

Primary Health Care in India: A Narrative Review of Principles and Implementation

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Abstract

Background: Primary Health Care (PHC) is the foundation of an effective, equitable, and accessible healthcare system and plays a crucial role in achieving universal health coverage. In India, PHC has evolved through various policy reforms and programmatic interventions; however, challenges in implementation continue to affect its overall effectiveness.

Objectives: This narrative review aims to examine the core principles of Primary Health Care and evaluate its implementation in India, with a focus on infrastructure, workforce, service delivery, and recent health system reforms.

Methodology: A narrative review approach was adopted by searching electronic databases such as PubMed, Google Scholar, Scopus, and Web of Science, along with national and international policy reports. Relevant studies published between 2000 and 2025 were screened and selected based on relevance. A total of 428 records were identified, of which 45 studies were included after screening and eligibility assessment. The selected literature was analyzed thematically.

Results: The review highlights that India has developed a wide PHC network, including Sub-centres, Primary Health Centres, and Community Health Centres, delivering essential health services. National programs and initiatives such as Ayushman Bharat and Health and Wellness Centres have strengthened service delivery and expanded the scope of care. However, persistent challenges such as infrastructure gaps, shortage of healthcare personnel, fragmented service delivery, and urban–rural disparities continue to limit the effectiveness of PHC. Workforce vacancies, limited diagnostic facilities, and weak referral systems remain major barriers.

Conclusion: Strengthening PHC in India requires a comprehensive approach focusing on improving infrastructure, addressing workforce shortages, enhancing service integration, and promoting community participation. Adoption of digital health technologies and sustained policy implementation are essential to build a resilient and equitable healthcare system capable of meeting current and future health needs.

Keywords: Primary Health Care; India; Health and Wellness Centres; Universal Health Coverage; Healthcare infrastructure; Health workforce; Public health; Service delivery.

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Introduction

Primary Health Care (PHC) is defined as essential health care based on practical, scientifically sound, and socially acceptable methods made universally accessible to individuals and families in the community” (World Health Organization, 1978) [1]. The concept of PHC was formally established during the Alma-Ata Declaration, which emphasized health as a fundamental human right and highlighted the need for equitable distribution of health services, community participation, intersectoral coordination, and appropriate

technology as core principles of health systems [1,2]. PHC serves as the first level of contact between individuals and the healthcare system and plays a crucial role in achieving universal health coverage (UHC) and improving population health outcomes.

Globally, PHC has been recognized as the cornerstone of effective and sustainable health systems. “Strong primary care systems are associated with better health outcomes, reduced health disparities, and lower healthcare costs”

(Starfield et al., 2005) [3]. The Astana Declaration reaffirmed the global commitment to strengthening PHC as a pathway to achieve Sustainable Development Goals (SDGs), particularly those related to health and well-being [4]. Despite these commitments, many low- and middle-income countries continue to face challenges in PHC implementation due to inadequate infrastructure, workforce shortages, and limited financial resources [5].

In India, the foundation of PHC was laid based on the recommendations of the Bhore Committee (1946), which advocated for a comprehensive, government-funded health system focusing on preventive and promotive services [6]. Over the decades, India has developed an extensive network of sub-centres, primary health centres (PHCs), and community health centres (CHCs) to deliver essential healthcare services, particularly in rural areas [7]. These institutions form the backbone of the public health system and are instrumental in implementing national health programs, maternal and child health services, immunization, and disease control initiatives.

However, the implementation of PHC in India has been uneven, with disparities in access and quality of care between urban and rural populations. “Challenges such as inadequate infrastructure, shortage of trained healthcare personnel, limited diagnostic facilities, and fragmented service delivery continue to hinder the effectiveness of PHC” (Rao et al., 2011) [8]. In response to these challenges, the Government of India has introduced several reforms, including the National Health Mission and the more recent Ayushman Bharat initiative, which aims to strengthen primary healthcare through the establishment of Health and Wellness Centres (HWCs) and improve financial protection for secondary and tertiary care [9].

The importance of strengthening PHC has gained renewed attention in the context of emerging health challenges such as non-communicable diseases, pandemics, and demographic transitions. “A robust primary health care system is essential for early detection, prevention, and management of diseases, as well as for ensuring equitable and accessible healthcare services” [10]. Therefore, this narrative review aims to examine the principles of primary health care and evaluate its implementation in India, highlighting achievements, challenges, and future directions.

This narrative review aims to comprehensively examine the principles of Primary Health Care (PHC) and evaluate its implementation in India, with the objective of synthesizing existing literature to understand the extent to which core PHC components—such as accessibility, equity, community participation, intersectoral

coordination, and appropriate technology—are being effectively translated into practice within the Indian healthcare system. The review also seeks to identify key achievements, persistent challenges, and gaps in service delivery, particularly in rural and underserved populations, while analyzing the impact of recent initiatives such as Health and Wellness Centres under Ayushman Bharat. The justification for this study lies in the growing importance of PHC as the foundation for achieving universal health coverage, especially in the context of increasing burden of non-communicable diseases, emerging infections, and healthcare inequities in India. By critically examining current implementation strategies, this review is expected to provide future outcomes in the form of evidence-based insights that can guide policymakers, public health professionals, and healthcare providers in strengthening PHC infrastructure, improving service quality, enhancing community engagement, and ensuring equitable access to essential health services, ultimately contributing to improved population health and sustainable healthcare development.

Methodology

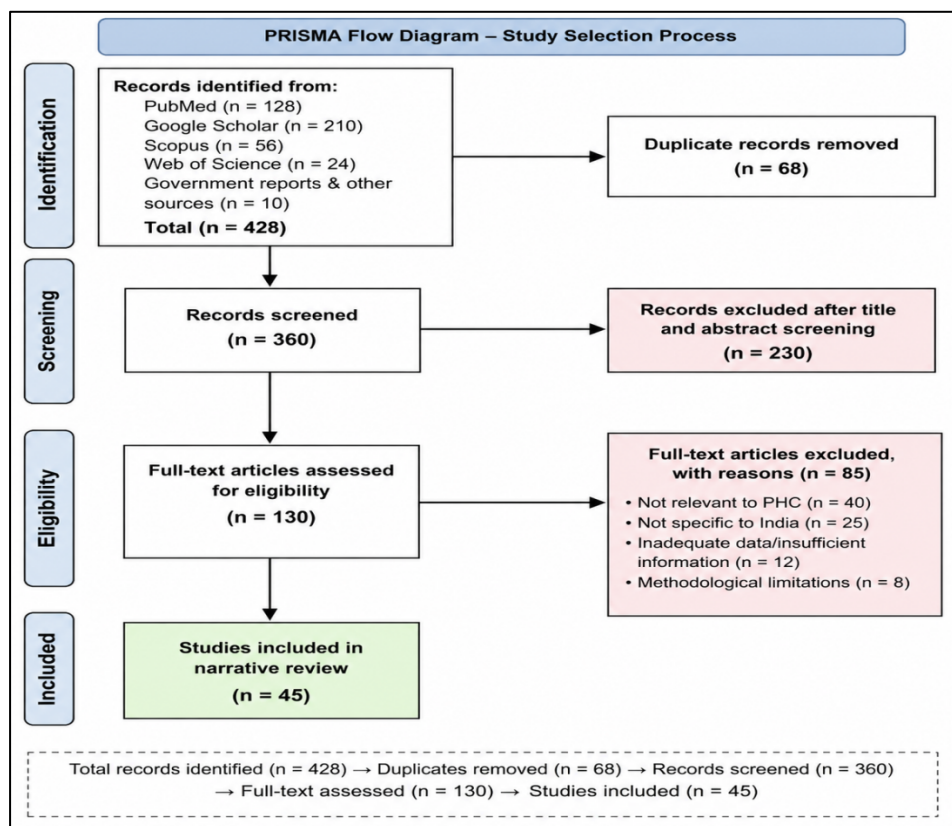
This narrative review was conducted to examine the principles and implementation of Primary Health Care (PHC) in India through a structured yet flexible literature synthesis approach. A comprehensive search of electronic databases, including PubMed, Google Scholar, Scopus, and Web of Science, was performed to identify relevant studies published between 2000 and 2025. Additional sources such as government reports, policy documents, and publications from organizations like the World Health Organization (WHO) and Ministry of Health and Family Welfare, India, were also included to ensure contextual relevance.

A total of 428 records were initially identified through database searching and other sources. After removal of 68 duplicate studies, 360 articles were screened based on titles and abstracts. During the screening process, 230 studies were excluded due to irrelevance to PHC principles or implementation, leaving 130 articles for full-text assessment. Of these, 85 studies were further excluded because of inadequate data, lack of relevance to the Indian context, or insufficient methodological clarity. Finally, 45 studies were included in the narrative review and were analyzed thematically.

The selected studies comprised original research articles, systematic reviews, meta-analyses, and national and international policy reports related to PHC. Data were extracted and categorized into major domains, including PHC principles, infrastructure and service delivery, workforce and accessibility, program implementation, and

challenges in the Indian context. The findings were synthesized descriptively to provide a comprehensive overview of PHC implementation

in India, integrating both global perspectives and country-specific evidence.



Thematic Analysis of Primary Health Care (PHC) in India

Theme 1: Core Principles of Primary Health Care: Primary Health Care is grounded in principles of equity, accessibility, community participation, intersectoral coordination, and appropriate technology” [11]. These principles ensure that healthcare services are universally accessible and culturally acceptable. In India, PHC aims to provide essential services at the grassroots level through Sub-centres, Primary Health Centres (PHCs), and Community Health Centres (CHCs). However, disparities in implementation across regions continue to challenge the realization of equitable healthcare delivery [12].

Theme 2: Infrastructure and Service Delivery System: An effective PHC system requires well-established infrastructure and integrated service delivery mechanisms” [13]. India has developed an extensive network of healthcare facilities, with over 1.5 lakh Sub-centres and 25,000+ PHCs, forming the backbone of rural healthcare. Despite this, many facilities face issues such as inadequate buildings, lack of essential drugs, and insufficient diagnostic services, which limit their functional capacity [14].

Theme 3: Human Resources and Workforce Challenges: Availability of trained healthcare personnel is a critical determinant of PHC effectiveness” [15]. India continues to experience shortages of doctors, nurses, and paramedical staff, especially in rural and remote areas. Reports indicate that up to 20–30% of sanctioned posts in PHCs remain vacant, affecting service delivery and quality of care [16]. Unequal distribution of workforce and lack of incentives for rural postings further aggravate the problem.

Theme 4: Implementation of National Health Programs: Primary Health Care facilities play a pivotal role in the implementation of national health programs and public health interventions” [17]. Programs such as immunization, maternal and child health services, tuberculosis control, and non-communicable disease screening are primarily delivered through PHC infrastructure. Initiatives under the National Health Mission have strengthened outreach services; however, fragmentation and vertical program approaches sometimes hinder integrated service delivery [18].

Theme 5: Ayushman Bharat and Health and Wellness Centres (HWCs): The Ayushman Bharat initiative has significantly reoriented India’s PHC system toward comprehensive and preventive

care through Health and Wellness Centres” [19]. HWCs aim to expand the scope of services beyond maternal and child health to include management of non-communicable diseases, mental health, and geriatric care. Early evidence suggests improved service utilization and screening coverage; however, challenges such as infrastructure gaps and workforce training persist [20].

Theme 6: Challenges and Future Directions in PHC: Persistent challenges such as inequitable access, resource constraints, and variability in

quality of care continue to limit the effectiveness of PHC in India” [11–20]. Urban–rural disparities, poor referral systems, and limited community awareness affect healthcare utilization. Strengthening PHC requires improved governance, increased funding, integration of digital health technologies, and enhanced community engagement. Adoption of a people-centered approach and reinforcement of primary care as the foundation of the health system are essential for achieving universal health coverage.

Table 1: Core Components and Implementation of PHC in India

Theme	Key Aspects	Current Status/Data
PHC Principles	Equity, accessibility, community participation	Uneven implementation across regions
Infrastructure & Services	Sub-centres, PHCs, CHCs	~1.5 lakh Sub-centres, >25,000 PHCs
Human Resources	Doctors, nurses, health workers	20–30% vacancies in rural areas
National Programs	MCH, immunization, TB, NCDs	Delivered via PHC network
Ayushman Bharat (HWCs)	Comprehensive primary care expansion	Increased screening & OPD services
Challenges	Access gaps, quality issues	Rural–urban disparity persists

Table 2: Challenges and Strategies for Strengthening PHC

Challenge Area	Key Issues	Suggested Strategies
Access & Equity	Rural–urban disparity, underserved populations	Expand outreach, mobile health units
Infrastructure Gaps	Poor facilities, lack of diagnostics	Strengthen PHC infrastructure, funding
Workforce Shortage	Vacant posts, uneven distribution	Incentives, training, rural postings
Program Implementation	Fragmented vertical programs	Integrated service delivery
Policy & Governance	Weak regulation, implementation gaps	Strong monitoring & accountability
Community Awareness	Low health literacy, poor utilization	Health education, community participation

Discussion

Primary Health Care (PHC) remains the cornerstone of an effective and equitable health system, as emphasized since the Alma-Ata Declaration and reaffirmed in the Astana Declaration” [1,4]. The present narrative synthesis indicates that while India has made substantial progress in expanding PHC infrastructure and program delivery, gaps persist in translating core principles into uniform practice across regions. Globally, strong PHC systems are associated with improved health outcomes, reduced inequalities, and lower healthcare costs [3]; however, similar benefits in India are variably realized due to disparities in accessibility and quality of care, particularly between urban and rural settings [8].

With respect to PHC principles, the Indian system aligns conceptually with global frameworks emphasizing equity, community participation, and intersectoral coordination [1,2,11]. However, studies suggest that effective community participation remains limited in practice, and health services are often provider-driven rather than community-centered [12]. Compared to high-performing PHC systems globally, where

community engagement is integral to service planning, India still faces challenges in achieving participatory healthcare delivery.

In terms of infrastructure and service delivery, India has established a vast network of Sub-centres, PHCs, and CHCs, which forms the backbone of rural healthcare [7,13]. Data indicate that more than 1.5 lakh Sub-centres and over 25,000 PHCs are operational; however, infrastructure deficiencies such as inadequate buildings, lack of equipment, and limited diagnostic facilities continue to hinder service effectiveness [14]. In contrast, developed health systems demonstrate better integration of services and availability of essential resources at the primary care level, leading to more efficient patient management and reduced burden on higher-level facilities [5].

The issue of human resources remains a critical barrier in PHC implementation. Evidence suggests that 20–30% of sanctioned posts in PHCs are vacant, particularly in rural and remote areas [15,16]. This shortage affects not only service delivery but also the quality and continuity of care. Similar challenges have been reported in other low- and middle-income countries; however, successful

models have demonstrated that incentives, task-shifting, and community health worker programs can significantly improve workforce distribution and healthcare access [5,8]. India's ASHA program has shown positive outcomes in improving outreach services, yet gaps in training and retention persist.

Regarding implementation of national health programs, PHC facilities play a pivotal role in delivering services such as immunization, maternal and child health care, tuberculosis control, and non-communicable disease (NCD) screening [17,18]. While program coverage has improved significantly over the years, vertical implementation often leads to fragmentation of services and increased workload on frontline workers. Integrated service delivery models, as seen in stronger PHC systems globally, are associated with better health outcomes and resource utilization [3].

The introduction of Ayushman Bharat and Health and Wellness Centres (HWCs) marks a significant shift toward comprehensive primary care in India [9,19]. HWCs aim to expand the scope of services to include NCD management, mental health, and geriatric care. Early data indicate improvements in outpatient attendance, screening coverage, and preventive service utilization [20]. However, challenges such as infrastructure readiness, availability of trained personnel, and supply chain management continue to limit the full potential of these reforms. Comparatively, countries with well-established primary care systems have demonstrated that sustained investment and system integration are essential for long-term success [5].

Despite these advancements, persistent challenges continue to affect PHC effectiveness in India. Urban-rural disparities, inequitable resource distribution, weak referral systems, and limited community awareness contribute to suboptimal healthcare utilization [8,11-20]. Additionally, the rising burden of non-communicable diseases and emerging infectious threats necessitate a more responsive and resilient PHC system. Global evidence suggests that strengthening PHC through increased funding, improved governance, digital health integration, and community engagement can significantly enhance health outcomes and system efficiency [10].

In summary, the findings of this review demonstrate that while India has made commendable progress in strengthening PHC through policy initiatives and infrastructure expansion, significant gaps remain in implementation and service quality. A comprehensive approach focusing on strengthening workforce capacity, improving infrastructure, enhancing community participation, and ensuring

integrated service delivery is essential to realize the full potential of PHC and achieve universal health coverage.

Conclusion

Primary Health Care (PHC) in India has evolved as the foundation of the healthcare system, with significant progress in expanding infrastructure, implementing national health programs, and strengthening service delivery through initiatives such as Health and Wellness Centres. Despite these advancements, the effective translation of PHC principles into practice remains uneven across regions. Persistent challenges such as inadequate infrastructure, shortage of trained healthcare personnel, fragmented service delivery, and disparities in access continue to limit its overall effectiveness. Strengthening PHC is essential not only for improving basic healthcare services but also for addressing emerging health challenges, including non-communicable diseases and public health emergencies. A robust, accessible, and equitable PHC system is critical for achieving universal health coverage and improving population health outcomes in India.

Limitations

This narrative review has certain inherent limitations. As a narrative synthesis, it lacks the methodological rigor and systematic approach of a systematic review or meta-analysis, which may introduce selection bias. The inclusion of studies was based on relevance rather than strict inclusion criteria, which may affect the comprehensiveness of the findings. Additionally, the review relied primarily on published literature and secondary data sources, which may not fully capture recent developments or ground-level variations in PHC implementation. Variability in study designs and reporting standards across included studies may also limit direct comparison of findings. Furthermore, limited availability of region-specific data restricted the ability to provide detailed localized insights.

Recommendations

Strengthening Primary Health Care in India requires a comprehensive and integrated approach focusing on infrastructure, workforce, governance, and community engagement. There is a need to improve physical infrastructure and ensure the availability of essential drugs, equipment, and diagnostic services at all primary care facilities. Addressing workforce shortages through recruitment, training, and incentives for rural postings is crucial for improving service delivery. Integration of healthcare services and strengthening referral systems can enhance continuity of care and reduce the burden on higher-level facilities. Increasing community participation and health

awareness will improve utilization of services and promote preventive healthcare practices. Adoption of digital health technologies and robust health information systems can improve efficiency, monitoring, and decision-making. Finally, sustained political commitment, adequate funding, and effective implementation of policies are essential to build a resilient and equitable PHC system capable of meeting current and future healthcare needs.

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