



Water Resources

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ABSTRACT

India's healthcare system is undergoing a significant transformation driven by inclusive growth, policy initiatives, and infrastructure development aimed at improving health outcomes for all citizens. Sustainable economic growth linked with strategic investments in healthcare, education, and social security forms the foundation for enhanced living standards. The government's focused efforts, including flagship programs such as Ayushman Bharat, PM-ABHIM, and the Free Drugs Service Initiative, have revolutionized healthcare delivery by expanding coverage, improving accessibility, and making services more affordable. These initiatives emphasize prevention, early diagnosis, and treatment across urban and rural areas while promoting digital healthcare through teleconsultations and electronic health records to bridge geographical and socio-economic gaps. Financial protection schemes like AB-PMJAY address out-of-pocket expenditures that have historically hindered access to quality care for vulnerable populations. Alongside infrastructure development, policy reforms supporting robust public health systems, medical education, and technological adoption have strengthened India's healthcare ecosystem. Despite notable progress, health outcomes remain influenced by broader socio-economic determinants including sanitation, nutrition, and education, underscoring the need for integrated development policies. The Vision of Viksit Bharat 2047

envisioning a resilient, equitable, and technology-enabled healthcare system that fosters a healthy population, capable of contributing effectively to the nation's development trajectory.

1. Introduction

The healthcare sector serves as a fundamental pillar of economic development and social progress, particularly in developing nations striving for inclusive growth and comprehensive welfare (Bloom et al., 2004). In the context of India's aspirational journey towards becoming Viksit Bharat by 2047, healthcare transformation has emerged as a critical component of the nation's development strategy, requiring substantial policy interventions, infrastructure investments, and inclusive service delivery mechanisms (Reddy et al., 2011). The Economic Survey 2024-25 emphasizes that sustainable and inclusive economic growth serves as the foundation of a virtuous cycle of economic and social development, where growth expands opportunities, reduces poverty, and enhances living standards through better healthcare, education, and livelihoods (Government of India, 2025).

Healthcare infrastructure development has gained unprecedented momentum in recent years, with government expenditure on health rising from ₹2.1 lakh crore in FY17 to a projected ₹6.1 lakh crore in FY25, reflecting nearly a three-fold increase in budgetary allocation (Hooda, 2013). This substantial financial commitment aligns with global evidence demonstrating that higher government health expenditure, coupled with strong economic growth and increased healthcare provision, directly correlates with improved health outcomes, including reduced infant mortality and enhanced life expectancy (Anand & Ravallion, 1993). The transformation is particularly evident in India's Total Health Expenditure (THE), which reached ₹9,04,461 crore in FY22, accounting for 3.8% of the country's GDP, signaling a paradigmatic shift towards prioritizing health as a key determinant of national prosperity (Garg & Karan, 2009).

The implementation of flagship programs such as Ayushman Bharat-Pradhan Mantri Jan Arogya Yojana (AB-PMJAY) has revolutionized healthcare accessibility by providing coverage to over 55 crore individuals, making it the world's largest health assurance scheme (Lahariya, 2018). This initiative has contributed significantly to reducing Out-of-Pocket Expenditure (OOPE) from 69.4% in 2004-05 to 47.1% in 2021-22, thereby addressing one of the most pressing challenges in India's healthcare landscape (Berman et al., 2010). The establishment of over 1,75,560 Ayushman Arogya Mandirs nationwide



demonstrates the government's commitment to bringing healthcare services closer to communities, particularly in rural and underserved areas (Angell et al., 2019).

Despite these remarkable achievements, India's healthcare system continues to face multifaceted challenges including infrastructure gaps, human resource shortages, and persistent health disparities across different socio-economic segments (Rao et al., 2011). The need for comprehensive policy reforms, enhanced infrastructure development, and innovative service delivery models remains critical to ensure universal health coverage and achieve the Sustainable Development Goal 3 of ensuring healthy lives and promoting well-being for all (Kumar et al., 2011). This research paper aims to analyze the transformative journey of healthcare in India through the lens of inclusive growth, infrastructure development, and policy initiatives, examining how these interventions contribute to building a healthier nation and supporting India's broader development aspirations.

2. Review of Literature

Healthcare transformation in India has emerged as a critical area of scholarly investigation, particularly in the context of achieving universal health coverage and inclusive growth. The existing literature reveals a comprehensive understanding of India's healthcare evolution, with researchers examining multiple dimensions including policy effectiveness, infrastructure development, financial protection mechanisms, and health outcomes.

Healthcare System Transformation and Policy Evolution

Kumar (2023) provides a comprehensive analysis of India's healthcare system transformation, highlighting the complex network of public and private sectors serving 1.4 billion inhabitants. The study identifies persistent challenges including inadequate infrastructure, healthcare professional shortages, urban-rural disparities, limited health insurance coverage, and fragmented healthcare delivery systems. The research emphasizes the government's multi-pronged approach through initiatives such as the National Health Mission and Ayushman Bharat scheme, which have collectively enhanced healthcare accessibility and affordability.

Ghia and Rambhad (2023) examine the implementation of equity and access in Indian healthcare, revealing that 37.2% of the total population is covered by health insurance, with 78% covered by public insurance companies. Their analysis demonstrates that approximately 30% of total health expenditure is borne by the public sector, indicating significant reliance on out-of-pocket payments. The study



emphasizes the government's commitment to achieving Universal Health Coverage through increased healthcare budgeting, with a 137% increase in 2021 budget allocations.

Ayushman Bharat Scheme: Coverage, Utilization, and Impact

Extensive research has evaluated the Ayushman Bharat-Pradhan Mantri Jan Arogya Yojana (AB-PMJAY) impact on healthcare accessibility and financial protection. Kourav and Kaur's (2024) study in rural Madhya Pradesh demonstrates significant progress in enhancing healthcare service accessibility and reducing out-of-pocket costs. The research reveals that 42.33% of surveyed households were covered under the scheme, with 47.24% of covered households having availed services in the past year. Importantly, only 10% of beneficiaries spent additional amounts, while 39.88% of non-covered households faced financial burden due to healthcare expenditures.

A comprehensive evaluation by researchers from Saveetha Medical College found that 65.36% of lower and upper-lower class households from their study were covered under Ayushman Bharat, exceeding the national target of 40%. The study identified lack of awareness and knowledge as key barriers to scheme coverage, emphasizing the need for enhanced community outreach and primary healthcare physician involvement in creating awareness.

Rasool and Geer (2025) conducted a detailed assessment in Jammu and Kashmir, finding that 11% of hospitalization cases did not utilize AB-PMJAY services, with 6.71% of these cases facing financial hardship. The research demonstrates the scheme's potential to reduce financial burden significantly, particularly when expanded to include outpatient services for major chronic diseases such as diabetes, hypertension, and cardiovascular conditions.

Out-of-Pocket Expenditure Reduction and Financial Protection

The literature extensively documents the significant decline in Out-of-Pocket Expenditure (OOPE) as a proportion of total health expenditures. A systematic review analyzing factors influencing OOPE in India reveals a remarkable reduction from 69.4% in 2004-05 to 47.1% in 2021-22. This substantial decline represents improved accessibility and affordability of healthcare services, with India's total health expenditure reaching ₹9,04,461 crores (3.83% of GDP) in 2021-22.

Research demonstrates that high OOPE affects household economies and pushes many families into poverty, with studies indicating that approximately 2.2% of India's population falls below the poverty line due to healthcare payments. The impoverishing effects study reveals that poverty headcount



increases from 16.44% to 19.05% after making OOP payments, affecting 6.47 million households. Government data confirms that between 2014-15 and 2021-22, government health expenditure as a percentage of GDP rose from 1.13% to 1.84%, contributing significantly to OOPE reduction.

Healthcare Infrastructure Development and Human Resources

Literature examining healthcare infrastructure reveals significant disparities across Indian states. Mann (2020) identifies states like Bihar, Jharkhand, Madhya Pradesh, and Uttar Pradesh as lacking basic health services and remaining below WHO recommendations. The research emphasizes urgent needs for strengthening the three-tier health infrastructure system, with particular focus on bridging gaps in Community Health Centers and Primary Health Centers.

Muniswamy's critical analysis of rural health infrastructure highlights persistent shortcomings in northeastern states, emphasizing the need for optimal fund utilization and strengthening primary healthcare delivery. The study reveals inadequate physical infrastructure, shortage of buildings for health centers, and insufficient residential accommodation for medical personnel in remote areas as major challenges.

Digital Health Transformation and Technology Integration

India's digital health transformation has gained significant scholarly attention, particularly following the COVID-19 pandemic. Research by Verma and Renu (2024) highlights the revolutionary role of information and communication technology in bridging government-citizen gaps and providing transparent, efficient services. The Digital India program has facilitated telemedicine adoption, remote patient monitoring, and mobile healthcare applications, particularly benefiting remote areas.

The Ayushman Bharat Digital Mission (ABDM) represents a flagship initiative for creating a national digital health ecosystem. Research demonstrates that digital health adoption accelerated post-COVID-19, with telemedicine guidelines issued in March 2020 and the CoWIN platform successfully managing vaccination programs. Studies indicate that digital health technologies have improved disease surveillance, enhanced preventive interventions, and strengthened community health initiatives.

National Health Mission Impact and Outcomes

Comprehensive evaluation of the National Health Mission demonstrates significant improvements in health indicators. Research documents substantial progress in reducing maternal mortality ratio from 103



per 100,000 live births in 2017-19 to 97 in 2018-20, achieving the National Health Policy target. Similarly, infant mortality rate declined by 6.66% in 2019-20, reaching 28 per 1000 live births.

The NITI Aayog study provides extensive analysis of NHM impact over 15 years (2005-2020), documenting improvements in healthcare utilization, health outcomes, and healthcare inequalities. The research synthesizes evidence from multiple data sources including National Sample Survey Organization, National Family Health Survey, and Sample Registration System, demonstrating measurable improvements in maternal and child health outcomes.

3. Objective of the Study

The primary objective of this study is to critically evaluate how inclusive economic growth, targeted infrastructure investments, and strategic policy initiatives have jointly driven the transformation of India's healthcare system. Specifically, the research aims to

- (1) assess the impact of rising public health expenditures and flagship schemes such as Ayushman Bharat-PMJAY and PM-ABHIM on service access, financial protection, and health outcomes;
- (2) analyze the expansion and strengthening of primary, secondary, and tertiary health infrastructure—including the proliferation of Ayushman Arogya Mandirs and digital health platforms—in reducing urban-rural disparities; and
- (3) examine the role of complementary policy measures (such as the Free Drugs Service Initiative, preventive health programs, and digital health missions) in addressing socio-economic determinants of health.

4. Research Methodology

The research adopts a secondary data analysis approach, synthesizing quantitative and qualitative information from a range of authoritative government and institutional sources to examine India's healthcare transformation. Key data inputs include Union and State budget documents (FY17-FY25), National Health Accounts reports (FY19-FY22), Ministry of Health and Family Welfare program factsheets (Ayushman Bharat, PM-ABHIM, Free Drugs Service Initiative), Press Information Bureau releases, and World Bank-OECD health expenditure analyses. Complementary evidence is drawn from published policy reviews, peer-reviewed journal articles, and official digital mission dashboards (e.g., Ayushman Bharat Digital Mission, CoWIN). Data on service utilization, financial protection (OOPE trends), and health outcomes (infant and maternal mortality, disease prevalence) are collated into

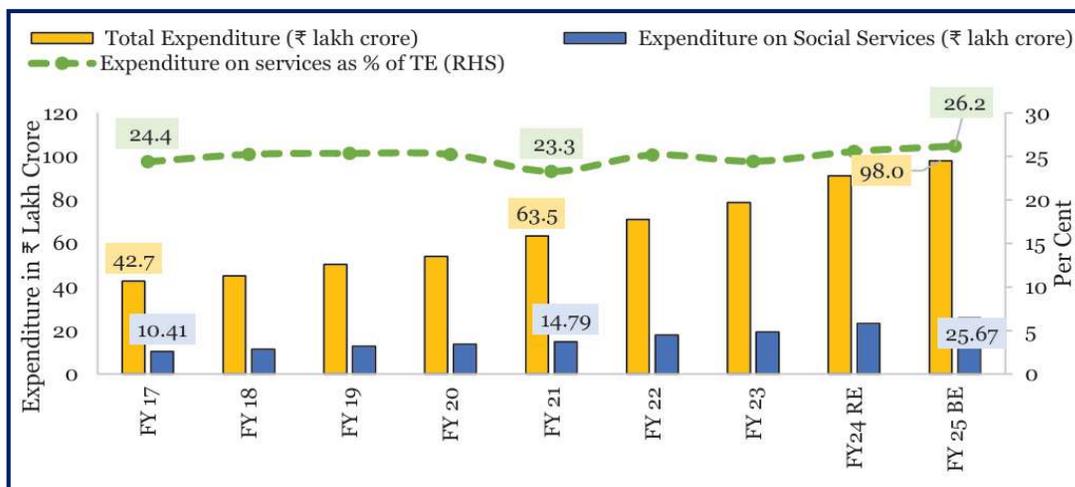
structured datasets, enabling trend analysis, cross-state comparisons, and assessment of urban–rural disparities. This methodology ensures a comprehensive, evidence-based evaluation of how inclusive growth, infrastructure investments, and policy initiatives have influenced accessibility, affordability, and quality of healthcare across India.

Result and Discussion with Data Analysis

5. Inclusive Growth and Holistic Development

Sustainable and inclusive economic growth serves as the foundation of a virtuous cycle of economic and social development, where growth expands opportunities, reduces poverty, and enhances living standards through better healthcare, education, and livelihoods. To transform growth into meaningful development, sound and comprehensive policies are essential, especially in areas like education, health, social security, and skill-based employment. Recognizing the interlinked nature of social sector outcomes, government interventions emphasize integrated strategies that empower citizens, improve capabilities, and ensure equitable access to opportunities. By leveraging technology, transparent monitoring systems, and efficient welfare delivery, the vision of Viksit Bharat 2047 seeks to achieve all-round development and a higher quality of life for every citizen.

5.1. Trends in social service sector expenditure by government (combined Centre and States)



Sources: Budget Documents of Union and State Governments

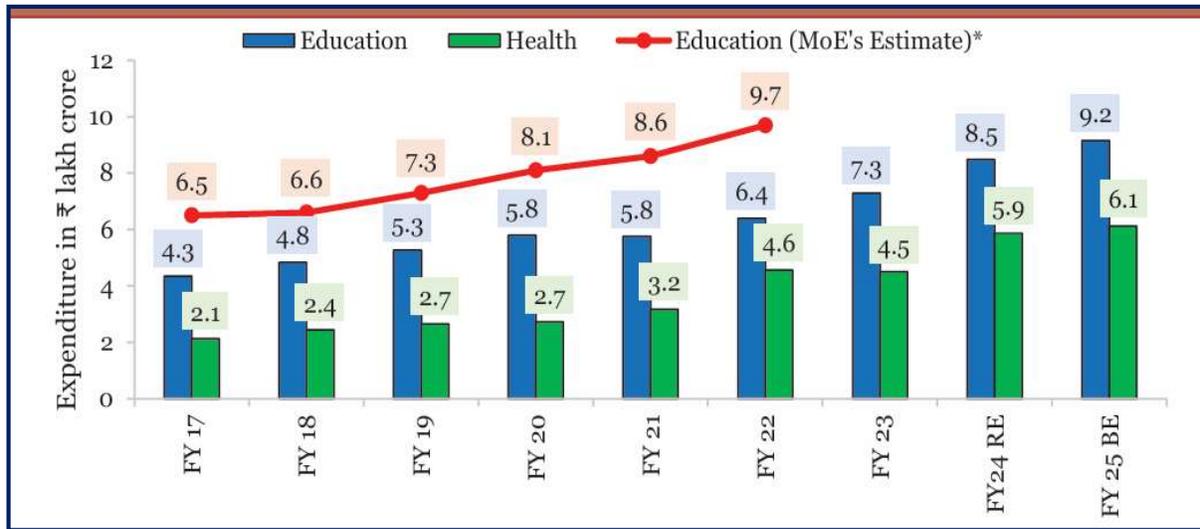
The Chart illustrates trends in social service sector expenditure by the government, combining both Centre and State spending from FY17 to FY25 BE. The bar graph compares total government



expenditure (in ₹ lakh crore) with expenditure specifically directed toward social services such as health, education, and welfare. There is a clear upward trajectory in both categories, with total expenditure rising from ₹42.7 lakh crore in FY17 to ₹98.0 lakh crore in FY24 RE, and projected at ₹105.1 lakh crore in FY25 BE. Expenditure on social services also shows substantial growth, increasing from ₹10.41 lakh crore in FY17 to ₹25.67 lakh crore in FY25 BE, highlighting the government's focus on improving social infrastructure.

The chart's dotted green line displays the percentage of total expenditure dedicated to social services, which fluctuates moderately but remains above 23% throughout the period. It starts at 24.4% in FY17, dips slightly in the following years, and rises to 26.2% in FY25 BE, indicating an enhanced commitment towards social welfare and inclusivity. This consistent share demonstrates the government's ongoing prioritization of social sector investments, aiming for long-term improvement in living standards through health, education, and other welfare measures.

5.2. Expenditure on education and health



Sources: Budget Documents of Union and State Governments

The chart presents the government's expenditure trends on education and health from FY17 to FY25 BE, highlighting a steady increase in both sectors over the years. Spending on education rose from ₹4.3 lakh crore in FY17 to a projected ₹9.2 lakh crore in FY25 BE, while health expenditure increased from ₹2.1 lakh crore to ₹6.1 lakh crore in the same period, reflecting the government's enhanced commitment to social development.



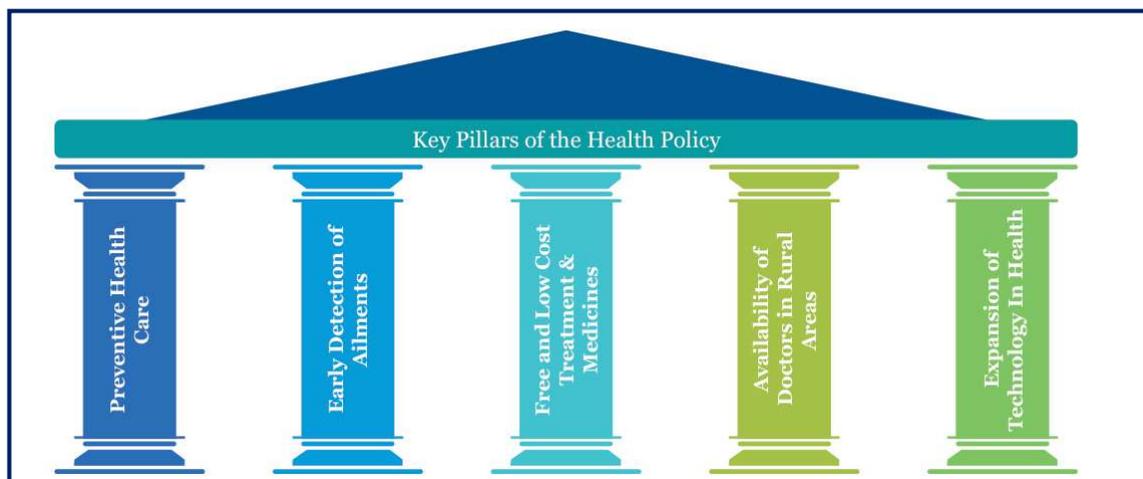
Additionally, the red line indicates the Ministry of Education’s (MoE) estimate for total education outlays, which climbs from ₹6.5 lakh crore in FY17 to ₹9.7 lakh crore in FY25 BE. This upward trend in both actual and estimated allocations underscores the growing importance placed on improving educational infrastructure alongside healthcare, fostering well-being and human capital formation.

6. Building a Healthy Nation

Health is a vital asset for economic prosperity, driving higher productivity, reducing the demand for healthcare services, and increasing life expectancy—all of which further social development. Particularly for India, with its large and youthful population, good health forms the bedrock for future generations to realise their aspirations and contribute to national progress.

Government-led initiatives—such as preventive healthcare programs, universal access to medical services, enhanced public health infrastructure, and improved medical education—have worked together to make healthcare more accessible and affordable. These efforts are crucial for nurturing a robust and healthy workforce, supporting economic growth, and helping every citizen benefit from rising national opportunities.

6.1. Key pillars of health policy



Source : PIB release of Prime Minister’s Office dated 29 October 2024 <https://tinyurl.com/2dk3562z>

6.2. Health Expenditure and Outcomes: National Health Accounts 2021-22



Impact of Health Expenditure on Outcomes : Analysis from OECD countries confirms that higher government health expenditure (GHE), strong economic growth, and increased healthcare provision—such as a greater number of doctors—are directly linked to improved health outcomes. These investments reduce infant mortality and boost life expectancy by making healthcare services more effective and accessible to all segments of the population.

Rising Health Expenditure in India : Reflecting global trends, health expenditure in India has risen consistently in recent years. According to the National Health Accounts statistics released in September 2024, the Total Health Expenditure (THE) for FY22 was ₹9,04,461 crore, accounting for 3.8% of the country's GDP. This increase underlines India's priority towards building robust health infrastructure and improving nationwide access to quality care.

Per Capita Spending Trends : India's per capita health expenditure stood at ₹6,602 at current prices in FY22, showing a sustained increasing trend since FY19 when measured at constant prices. The upward trajectory in individual spending underscores expanding government efforts and personal choices for better healthcare, securing tangible progress in population health indicators over recent years.

Policy Measures Enhancing Delivery : These improvements are supported by policy measures such as preventive health care initiatives, early detection programs for non-communicable diseases, affordable treatment via schemes like PM Jan Arogya Yojana, and digital advancements such as the AB Digital Mission. Together, they ensure not only greater investment but also more efficient and equitable delivery of healthcare services across the country.

7. **Ayushman Bharat PMJAY and Out-of-Pocket Expenditure (OOPE) in Healthcare**

The Ayushman Bharat-Pradhan Mantri Jan Arogya Yojana (AB-PMJAY) has transformed healthcare access in India by providing health coverage to over 12 crore families, approximately 55 crore individuals, particularly targeting the bottom 40% of the population as per the Socio-Economic Caste Census 2011. It offers annual hospitalisation benefits up to ₹5 lakh per family for secondary and tertiary care, making it the world's largest health assurance scheme. As of January 2025, more than 36.36 crore Ayushman cards have been issued, with around 30,000 hospitals—including over 13,000 private facilities—empanelled under the scheme. Women constitute nearly half of the cardholders and hospital admissions, which demonstrates the scheme's focus on health equity. Additionally, the scheme has expanded to cover senior citizens aged 70 and above regardless of socio-economic status, extending free coverage and top-up benefits to millions more.



Out-of-Pocket Expenditure (OOPE) refers to direct payments made by households at the time of receiving healthcare services. High OOPE has historically been a major barrier to affordable healthcare in India, often pushing families into poverty due to treatment costs. However, recent data shows a significant decline in OOPE as a proportion of total health expenditures, dropping from 69.4% in 2004–05 to 47.1% in 2021–22. This decrease reflects improvements in government healthcare spending and expanded insurance coverage through schemes like AB-PMJAY, which help reduce the financial burden on households and improve access to essential healthcare services.

Despite these advances, healthcare outcomes are also influenced by broader socio-economic factors such as sanitation, education, nutrition, and early childhood development. Thus, while government health initiatives play a critical role in improving healthcare access and affordability, tackling these interrelated social determinants is essential for sustaining improved health outcomes and ensuring comprehensive well-being across the population.

 30,000 hospitals empanelled	 13,352 private facilities empanelled	 49% of cardholders are women	 48% of hospital admissions are utilised by women
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8. Transforming Healthcare Infrastructure in India

Healthcare infrastructure is fundamental to ensuring access to quality medical services and promoting public health. India's healthcare system comprises hospitals, clinics, primary health centres, healthcare professionals, medical institutions, and health centres, all working together to deliver comprehensive care. Over the past decades, India has made notable progress in health infrastructure through advancements in medical technology and expanded public health programs. Key initiatives such as Ayushman Bharat (AB), the Pradhan Mantri Ayushman Bharat Health Infrastructure Mission (PM-ABHIM), and the Free Drugs Service Initiative (FDSI) have been pivotal in transforming healthcare delivery across the country.

Launched in 2018, Ayushman Bharat represents a significant shift towards a comprehensive continuum of care encompassing prevention, promotion, and treatment at the primary, secondary, and tertiary levels. The transformation of sub-health centres (SHCs) and primary health centres (PHCs) into Ayushman Arogya Mandirs (AAM) has operationalised universal, free, and expanded healthcare services closer to communities, especially in rural and urban areas. These centres provide preventive, promotive, curative,



palliative, and rehabilitative services, thereby strengthening India’s healthcare system and bringing essential services closer to the people they serve.

8.1. Factsheet of Ayushman Arogya Mandir

Component	Units
Number of AAMs operational	1,75,560+
Number of footfalls (crore)	371.97
Hypertension screenings (crore)	100.57
Diabetes screenings (crore)	88.65
Oral cancer screenings (crore)	59
Breast cancer screenings (crore)	26.95
Cervical cancer screenings (crore)	17.69
Wellness Sessions including Yoga (crore)	4.74
Teleconsultations conducted (crore)	31.86

Source: MoHFW, Figures as on 31 December 2024

The factsheet of Ayushman Arogya Mandir highlights its extensive reach and impact in India’s healthcare delivery, with over 1,75,560 centres operational nationwide as of December 2024. These centres have recorded nearly 372 crore footfalls and conducted large-scale screenings for hypertension (100.57 crore), diabetes (88.65 crore), oral cancer (59 crore), breast cancer (26.95 crore), and cervical cancer (17.69 crore). Additionally, more than 4.74 crore wellness sessions—including yoga—and 31.86 crore teleconsultations have been held, reflecting the initiative’s comprehensive and community-oriented approach to preventive, promotive, and curative health services.

8.2. Factsheet of PM-ABHIM

The PM-ABHIM initiative aims to strengthen public health infrastructure and bridge critical gaps in healthcare services across India, spanning both urban and rural areas.

Component	Units Approved
Building-less Sub Centre-Health Wellness Centre (HWC)	9,594
Urban-HWC	4,623
Block Public Health Unit	2,033



Integrated Public Health Labs	703
Critical Care Blocks	577

Source: MoHFW; Figures as on 15 November 2024

This table shows key components approved under PM-ABHIM, including 9,594 building-less sub-centre HWCs and 4,623 urban HWCs, designed to extend health and wellness services to underserved regions. The scheme also features 2,033 block public health units, 703 integrated public health labs, and 577 critical care blocks for advanced medical care and diagnostics, reflecting a comprehensive approach to enhancing health infrastructure and service delivery nationwide.

9. Conclusion

In conclusion, India's healthcare transformation over the past decade reflects a concerted effort to align inclusive economic growth with strategic infrastructure investments and policy innovations. Government health expenditure surged from ₹2.1 lakh crore in FY17 to an estimated ₹6.1 lakh crore in FY25, while social service outlays rose from ₹10.41 lakh crore to ₹25.67 lakh crore over the same period, signifying an enhanced fiscal commitment to public welfare. Flagship schemes such as Ayushman Bharat–PMJAY now cover over 55 crore individuals and have helped reduce out-of-pocket expenditure from 69.4% in 2004–05 to 47.1% in 2021–22. The operationalization of 1,75,560 Ayushman Arogya Mandirs, which recorded nearly 372 crore footfalls and conducted over 289 crore non-communicable disease screenings, underscores the expansion of primary care services into rural and underserved areas. Simultaneously, digital platforms under the Ayushman Bharat Digital Mission and CoWIN have broadened access and improved service delivery efficiency. Despite these advances, challenges persist—human resource shortages, inter-state infrastructural disparities, and socio-economic determinants of health continue to influence outcomes. Moving forward, sustaining and scaling these initiatives—coupled with targeted efforts in preventive care, workforce development, and social determinants—will be essential to realize the vision of a resilient, equitable, and technology-enabled healthcare system in Viksit Bharat 2047.

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