim to improve the quality of maternal healthcare (USAID 2017).
- Palladium partnered with Pune's Pimpri-Chinchwad Municipal Corporation (PCMC) and the United Nations Development Program (UNDP) via a memorandum of understanding to jointly develop India's first Social Impact Bond (SIB) (Palladium 2021).

Successful demonstrations of public-private partnerships are leading to increased collaboration and private sector participation in delivery of care.

6 Public-private partnerships

Encouraging multiple spheres of public-private partnerships

Rising investment opportunities in medical infrastructure and domestic drug development

- The government aims to increase budgetary allocations to health to 2.5% of the country's GDP by 2025 (MoHFW 2017).
- Approximately US $808 million was allocated to the Pradhan Mantri-Ayushman Bharat Health Infrastructure Mission (PM-ABHIM) to strengthen India's health infrastructure and improve primary, secondary and tertiary care services (PIB 2021b).

India has gained preference as a destination for medical and wellness tourism and drug trials

- Due to the relatively low cost of medical care in India, medical tourism is experiencing a 22-25% growth, and contributes over US $2 billion to the country's healthcare market (Sarwal et al. 2021).
- India is gaining global recognition as a preferred destination for clinical trials due to a heterogeneous patient and skilled labour pool as well as cost competitiveness.

Conducive policies to encourage foreign direct investments

- Foreign direct investment (FDI) is permitted up to 100% under the automatic route (i.e., the non-resident investor or Indian company does not require approval from the Government of India for the investment) in the hospital sector and in the manufacturing of medical devices (Sarwal et al. 2021).
- Healthcare sector has received heightened interest from investors over the years, with the transaction value increasing from US $94 million (2011) to US $1.2 billion (2016) – a jump of nearly 13.5 times (Sarwal et al. 2021).

The public sector has partnered with the private sector to increase participation and improve the quality of healthcare

The Indian Space Research Organisation (ISRO) partnered with the Government of Karnataka (GoK) to create the Karnataka Integrated Telemedicine and Telehealth Project (ISRO 2002).

The Yeshasvini Cooperative Farmers Healthcare Scheme is an insurance scheme initiated by the Narayana Hrudayalaya and GoK (Sahakara Sindhu n.d).

Increasing push to reduce India's dependency on import of medical drugs and devices and support local innovation for self and foreign use.

7 Innovations in drugs, vaccines and medical devices

Reducing dependency on the import of drugs and equipment

68%

of India's Active Pharmaceutical Ingredients (API) is imported from China as it is a cheaper option than domestic manufacture (PIB 2020).

80%

dependency on imports of medical devices (Ministry of Chemicals and Fertilizers 2022).

Policies to support domestic manufacturing of drugs and reduce import dependency for APIs

- The government has earmarked over US $2 billion worth of incentives for both private Indian companies and foreign players to start producing 53 APIs for which India heavily relies on China (NITI Aayog n.d.b).

Gain global recognition as a Research and Development (R&D) hub for medical drugs and equipment

- The MoHFW and the Central Drugs Standard Control Organisation (CDSCO) aim to increase exports from US $2.53 billion in FY21 to US $10 billion by FY25 (Sarwal et al. 2021).
- The Union Budget FY 2021-22 proposed an outlay of US $6 billion, spread over five years, for the National Research Foundation, aimed at improving innovation and R&D in the country (PIB 2021d).

Increased recognition of other factors affecting health and taking a more holistic view through a 'One Health' approach.

8 Intersectoral approach to health

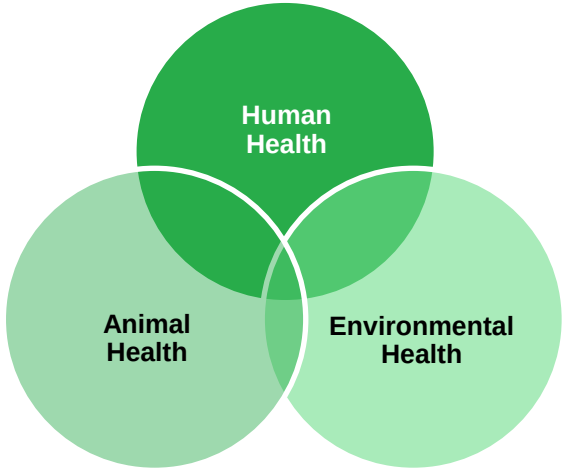
Designing and implementing programmes, policies, and research in which multiple sectors communicate and collaborate to achieve better public health outcomes (WHO n.d.f).

Efforts of any one sector are sometimes not enough to tackle diseases

Ensuring food safety

Controlling zoonoses

Combating antibiotic resistance



The COVID-19 pandemic prompted the development of India's One Health Framework

- India's Department of Biotechnology, Ministry of Science and Technology built a **"One Health" framework** that integrates biodiversity, ecosystem services, climate change, agriculture, health, bio-economy and capacity building in the realm of biodiversity science. This framework has a mission component that explicitly links biodiversity to human health through the One Health approach (Ministry of Science and Technology 2020).
- **Centre for One Health established in Nagpur** under the Indian Council of Medical Research (ICMR) to contain zoonotic diseases (PIB 2021c).
- **Constituted a National Expert Group** on One Health to promote multisectoral and transdisciplinary collaboration and cooperation to adopt and implement a One Health framework in India (Ministry of Science and Technology 2020).
- The One Health consortium consists of the All India Institute of Medical Sciences (AIIMS), New Delhi; AIIMS Jodhpur; Indian Veterinary Research Institute (IVRI), Bareilly; Guru Angad Dev Veterinary And Animal Sciences University (GADVASU), Ludhiana; Tamil Nadu Veterinary and Animal Sciences University (TANUVAS), Chennai; Maharashtra Animal and Fishery Sciences University (MAFSU), Nagpur; Assam Agricultural and Veterinary University, Jorhat; and several Indian Council of Agricultural Research (ICAR) and ICMR centres, and wildlife agencies (PIB 2021c).

ANNEXURE

Major thematic areas in health

	Focus Areas	National Priority	Philanthropic Investments
RMNCH+A	Maternal, Child and Adolescent Health	High	High
	Nutrition	High	High
	Sexual and Reproductive Health and Rights	Medium	Medium
Communicable Diseases	Tuberculosis	High	Medium
	Pneumonia	Low	Low
	HIV/AIDS	Medium	Medium
	Dengue	Low	Low
	Malaria	Medium	Low
	Neglected Tropical Diseases (NTDs)	Medium	Low
Noncommunicable Diseases	Cancer*	Medium	Medium
	Cardiovascular Disease*	Medium	Medium
	Chronic Obstructive Pulmonary Disease (COPD)	Medium	Medium
	Diabetes*	Low	Medium
	Neurological Disorders	Low	Low
	Mental Health*	Medium	Low

*Areas with emerging philanthropic interest. Note: Ratings are qualitative in nature and obtained through market research and Sattva expertise

The government's focus is gradually shifting to ensuring UHC (PMJAY) and enhancing the nation's healthcare infrastructure (PM-ABHIM).

US $12 million

% allocation FY21

Major Programmes	2020-21 Actuals (PRS Legislative Research n.d.a)	2021-22 RE (PRS Legislative Research n.d.b)	2022-23 BE (KPMG 2022)	Description
Healthcare budget	**642** (1.8% of GDP)	**829** (2.1% of GDP)	**739** (2.5% of GDP)	
46% National Health Mission	370	344	370 ↑	Disease-specific schemes, health systems strengthening and infrastructure development
15% Autonomous and statutory bodies	121	139	152 ↑	Grants to medical institutions such as AIIMS
15% COVID-19*	119	165	2 ↓	Allocation for both phases of COVID-19 emergency
9% Pradhan Mantri Swasthya Suraksha Yojana (PMSSY)	68	74	100 ↑	Expansion of tertiary healthcare facilities across the country
3% Pradhan Mantri Arogya Yojana (PM-JAY)	26	31	64 ↑	Healthcare insurance for poor and vulnerable families
0% PM Ayushman Bharat Health Infrastructure Mission (PM-ABHIM)		10	58 ↑	Developing capacities of health systems and institutions

*US $4734 million allocated for citizens' COVID-19 vaccinations by the Ministry of Finance

BE :Budget Estimates; RE: Revised Estimates

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