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Exploring the Landscape of Primary Healthcare in India: A Comprehensive Analysis of Strengths, Weaknesses, Opportunities, and Threats

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Abstract

The Indian public health system follows a three-tiered pyramid, comprising primary, secondary, and tertiary healthcare facilities. Primary care serves as the foundation of healthcare delivery globally. Despite efforts to reform primary healthcare, challenges persist, including inadequate infrastructure and a severe shortage of medical staff and resources. This study relies on secondary data from government publications, journals, and press releases sourced from databases like Google Scholar, PubMed, ScienceDirect, and search engines such as Google.

The analysis employs a Strengths, Weaknesses, Opportunities, and Threats (SWOT) framework, considering the structure and dynamics of primary healthcare systems alongside relevant literature. To enhance primary healthcare delivery, it is recommended to upgrade facilities, construct new housing to accommodate population growth, and implement a bottom-up approach, focusing on community empowerment, illness prevention, and health promotion.

Keywords: PHC, SWOT analysis, Primary healthcare reform

Introduction

World healthcare systems are influenced by political, economic, geographical factors, and historical trends of individual nations. In India, the public health system is structured as a three-tiered pyramid, comprising primary, secondary, and tertiary healthcare facilities. Primary care serves as the cornerstone of healthcare delivery globally and is characterized by three interrelated components: comprehensive integrated health services, multisectoral policies, and initiatives, and engagement and empowerment of individuals, families, and communities.

Primary healthcare is a holistic approach that aims to ensure the highest level of health and well-being, emphasizing equity and focusing on people's needs across the health continuum. The primary tier includes Subcentres (SC), Primary Health Centres (PHC), and community health centres (CHC).[1] Subcentres serve as the initial point of contact between health workers and the community, playing a crucial role in healthcare delivery.

The Indian Public Health Standards (IPHS) document outlines uniform standards to enhance the quality of healthcare delivery, adapting to changing protocols and the introduction of new

programs.[2] Primary healthcare involves a combination of tasks, methods, and levels of medical attention, encompassing eight essential components such as immunization, health education, nutrition, safe water, basic sanitation, maternal and child health care, prevention and control of endemic diseases, appropriate treatment of common ailments, and provision of essential drugs.[3-5]

In this context, researchers aim to review the current state of the Primary Healthcare (PHC) system, exploring its condition and identifying achievements that contribute to its strengthening.

Literature Review

This research exclusively relies on secondary information, complemented by a rigorous methodological examination of existing literature and data. Extensive searches were conducted across databases, including Google Scholar, PubMed, Science Direct, and search engines like Google, using specific search terms such as PHC, Primary Care in India, Achievements of PHC, Subcentres, and Primary Health Centres. The materials gathered for the study encompassed a range of sources, including press releases, peer-reviewed journals, and government reports, offering up-to-date information on the subject.
Despite the comprehensive search, there is a scarcity of publications addressing both internal and external factors that may impact the PHC system positively or negatively. Consequently, the collected information was systematically categorized into strengths, weaknesses, opportunities, and threats to provide a nuanced understanding of the primary healthcare landscape.

SWOT Analysis

The SWOT analysis is presented in the form of a matrix (refer to Figure 1), offering a well-organized and easily understandable map that categorizes and outlines the strengths, weaknesses, opportunities, and threats of a program. Utilizing this analysis involves leveraging the existing structure, dynamics, and documented reports. This method aids in strategic planning and decision-making by providing a clear visual representation of key internal and external factors impacting the program.[6]

	Helpful to Objective	Harmful to Objective
Internal Origin	Strength	Weakness
External Origin	Opportunities	Threats

Fig-1: SWOT matrix, an adaptation from essentials of strategic planning in healthcare by Jeffrey P. Harrison (Health administration press, 2010).[6]

Strengths

The government demonstrates a steadfast commitment by launching new initiatives aimed at enhancing life expectancy, reducing infant mortality rates, and increasing vaccination rates. These initiatives extend healthcare services widely across the country, even reaching remote areas through the mobilization of a significant volunteer force comprising Accredited Social Health Activists (ASHAs).[7] The proactive measures include improved outreach services, leveraging technological advancements for greater efficiency, and ensuring enhanced access to healthcare services.

Notable among these initiatives is the Ayushman Bharat Pradhan Mantri Jan Arogya Yojana Scheme, recognized as the largest health insurance program ever implemented. Additionally, alternative healthcare programs such as AYUSH (Ayurveda, Yoga, Unani, Siddha, Homeopathy) contribute to the holistic approach in promoting health and well-being. These efforts collectively signify a comprehensive strategy by the government to uplift and revolutionize the healthcare landscape in the country.[8-12]

Weakness

The unequal distribution of healthcare services is, to some extent, influenced by political and individual preferences. Insufficient coordination among various departments has a direct or indirect impact on public health performance. Factors such as population growth, rapid urbanization, and changing demographics contribute to imbalances in infrastructure needs and distribution. Despite the increasing demand, only about two percent of India's GDP is allocated to healthcare.[13-14]

Reports highlight a stark disparity between rural and urban areas, with rural regions experiencing a disproportionate lack of healthcare resources. While organized service delivery infrastructure is largely absent in cities and towns, it is crucial for addressing the healthcare needs of the urban poor. Low public spending remains a challenge, and establishing a referral system at the primary level is essential to prevent overcrowding at the secondary and tertiary levels.[16-18]

Issues such as poor community participation, particularly in areas like sanitation, result in a disconnect from higher levels of care. The distribution of human resources in the healthcare sector is uneven, exacerbating challenges. Effectively gathering and utilizing data for planning and patient monitoring is crucial for addressing these systemic issues and improving the overall healthcare landscape.[19-22]

Opportunities

The proliferation of medical colleges contributes to advancing research opportunities in the healthcare sector. The current low doctor-to-patient ratio presents ample employment prospects.[23] Effective coordination among various government departments has the potential to expedite improvements in mass healthcare. The National Rural Health Mission (NRHM) possesses available funds that states can leverage to reduce unapplied budgets.[24-26]

To enhance accessibility, there's a need to produce and supply medicines and equipment at lower costs, ensuring availability to a broader population. Exploring models such as Public Private Partnership (PPP) becomes essential for elevating the quality of healthcare at the foundational level.[27-28] By investigating innovative approaches and capitalizing on existing resources, the government can further strengthen healthcare delivery and accessibility for the benefit of the masses.

Threats

Insufficient funds, the risk of potential quackery, and the inconvenience of traveling long distances often limit options, leaving private facilities as the primary alternative. In the country, there are reportedly 25,781 public hospitals and 43,487 private ones. The challenges include a lack of awareness, insufficient support, and financial barriers.[30-32]

Due to the frequent overcrowding of government hospitals, many patients opt for privately run healthcare facilities. India still falls short of meeting the World Health Organization's (WHO) recommendation of having one doctor per 1,000 people, currently having one doctor for every 1,194 people.[33] These factors underscore the ongoing challenges in achieving widespread, accessible, and quality healthcare services in the country.[34-35]

Discussions

Indian present public health centre scenario

Presently, India has 31,035 Functional Primary Health Centres (PHCs) and 1,61,829 Subcentres (SCs), as illustrated in Figure 2. The national health policy of 2017 commits the government to allocate a significant proportion (more than two-thirds) of resources to Primary Health Care (PHC).[35-36] A key strategy to achieve this commitment involves establishing 1,50,000 Health and Wellness Centres (HWCs), intended to serve as primary points of contact for PHC.

According to the National Family Health Survey (NFHS)-5 report, 49.9% of Indian households typically do not use government medical facilities, a figure slightly lower than the 55% reported in NFHS-4 (2015-16).[37] Both urban and rural residents show a preference for private facilities over public ones. The Union Cabinet approved the National Urban Health Mission (NUHM) on May 1, 2013, as a sub-mission of the larger National Health Mission (NHM). NUHM aims to provide equitable and high-quality primary healthcare services to urban residents, with a specific focus on rural and vulnerable groups within the community.[38]

Urban areas

The National Urban Health Mission (NUHM) aims to enhance public health by providing access to high-quality primary healthcare. This initiative encompasses all towns and cities with populations exceeding 50,000, as well as district and state capitals with populations exceeding 30,000. As of March 31, 2022, there are 6,118 Urban Primary Health Centres (U-PHCs) operating in India, falling short of the required percentage for the urban population. Among these U-PHCs, 1,734 have been converted into Health and Wellness Centres (HWCs).[39]

Norms for the urban population indicate a roughly 44.4% shortage of U-PHCs. Approximately 70% of U-PHCs are housed in government buildings, 27% in rented

buildings, and 3% in rent-free buildings. At the U-PHC level, there is a 13.4% vacancy for female health workers (HW (F))/Auxiliary Nurse and Midwife (ANMs). Specific shortages include 19.1% for staff nurses, 18.8% for doctors, 16.8% for chemists, and 18.8% for lab technicians.

Urban Community Health Centres (U-CHCs) operate in India's urban areas, numbering 584 as of March 31, 2022. Of these, 4% are housed in privately rented buildings, while 96% are in public buildings. There are open vacancies for 16,820 HW(F)/ANMs in urban areas. Specific shortages include 19.1% for doctors, 21.4% for chemists, 29.8% for lab technicians, and 21.7% for staff nurses at U-PHCs.[40]

Rural areas

Since the inception of the National Rural Health Mission in 2005, the number of allopathic doctors working in primary health centres has risen by over 50%. Comparatively, by 2022, there is projected to be a substantial increase of 30,640 allopathic doctors employed at PHCs, marking a significant growth from the 20,308 recorded in 2005. However, the Rural Health Statistics (RHS) report underlines a critical shortage of specialists in the country, with Community Health Centres (CHCs) reporting an 80% deficit in required specialists.

CHCs, which serve as block-level medical facilities with 30 beds, face challenges in staffing with specialists despite their pivotal role in providing general medical, surgical, gynecological, and pediatric care. Of the 6,064 CHCs in India, many struggle to be adequately staffed with specialists. The shortage is particularly prominent in surgical (83.2%), obstetrics and gynecology (74.2%), medicine (79.1%), and pediatrics (81.6%) specialties.

Furthermore, the report emphasizes a shortage of female healthcare professionals and auxiliary nursing midwives, with up to 14.4% of these positions remaining unfilled. As of March 2022, the country has 157,935 operational rural Subcentres (SCs), and there has been a significant increase in the number of SCs since 2005, especially in states like Rajasthan (3,011), Gujarat (1,858), Madhya Pradesh (1,413), and Chhattisgarh (1,306).

Similarly, the number of rural Primary Health Centres (PHCs) has seen substantial growth since 2005, with 24,935 PHCs in operation. Notable increases have been recorded in the states of Jammu and Kashmir (557), Karnataka (457), and Rajasthan (420). These statistics underscore the progress made in healthcare infrastructure in rural areas while highlighting persisting challenges in specialist staffing.[40]

There is a shortage of 44.3% for ANMs at PHCs and 57 Subcentres (SCs). Moreover, there are deficits in doctors (16.7%), chemists (24.3%), lab technicians (50.9%), and staff nurses across various healthcare facilities. These statistics underscore the challenges in maintaining adequate staffing levels and resources in urban healthcare settings.

Major achievements for primary health centre

The Ayushman Bharat-Pradhan Mantri Jan Arogya Yojana scheme has facilitated approximately 2.4 crore hospital admissions, amounting to an expenditure of nearly Rs. 28,300 crores. In the realm of school health and wellness initiatives, 68,582 headmasters/principals and 1.34 lakh health and wellness ambassadors have undergone training in 24 states.

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From April 2021 to November 2021, the Weekly Iron Folic Acid Supplementation Program (WIFS) has provided benefits to 3.01 crore beneficiaries each month. This includes 2.64 crore students and 36.75 lakh non-student adolescent girls. Across the country, there are presently 7,135 Adolescent Friendly Health Clinics (AFHCs), covering a total of 50.6 crore children.

The program has conducted over 90 million prenatal examinations at sites offering comprehensive services. It has identified and managed more than 5 lakh high-risk pregnancies through prophylactic oral rehydration solution (ORS). Accredited Social Health Activists (ASHAs) have reached over 7.0 billion children under the age of five.

As a result of these efforts, there has been a significant improvement in maternal and infant health indicators. The Maternal Mortality Rate has dropped to 100 per 100,000 live births, while the Infant Mortality Rate has decreased to 30 per 1,000 live births. These achievements underscore the positive impact and success of the healthcare initiatives implemented under the Ayushman Bharat-Pradhan Mantri Jan Arogya Yojana scheme.

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The initiative has conducted over 90 million prenatal examinations at sites offering full services, identifying more than 5 lakh high-risk pregnancies for prophylactic Oral Rehydration Solution (ORS). Accredited Social Health Activists (ASHAs) have facilitated healthcare for over 7.0 billion children under the age of five.

Health indicators have shown substantial improvement, with Maternal Mortality dropping to 100/100,000 live births and the Infant Mortality Rate decreasing to 30/1,000 live births. Additionally, there have been notable reductions in Malaria mortality (60%), Kala Azar mortality (100%), Filaria reduction rate (80%), Dengue mortality (50%), and Cataract surgeries have increased to 46 lakhs annually. Leprosy Prevalence Rate has decreased to less than 1 per 10,000, and Tuberculosis Control has achieved over 70% case detection and an 85% cure rate.

Initiatives like the National Programme for Palliative Care (NPPC) have been introduced, with over 1.77 lakh patients benefitting from the Dialysis Program, accounting for more than 19.15 lakh dialysis sessions.

The National Health Mission (NHM) has allocated Rs. 1218.31 crores for the Free Diagnostics Services Initiative across 29 States/UTs. Operational Guidelines for Non-Communicable Disease (NCD) Screening and Management have been released, with screenings initiated in about 60 districts across 12 states and 2 UTs.

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As of November 2021, 44.54 lakh patients have benefited from AMRIT Pharmacies, generating significant savings and minimizing out-of-pocket costs. Under the National Rural Health Mission (NRHM), there are currently 20,990 emergency response vehicles and 5,499 patient transport vans in use, emphasizing "free pickup and drop back" services for expecting mothers and unwell babies.

By September 2022, the Biomedical equipment maintenance and management program has been implemented in 28 states. Currently, 2.25 lakh healthcare facilities provide monthly data on their physical environment, staffing levels, and the provision of medical services. These comprehensive initiatives underscore significant progress in healthcare accessibility, delivery, and overall public health.[40-41]

Primary health centre across the globe

Countries exhibit diverse primary healthcare systems, policies, and cultural contexts. Here are examples of fundamental healthcare approaches from various nations:

1. **Canada:**

- Public healthcare system named Medicare.

- Primary care delivered by family physicians, nurse practitioners, and allied health specialists.

- Widely accessible primary care emphasizing comprehensive, patient-centered services, including preventive treatments and managing chronic conditions.

2. **United Kingdom (UK):**

- Access to free medical care via the National Health Service (NHS).

- General practitioners (GPs) serve as the first point of contact, offering primary healthcare.

- GPs provide a range of services, including preventive care, treatment of common illnesses, and referrals to specialists as needed.

3. **Australia:**

- Mixed healthcare system with public and private providers.

- Primary healthcare provided by general practitioners, nurses, and other medical personnel.

- Government promotes Primary Health Networks (PHNs) to organize and enhance primary care services, covering preventive care, chronic disease management, and mental health services.

4. **Germany:**

- Social health insurance system covering the majority of citizens.

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- General practitioners play a key role as gatekeepers, overseeing patient care.

- Emphasis on managing illnesses, promoting health, and offering preventive care.

- Advocates integrated care strategies involving collaboration among diverse healthcare organizations.

These examples illustrate the varied approaches to primary healthcare globally, reflecting the unique priorities, structures, and cultural considerations of each country.

(Estimated Population 2019-20)

Sl.No.	Major States	Sub-Centre	PHC	CHC
1	Kerala	1992	13746	51076
2	Himachal Pradesh	3159	11716	77741
3	Jammu & Kashmir	3150	10138	121519
4	**Karnataka**	**4116**	**17378**	**200079**
5	Gujarat	3971	24631	104540
6	Uttarakhand	4020	28767	132018
7	Chhattisgarh	4142	27218	126806
8	Tamil Nadu	4153	25480	93979
9	Rajasthan	4302	27691	105814
10	Telangana	4300	32077	240012
11	Andhra Pradesh	4606	29996	242950
12	Odisha	5551	28822	98469
13	Madhya Pradesh	5840	49807	193262
14	Maharashtra	6063	35295	232212
15	Punjab	6050	41799	124811
16	West Bengal	6070	68843	180615
17	Assam	6330	31175	155221
18	Haryana	6639	45127	147237
19	Jharkhand	7358	97296	165573
20	Uttar Pradesh	8413	60696	245857
21	Bihar	11763	62977	1880474
	All India	**5729**	**35730**	**171779**

Source: Rural Health Statistics, MoHFW, Government of India, 2020

Figure-2: SC, PHC, CHC currently function in India

Japan ensures universal access to basic medical care through its national health insurance program. The focus is on delivering comprehensive and coordinated care, with general practitioners serving as the primary providers of primary care services. A significant emphasis is placed on public health improvement through preventive care, health screenings, and health education. This approach underscores Japan's commitment to holistic healthcare and proactive measures to enhance the overall well-being of its population. [47]

In the Netherlands, the mandatory health insurance system comprises both state and private insurers. Primary healthcare (PHC) is provided by general practitioners, who serve as the primary coordinators of patient care. The Dutch primary care system prioritizes continuity of care, preventive measures, and shared decision-making between patients and healthcare providers. This underscores the commitment to a comprehensive and collaborative approach to primary healthcare in the Netherlands.[48]

In Cuba, the primary healthcare system stands out for its emphasis on community-based care, preventive measures, and a comprehensive policy. Family doctors and nurses take center stage as care providers, with responsibilities extending to specific demographic groups within their local communities.[49]

Contrastingly, the United States boasts a complex healthcare system, incorporating both public and private providers. Primary care, typically provided by physicians, nurse practitioners, and physician assistants, may encounter challenges related to geography, cost,

and insurance coverage. The scope of primary care in the U.S. includes immediate treatment, specialist referrals, managing chronic illnesses, and preventive measures.[50]

Brazil operates a mixed healthcare system featuring both public and private providers. The Sistema Nico de Sade (SUS), a national healthcare delivery system, ensures universal access to quality medical treatment. The Family Health Strategy (Estratégia de Sade do Família), a primary care program in Brazil, underscores the importance of preventive care, health promotion, and community-based services.[51]

Chile's healthcare system incorporates public and private services, with primary healthcare provided through individual private practices and free clinics known as Consultorios. Prioritizing illness management, health promotion, and preventive care, Chile has embraced the family health model (Modelo de Salud Familiar), highlighting treatment continuity and the role of primary care teams in patient coordination.[52]

In Argentina, the healthcare system integrates the public, social security, and private sectors. Primary healthcare is dispensed through a network of centers referred to as CAPS or Centros de Atención Primaria de la Salud (PHC Centers). These institutions offer a wide range of services, including preventive care, treatment for common illnesses, and necessary referrals to specialized care. Argentina places significant emphasis on health promotion programs and community-based therapy.[53]

Conclusion

For numerous years, Primary Health Care (PHC) has been recognized as the cornerstone for building stronger and more efficient healthcare systems. India embarked on efforts to enhance PHC in 1943 with the establishment of the "health survey and development committee," led by Sir Joseph Bhore. This paper seeks to shed light on the functioning of the PHC system, acknowledging its apparent shortcomings, which stem from various factors. One significant challenge is the general scarcity of resources in India, compounded by the continuous loss of medical professionals, making it challenging to sustain an effective and comprehensive healthcare system.

Recognizing the imperative for a comprehensive, integrated PHC strategy, especially in light of the increasing burden of chronic diseases, the Indian government recently introduced the Ayushman Bharat program. This initiative aims to provide citizens with access to comprehensive healthcare services, including care near their homes through health and wellness centers, coupled with financial protection. To leverage current advantages and opportunities, India must meticulously decide on the continuation, modification, or termination of policies through an efficient communication system across decision-making levels.

Additionally, it is recommended to intensify efforts in increasing investment in PHC, enhancing infrastructure and technology, expanding access to medicines and essential supplies, prioritizing preventive care, fostering public-private partnerships, promoting community engagement, and implementing robust monitoring and evaluation of health programs to address health inequalities.

The final recommendation underscores the need to upgrade PHC delivery service facilities, construct new units to accommodate population growth, and adopt a bottom-up approach

focusing on community empowerment, disease prevention, and health promotion, as health holds unparalleled significance – "Health is not everything but everything else is nothing without health."

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