

Transforming Primary Health Care Delivery in India: A Study of Challenges and Strategic Solutions

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ABSTRACT

The Primary Health Care delivery system in India is facing significant challenges that limit the achievement of equitable and efficient treatment for all, especially in rural and underserved regions. This research paper aims to critically analyze the barriers preventing the current system and provide evidence-based solutions to enhance service delivery. The objective of this study is to identify key challenges, examine the structural and operational inefficiencies, and provide strategic solutions that can improve the accessibility, affordability, and quality of public health services. The methodology employed in this study includes a qualitative approach, with data collection conducted through a systematic review of policy documents, government reports, and relevant literature to supplement the secondary data. The methods of analysis involve thematic analysis to identify patterns in the challenges, and SWOT (strengths, weaknesses, opportunities, and threats) analysis to evaluate the strategic solutions. This paper also addresses the role of digital health innovations, the integration of PPP, and the importance of community-based healthcare models in transforming service delivery. The findings of the study suggest that a comprehensive, multifaceted strategy is needed to address the systematic deficiencies. This paper concludes by highlighting actionable policy recommendations to drive progress towards a more equitable and efficient healthcare delivery system in India.

Keywords: Public Health, Digital Health Innovations, Public-Private Partnership, Service Delivery

INTRODUCTION

Health is considered a fundamental need because of its vital role in saving human life, and as such, it is officially recognized as a right to health that is part of the right to life and personal liberty, as mentioned in Article 21 of the Indian constitution. Even today when the country has made so much progress in all sectors, Primary Health Care delivery in India faces multiple challenges that significantly impact the efficiency of health services and long-term health outcomes for the Indian population. The Primary Health Care delivery system in India operates in a very complex environment with many obstacles to overcome and plenty of space for change. With the growing population day by day, India is facing diverse health-related issues ranging from infectious and non-infectious diseases, compounded by socio-economic disparities and regional variations in healthcare access and quality of care. Due to this dual load, the public health environment become complicated and it needs a comprehensive approach to health service delivery that can successfully meet the requirements of the diverse community services.

Despite the substantial investment in healthcare infrastructure and policy reforms aimed at enhancing accessibility and quality, many systematic issues remain difficult to change. These include inadequate funding, a fragmented healthcare system, and a shortage of trained healthcare professionals. Such insufficiencies often result in disparities in health outcomes, particularly in rural and underserved areas, where access to essential services is limited.ⁱ One of the biggest challenges facing the Primary Health Care delivery system is the equitable allocation of public health expenditure across different states, geographical areas, both rural and urban, and socio-economic classes as per their needs. For example, most of the public health expenditure is allocated to metropolitan areas, which are home to only 30% of the country's population, while the remaining 70% live in rural areas. Public health expenditure also varies widely from state to state.ⁱⁱ This leads to growing disparities in public health expenditure between states, although overall high- and middle-income states generally spend more on their public health system as compared to lower-income states.

The Indian health delivery model comprises both public and private sectors, with government institutions such as Primary Healthcare Centres (PHCs), Community Health Centres (CHCs), and hospitals playing a vital role in

providing basic healthcare services. Despite the high-reputed medical institutions and significant policy interventions, including the National Health Mission, and Ayushman Bharat, Mohalla Clinics Programme, disparities in health outcomes persist, especially between urban and rural areas.

Furthermore, a pandemic like COVID-19 has revealed serious flaws in our public health system, emphasizing the urgent need for creative solutions that prioritize flexibility and adaptive capability. The lessons learned from this disaster emphasize how crucial it is to have a robust public health system that can address both emerging and future health issues.ⁱⁱⁱ It is important to focus on flattening the curve during the COVID-19 outbreak to ensure that the surge capacity of the healthcare system is not overwhelmed during such an outbreak. It is also essential that the system responds promptly during such an outbreak to save lives and prepare mechanisms and actions in advance to ensure that people have easy access to healthcare services during such time.

This research paper aims to explore the multifaceted challenges confronting Primary Health Care delivery in India to propose strategic solutions for reform. By analyzing existing policies and programmes such as Ayushman Bharat, Mohalla Clinics, and National Digital Health Mission (NDHM), this study seeks to provide actionable recommendations that can enhance the effectiveness and equity in health services. Ultimately, the goal is to contribute to the development of a more integrated and sustainable public health system that meets the needs of all citizens, fostering a healthier future for India. Thus, transforming public healthcare delivery has become a key priority for India as it seeks to ensure universal health coverage and achieve the Sustainable Development Goals.

This study has immense significance in the current context, where the demand for accessible and equitable healthcare is growing. Primary Health Care delivery in India is at a crossroads, with both challenges and opportunities shaping its trajectories. Identifying and addressing the barriers to effective healthcare services is essential for ensuring healthier and more resilient populations.

By examining the key challenges facing the public health system and exploring the strategic solutions, this study aims to provide a comprehensive understanding of how India can overcome its healthcare delivery hurdles. The study also highlights innovative models, such as Mohalla Clinics, National Digital Health Mission, and emerging technologies like telemedicine, which hold the potential to revolutionize the way healthcare is delivered in the country. This study is timely, as it contributes to the ongoing discourse on public health reforms, particularly in post-pandemic India.

OBJECTIVES

The primary objectives of this study are:

- i) to access the current state of Primary Health Care delivery in India, with a focus on challenges related to accessibility, infrastructure, and resource allocation, and
- ii) To explore the innovative healthcare models and strategic solutions that can transform the public health landscape, with particular attention to technology, policy reforms, and community-based initiatives.

This study aims to provide a roadmap for improving the effectiveness, efficiency, and equity of public health service in India, ultimately contributing to the creation of a robust and resilient health care system.

SCOPE

This study focuses on the challenges faced by the Primary Health Care delivery system, particularly in underserved regions. It also highlights the role of technological innovation, public-private partnerships, and community-based healthcare models in driving improvements.

MATERIAL AND METHODS

The study adopts a qualitative approach to analyze the challenges and strategic solutions for transforming Primary Health Care delivery in India. The methodology includes;

Secondary Data Analysis- Review of policy documents, government reports, and previous research studies related to Primary Health Care delivery.

Case Study Approach: analysis of specific case studies such as National Health Mission, Ayushman Bharat, and Mohalla Clinics in Delhi to identify successful models of public health transformation.

PRESENT SCENARIO AND KEY CHALLENGES

At Present, India's public health infrastructure is so vast including a three-tier system. At the base, there are sub-centers and Primary Health Centres (PHCs) that serve largely rural and semi-urban populations. At the next level, there is secondary care, administered by community health centres, and district hospitals, and third tertiary care is

provided by specialist hospitals and medical institutions in cities. However, challenges remain in the form of unequal distribution of resources, insufficient funding, and misappropriate emphasis on urban healthcare compared to rural areas, where more than 65% of the population resides.

Over the years, there has been a determined push to improve primary healthcare services, popularly in rural areas, with an emphasis on maternal, child health, and disease control initiatives. The current scenario of Primary Health Care delivery in India reflects a mixed landscape, marked by commendable improvements in several areas while also facing challenges in infrastructural gap, shortage of workforce, financial constraints, urban-rural divide, accessibility, equity, and rising burden on non-communicable diseases.

According to a 2021 report by the *World Health Organization* (WHO), India has around 1.7 doctors per 1,000 population, which is below the recommended 2.5 doctors per 1,000 population standard set by WHO.^{iv} Additionally, the workforce is unevenly distributed, with a high concentration in urban areas, leaving rural regions undeserved.

Table 1: Current Status and Challenges of Primary Health Care delivery in India

Component	Status (2023)	Challenges
Doctors per 1,000 people	1.7 (WHO recommendation: 2.5)	Workforce shortage, Rural-Urban gap
Total Sub-Centres (SCs)	157,819	Underequipped in many regions
Primary healthcare centres (PHCs)	24,935	Staffing issues, quality of care
Community health centres (CHCs)	5,335	Limited capacity for referrals
Ayushman Bharat Beneficiaries	23 crores	Implementation challenges

Source: National Health Mission Report 2023

ANALYSIS AND DISCUSSION

Lack of Health Infrastructure and Accessibility: Data from the *Ministry of Health and Family Welfare* (2023) shows that more than 40% of Primary Health Centres (PHCs) do not meet the minimum operational criteria, including the availability of medicines, trained staff, and functional equipment.^v

Lack of Trained Health Professionals: A critical issue the interviewees highlighted was the shortage of trained healthcare professionals, particularly in rural regions. The shortage of doctors at the national level is further aggravated by regional imbalances, with states like Bihar and Uttar Pradesh faring worse than the southern states like Kerala.^{vi}

Health Financing and Out-of-Pocket Expenditure: *National Health Accounts* (2022) revealed that 62% of healthcare costs are borne out of pocket by patients, which pushes millions into poverty each year.^{vii}

SWOT Analysis of Proposed Strategies

Strengths	Weaknesses
Comprehensive digital health infrastructure initiative	Financial constraints limiting large-scale implementation
Public-private partnership to increase resource availability	Slow policy implementation in rural areas
Community-based models like Mohalla Clinics offer scalable solutions	Workforce shortage, especially in marginalized regions.
Opportunities	Threats
Leveraging telemedicine to extend care	Resistance to change from entrenched system

Expanding health coverage under Ayushman Bharat	Rising Non-Communicable Disease burden straining public health systems
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Table 2: Primary Health Care delivery by State (2023)

State	Health Centres Per 1,000 People	Doctor-Patient Ratio	Infant Mortality Rate (per 1,000 live births)	Public Health Expenditure (0% of GDP)
Kerala	35	1:800	8	2.5%
Maharashtra	25	1:1200	9	1.8%
Uttar Pradesh	18	1:2000	45	1.2%
Tamil Nadu	30	1:1000	15	2.0%
Bihar	12	1:3000	43	1.0%
Rajasthan	22	1:1500	38	1.5%
Delhi (NCT)	40	1:600	10	3.0%
West Bengal	28	1:1100	20	1.7%

Source: Ministry of Health and Family Welfare (2023). National Health Profile. Central Bureau of Health Intelligence. The table presents a comprehensive view of public health infrastructure and outcome across various Indian states in 2023. Kerala and Delhi show the strongest health indicators, with the highest numbers of health centres, favorable doctor-patient ratio, and low infant mortality rates. In contrast the states like Bihar and Uttar Pradesh lag in Primary Health Care delivery, reflecting lower health infrastructure and higher infant mortality rates, underscoring the disparities in health investment and outcomes across India.

FINDING AND SUGGESTION

The findings of the study suggest that although the Indian public health system has made great progress in recent years, especially with the establishment of programmes such as *Ayushman Bharat* and *Mohalla Clinics*, the challenges related to infrastructure, workforce, and financing still persist. A holistic, multi-pronged approach is needed to address these systematic barriers and suggest strategies and reform to improve health service delivery, especially in rural areas where it is most needed.

Strategic Solutions for Transforming Primary Health Care delivery

To address the challenges, a combination of structural reforms, innovative practices, and strategic partnerships is required. The following solutions are proposed:

Strengthening Health Infrastructure

The government must prioritize its investment in upgrading the physical infrastructure of health facilities, particularly in rural areas. Expanding the number of PHCs and CHCs, and equipping them with necessary medical equipment and specialists, is crucial for effective service delivery.

Public Private Partnership

Leveraging PPP can be an effective strategy to bridge gaps in healthcare delivery. Private sector involvement can improve efficiency, enhance service quality, and reduce operational costs. The Ayushman Bharat Initiative, for example, has shown potential for collaboration between government and private entities.

Digital Health Innovations

The success of the *eSanjeevani Telemedicine Platform* during the COVID-19 pandemic demonstrated the potential of technology in bridging the urban-rural healthcare divide.^{viii}

Digital technology can revolutionize healthcare delivery, particularly in remote areas. *Electronic Health Records (HER)*, and *Mobile Health Platforms* can extend healthcare services to understand populations. The *National Digital Health Mission (NDHM)*, launched in 2020, aims to create a digital health ecosystem that integrates patient information, facilitating access to medical records across platforms.

Community-Based Health Care Models

Community engagement and empowerment play an essential role in improving healthcare access. Initiatives like *Mohalla Clinics* in Delhi have proven successful in delivering primary health care at the community level, offering a

replicable model for other regions. Strengthening *Accredited Social Health Activists (ASHA)* and Anganwadi Workers can also bolster community-based care.

Strengthening Human Resource

Addressing workforce shortage requires long-term investment in medical education and training. Increasing the number of medical colleges, offering incentives for doctors to work in rural areas, and improving working conditions can help retain healthcare professionals.

Use of Digital Tool for Feedback

For collecting feedback from citizens on Primary Health Care delivery system there should be more digital tool apart from “*My Hospital Initiative*” (Mera Asptaal Pahal) launched by the Ministry of Health and Family Welfare, Government of India.^{ix} This mobile app and web based platform allows patients to provide feedback on their experiences in public hospitals. This system collects feedback on various aspects such as the cleanliness of hospitals, behavior of health workers, availability of medicines, and quality of care, which is analyzed to improve healthcare services.

POLICY RECOMMENDATION

The following actionable policy recommendations are proposed to drive progress towards an equitable and efficient healthcare system in India.

1. Increase public health infrastructure: Raise health expenditure to at least 3% GDP to improve infrastructure, hire trained health professional, and ensure proper service delivery.
2. Incentivize Rural Healthcare: Provide financial incentive and career growth opportunities for doctors and specialists to serve in rural areas.
3. Expand Telemedicine Services: integrate telemedicine solutions to provide healthcare services to remote and underserved areas, reducing the need for physical visits to health centres.
4. Scale Community Healthcare Model: Successful community-based models like Mohalla Clinics should be replicated in other states to ensure accessibility to primary healthcare.
5. Enhance Digital Health Platforms: Accelerate the implementation of the National Digital Health Mission to streamline healthcare delivery and make health records accessible across the country.

CONCLUSION

Transforming Primary Health Care delivery system in India is challenging but achievable goal. Indian government can enhance the healthcare accessibility and quality for all of the whole populations by tackling pressing issues like inadequate funding, a lack of human resources, and deficiencies in infrastructure and by utilizing strategic solutions like digital health, strengthening primary health care, and public-private partnership. Though long-term success depends on ongoing political will, funding and community involvement, policy interventions like Ayushman Bharat and National Digital Health Mission mark significant turning points. A robust equitable and efficient healthcare system will not only improve health outcomes but also contribute to India’s broader socio-economic development. With the right policies and strategic investment, India can transform its public health landscape and ensure that quality healthcare is accessible to all.

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