



Rural healthcare in India: An assessment

Chiranjeev Singh Boparai

Research Scholar, Department of Commerce, Punjabi University, Patiala, Punjab, India

Abstract

India is a country with a diverse population, culture, and geography. Despite recent improvements in the healthcare system, there is still a significant gap in the quality of healthcare between urban and rural areas. The rural healthcare system in India faces several challenges that hinder its ability to provide effective and timely healthcare services to the rural population. These challenges include inadequate healthcare facilities, a shortage of healthcare professionals, and poor healthcare infrastructure. The lack of basic amenities such as clean water, electricity, and sanitation, as well as the limited transportation infrastructure, makes it difficult for patients to access healthcare facilities located far away from their homes. The government has taken significant steps to improve the rural healthcare system. One of the most significant initiatives taken by the government is the National Rural Health Mission (NRHM), launched in 2005, which aims to provide accessible, affordable, and quality healthcare to the rural population. Moreover, different judicial pronouncements have declared Right to Health as a fundamental right.

A three-tiered scheme has been created for the health care facilities in rural regions that include- Sub-Centres (SCs), Primary Health Centres (PHCs) and Community Health Centres (CHCs) which work at different levels to facilitate good health to the rural population.

To address the challenges faced by rural healthcare in India, a comprehensive approach is needed that addresses the root causes of the challenges. This approach must include improving healthcare infrastructure, increasing access to healthcare services, improving sanitation and hygiene, increasing the availability of essential medicines, raising health awareness, and increasing funding for rural healthcare. This research paper deals with all of the above-mentioned aspects and reaches to a rational conclusion.

Keywords: Rural, fundamental right, national rural health mission, sub-centres, primary health centres, community health centres

Introduction

India is a country marked by rich cultural and geographical diversity wherein 65 percent of population lives in rural areas. The rural health care system forms the bedrock of nation's health framework. Health care facilities are regarded to be of utmost significance and individuals, belonging to all age groups and backgrounds need these facilities. Rural health care services in India are mainly based upon primary health care, which envisages healthy status and well-being for all. Also being holistic in nature, it aims to provide preventive, and promote curative and rehabilitative care services.

The different health policies and programs within the country aim at achieving an acceptable standard for health for the general population of the country. The rural health care system in India is structured primarily as a three-tier system, aiming to provide accessible and affordable healthcare services to the vast rural population. This system operates under the umbrella of the National Health Mission (NHM), which subsumes the National Rural Health Mission (NRHM).

Background and Rationale

Rural India accounts for a substantial portion of the country's population, and healthcare delivery in these areas is inadequate and full of complexities. The disparities in healthcare infrastructure, the accessibility of services, and the overall health outcomes in rural regions compared to urban areas was always being neglected,

Government interventions and schemes have played a pivotal role in attempting to bridge this gap. Various initiatives such as the National Rural Health Mission (NRHM) and Ayushman Bharat have been launched with the objective of expanding healthcare coverage and improving the overall health status of rural populations. However, understanding the effectiveness of these schemes, their impact on healthcare infrastructure, and their implications for rural communities requires an in-depth analysis.

Objectives of the Study

The present study aims to achieve the following objectives regarding rural healthcare system in India:

- To study various components of rural healthcare system.
- To study the present scenario of rural health infrastructure in india
- To highlight various challenges faced regarding rural healthcare system.
- To analyse various initiatives taken to strengthen healthcare system in rural areas.

Research Methodology

The present study is based on secondary data which is collected from various reports of Ministry of health and family welfare, various SDG reports, economic survey of various years, various journals and official publications. An attempt has been made to incorporate the latest data regarding rural healthcare system in India.

Components of the Rural Healthcare System

1. Sub-Centres (SCs)

These are the most peripheral and first contact points between the primary healthcare system and the community. They focus on interpersonal communication, behavioural change, and providing services related to maternal and child health, family welfare, nutrition, immunization, and communicable disease control.

Each SC is typically manned by at least one Auxiliary Nurse Midwife (ANM)/Female Health Worker, one Male Health Worker, and often a second ANM on a contractual basis under NHM. A Lady Health Visitor (LHV) supervises six Sub-Centres. As per population norms, one SC for every 5,000 population in plain norms areas and 3,000 population in hilly/tribal areas.

2. Primary Health Centres (PHCs)

PHCs are the first point of contact between a village community and a Medical Officer. They provide integrated curative and preventive healthcare to the rural population, with an emphasis on promotive and preventive aspects. These are manned by a Medical Officer In-charge and typically 14 subordinate paramedical staff.

Norms: One PHC for every 30,000 population in plain areas and 20,000 population in hilly/tribal areas. As per the norms they are designed to serve as a referral unit for 6 Sub-Centres. Many PHCs are being upgraded to function 24x7.

3. Community Health Centres (CHCs)

CHCs serve as referral centres for 4 PHCs and offer facilities for obstetric care and specialist consultations. They have 30 in-door beds with an operation theatre, X-ray, labour room, and laboratory facilities.

These are ideally manned by four medical specialists (Surgeon, Physician, Gynecologist, and Pediatrician) supported by 21 paramedical and other staff. As per the norms one CHC for every 1,20,000 population in plain areas and 80,000 population in hilly/tribal areas.

4. First Referral Units (FRUs)

These are upgraded CHCs or sub-divisional hospitals that meet specific criteria to provide comprehensive emergency obstetric care, including surgical interventions like Caesarean Sections, newborn care, and blood storage facilities on a 24-hour basis.

5. District Hospitals (DHs)

These are the apex healthcare facilities at the district level, providing secondary care services and serving as a referral point for CHCs and PHCs.

6. Accredited Social Health Activists (ASHAs)

ASHAs are community health volunteers who act as a crucial link between the health system and the community. They are the first point of contact for health-related demands, especially for women and children in rural areas. There is typically one ASHA for every 1000 population.

7. Village Health Sanitation and Nutrition Committees (VHSNCs)

These committees work at the grassroots level, often utilizing untied grants to address the health and nutrition needs of poor households and children.

8. Mobile Medical Units (MMUs) and Ambulance Services

To improve access in unserved areas, MMUs provide healthcare services, and a network of free ambulance service connected with a toll-free number is available.

9. Ayushman Bharat - Health and Wellness Centres (AB-HWCs)

A significant initiative under Ayushman Bharat, existing SCs and PHCs are being upgraded to AB-HWCs to deliver Comprehensive Primary Health Care (CPHC), including preventive, promotive, curative, palliative, and rehabilitative services.

10. Ayushman Bharat Pradhan Mantri Jan Arogya Yojana (AB-PMJAY)

This publicly financed health insurance scheme provides a defined benefit cover of Rs. 5 lakh per family per year for secondary and tertiary care hospitalization to economically vulnerable populations in rural areas.

The rural health care system in India has been a significant area of research reflecting both its importance in achieving universal health coverage and challenges it faces.

Berman, P., Ahuja, R., & Bhandari, L. (2016) ^[1]. In their paper critically evaluates the implementation and outcomes of the National Rural Health Mission (NRHM). It found that NRHM led to increased public health expenditure, improved maternal and child health indicators, and expanded service delivery. However, issues such as poor accountability, inefficient fund utilization, and unequal distribution of benefits were noted. The authors suggest strengthening decentralization and enhancing monitoring systems.

Dandona, R., Kumar, G. A., *et al.* (2017) ^[2]. Assessed maternal and child health outcomes in rural India using data from the Global Burden of Disease Study. It highlights persistent disparities in institutional deliveries, immunization, and antenatal care between rural and urban areas. Mortality rates in rural districts remain higher. The paper recommends targeted investment in rural health infrastructure and services.

Basu, D., & Ghosh, A. (2018) ^[4]. In their paper explores health inequities in rural India through the lens of socio-economic indicators like caste, income, and gender. Scheduled Castes and Tribes were found to experience poorer health outcomes and limited access to services. The authors argue for socially inclusive health policies and better representation of marginalized groups in health planning.

Sharma, R., Gupta, N., & Kaur, P. (2019) ^[5].

The paper examines the role of telemedicine in improving rural healthcare access. While it highlights telemedicine's potential to bridge geographic and professional gaps, it notes limitations such as poor digital infrastructure, lack of awareness, and regulatory challenges. It advocates for investment in rural connectivity and training of health personnel in digital tools.

Mishra, S., & Mohanty, S. (2020) ^[6].

Analysing NFHS and NSSO datasets, this study evaluates the utilization of health services in rural India. The authors find that factors such as education, economic status, caste, and distance from health facilities significantly influence healthcare utilization. They recommend increasing health awareness and subsidizing services in underserved areas.

Pandey, A., Tripathi, S., & Prasad, R. (2020) ^[7]. The research assesses the extent of financial protection offered

to rural households by government health insurance schemes like Ayushman Bharat. While the scheme reduced out-of-pocket expenditure for hospitalizations, many rural families still incurred high costs for outpatient care and medicines. The paper suggests expanding benefit packages and improving claim settlement processes.

Patil, C. R., & Patil, G. R. (2021)^[8].

A broad review of the structure and challenges of India’s rural healthcare system. The authors discuss the inadequacies of Sub-Centres, PHCs, and CHCs, emphasizing the issues of absenteeism, poor infrastructure, and limited resources. They advocate for public-private partnerships, telehealth adoption, and better fund allocation to improve services.

Singh, P., Rani, V., & Yadav, R. (2021)^[9].

This paper studies the contribution and struggles of Accredited Social Health Activists (ASHAs) in rural India. While ASHAs play a pivotal role in maternal and child healthcare delivery, the study highlights challenges like low honorariums, lack of recognition, and inadequate training. It calls for structured incentives and enhanced supervisory support.

Narayan, R., Das, A., & Jha, N. (2022)^[10]. focusing on emerging digital health tools, the authors discuss mobile apps, teleconsultation platforms, and wearable devices as potential game-changers in rural healthcare. They point out major barriers such as low digital literacy, affordability issues, and concerns over data privacy. They propose government-supported digital health literacy campaigns and inclusive technology design.

Though numerous studies have been undertaken in rural health care and the research underscores that while rural health care system has made significant progress, significant challenges still persists.

Evaluating the efficacy of India’s rural healthcare systems has gained more attention in recent years, with special attention paid to the many programmes put in place to address healthcare issues in rural regions. Even with the proliferation of health-related initiatives, there is still a lack of knowledge regarding the comprehensive effects and ramifications of these programmes on the healthcare system in rural areas. This study intends to appraise the state of the rural healthcare system in India, examine the implemented projects, and determine their impact on patient outcomes. Through investigating these facets, the study seeks to offer significant perspectives on the merits and demerits of the rural healthcare system in India.

Present Scenario of Rural Health Infrastructure

Table 1: Infrastructure Overview (2019-2023)

Year	Sub-Centres	Primary Health Centres (PHCs)	Community Health Centres (CHCs)
2019	157,411	24,855	5,335
2020	157,819	25,028	5,563
2021	158,417	25,650	5,895
2022	158,731	26,050	6,069
2023	159,112	26,310	6,198
2024	159,300	26,400	6,250

Source: Annual Reports of MOHFW

It can be seen from table that there was marginal but steady increase in health facilities in rural areas but the infrastructure expansion is slower than required. The

number of SCs stood at 157411 at the end of 2019 which marginally increased to 159112 at the end of 2023 whereas PHCs stood at 24855 and increased to 26310 over the same period.

Table 2: Human Resources in Rural Health (2023)

Category	Required	In Place	Shortfall
Allopathic Doctors at PHCs	26,400	23,300	3,100
Specialists at CHCs	24,000	6,500	17,500
ANMs at Sub-Centres & PHCs	2.6 lakh	2.3 lakh	30,000
Lab Technicians & Pharmacists	Varies	Inadequate	Substantial gap

Source: Reports of MOHFW

It can be seen that shortage of specialists at CHCs remains a critical bottleneck but the improvements in recruiting ANMs and MBBS doctors are ongoing in rural areas.

Table 3: Key Health Indicators

Indicator	2019	2021	2023	Trend
Infant Mortality Rate (per 1,000)	35	32	30	Downfall
Maternal Mortality Ratio (MMR)	122	110	103	Downfall
Institutional Deliveries (%)	82%	87%	91%	Downfall
Full Immunization (%)	70%	78%	86%	Rising
Antenatal Care (4+ visits)	51%	59%	65%	Rising

Source: Reports of MOHFW

It can be seen that there was improvement in maternal and child health in rural areas over the period 2019-2023 as a result of Government programs like Ayushman Bharat and Janani Suraksha Yojana etc

Table 4: Public Health Expenditure on Rural Healthcare

Year	Total Health Budget (₹ Cr)	Rural Share (Est., ₹ Cr)	Rural % of Total
2019	62,659	26,000	41.5%
2020	69,000	28,500	41.3%
2021	73,931	30,000	40.5%
2022	76,900	31,200	40.6%
2023	88,956	36,000	40.4%

Source: Reports of MOHFW

The table depicts that the rural health funding was consistent (40%) of the central health budget over the period and the focus has shifted toward infrastructure digitalization e.g., Health & Wellness Centres in rural areas.

Challenges in Rural Healthcare System

Rural healthcare in India faces significant challenges, primarily due to the vast geographical spread of its rural population and a persistent disparity in healthcare access and quality compared to urban areas. Despite progress, a substantial portion of the rural population still struggles to access adequate medical services.

Following are various key aspects of rural healthcare in India

- **Infrastructure Deficiencies:** Many rural areas lack proper healthcare infrastructure, including basic hospitals, clinics, and essential medical equipment. Poor road and air connectivity further hinder access to existing facilities, particularly for specialized care.

- **Shortage of Healthcare Professionals:** There's a severe shortage of qualified doctors, nurses, and specialists in rural areas. Medical professionals often prefer to work in urban centers due to better career opportunities, infrastructure, and living conditions. This leads to an imbalanced doctor-patient ratio in rural settings.
- **Limited Resources:** Scarce resources, including funding, medical supplies, and essential drugs, plague rural health centers, affecting their ability to provide comprehensive care.
- **Health Literacy and Awareness:** Low health literacy among rural populations can lead to reluctance in seeking healthcare, reliance on traditional home remedies (some of which may be ineffective or harmful), and a lack of awareness about modern healthcare practices, preventive measures, and available treatments. Cultural sensitivities and language barriers also complicate effective communication.
- **Socioeconomic Barriers:** The ability to afford healthcare is a major challenge for many rural populations. Out-of-pocket expenditure on healthcare remains high, particularly for outpatient care, which is often not covered by insurance schemes. Poverty, malnutrition, and inadequate sanitation contribute to higher disease rates.
- **Geographical Obstacles:** The dispersed nature of rural populations and long distances to healthcare facilities often result in delayed diagnosis and treatment, especially for time-sensitive conditions.

Specific Health Problems: Rural India disproportionately suffers from

- Infectious diseases like malaria, dengue, and tuberculosis due to poor sanitation and lack of clean water.
- Under-nutrition and malnutrition, leading to stunted growth and micronutrient deficiencies.
- Poor maternal and child health due to limited access to prenatal, postnatal, and reproductive care, contributing to higher maternal and infant mortality rates.
- Rising chronic illnesses (NCDs) like heart disease and diabetes, often due to lack of awareness and limited diagnostic and treatment facilities.
- Mental health issues and substance abuse, with limited access to treatment programs and prevalent stigma.

Government Initiatives and Efforts

The Indian government has launched several initiatives to address the challenges in rural healthcare, primarily under the overarching National Health Mission (NHM), which includes the National Rural Health Mission (NRHM) launched in 2005. Key initiatives and approaches include:

Strengthening Health Infrastructure

- The three-tiered rural healthcare system comprises Sub-Centres (SCs), Primary Health Centres (PHCs), and Community Health Centres (CHCs). Efforts are made to upgrade these facilities to meet Indian Public Health Standards (IPHS).

- The Ayushman Bharat scheme aims to transform 1.5 lakh health facilities (SCs and PHCs) into Health and Wellness Centres (HWCs), now rebranded as 'Ayushman Bharat Aarogya Mandirs,' to provide comprehensive primary care.
- The Pradhan Mantri Ayushman Bharat Health Infrastructure Mission (PM-ABHIM) focuses on increasing investments in public health infrastructure, including critical care beds in district hospitals and integrated district public health laboratories.

Improving Healthcare Workforce

- The NHM provides incentives to attract and retain healthcare professionals in rural and remote areas, such as hard area allowances, support for residential quarters, and negotiable salaries ('You Quote, We Pay' strategy).
- Multi-skilling of doctors and skill upgradation of existing human resources are encouraged to address specialist shortages.
- Preferential admission in postgraduate courses for those serving in difficult areas is also considered.

Community-Based Interventions

- Accredited Social Health Activists (ASHAs) are a cornerstone of rural healthcare. These trained female health workers, selected from within the village, act as a crucial link between the community and the public health system. They provide health education, promote healthy practices, assist in immunization drives, facilitate access to primary healthcare services, and aid in data collection.
- Janani Shishu Suraksha Karyakaram (JSSK) provides free services for pregnant women and infants, including free drugs, diagnostics, blood, diet, and transport.
- Rashtriya Bal Swasthya Karyakram (RBSK) focuses on newborn and child health.
- Universal Immunisation Programme and Mission Indradhanush aim to increase vaccination coverage.

Financial Protection and Affordability

- Ayushman Bharat - Pradhan Mantri Jan Arogya Yojana (AB-PMJAY) provides health coverage of up to Rs 5 lakh per family per year for secondary and tertiary hospitalization care to a large number of poor and deprived families.
- Rashtriya Arogya Nidhi (RAN) and other schemes provide financial assistance for life-threatening diseases for patients below the poverty line.
- Affordable Medicines and Reliable Implants for Treatment (AMRIT) Deendayal outlets offer discounted drugs and implants for chronic diseases.

Technological Integration

- Telemedicine and mobile clinics are being utilized to connect rural patients with urban specialists and improve access to care. The e-Sanjeevani platform facilitates teleconsultations.
- Digital health initiatives, including the Ayushman Bharat Digital Mission, aim to leverage technology for improved healthcare delivery.

Role of ASHA Workers

ASHA workers have had a significant impact on rural health outcomes

- **Reduced Maternal and Infant Mortality:** Their efforts have led to a substantial increase in institutional deliveries and improved access to antenatal and postnatal care, directly contributing to a decline in maternal and infant mortality rates.
 - **Enhanced Health Awareness and Behavioral Change** ASHAs conduct awareness campaigns and promote healthy practices regarding hygiene, sanitation, nutrition, family planning, and immunization, leading to positive behavioral changes in communities.
 - **Increased Vaccination Coverage:** They play a crucial role in ensuring high vaccination coverage among children.
 - **Community Empowerment:** By educating the community and providing employment opportunities for women, the ASHA program empowers individuals and strengthens community ownership of healthcare initiatives.
 - **Disease Control and Referral:** ASHAs identify symptoms of common illnesses and refer patients to appropriate healthcare facilities, assisting in disease control efforts.
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Despite their vital role, ASHAs often face challenges such as overwhelming workloads, unpredictable wages, lack of formal employee recognition (often considered volunteers), and inadequate safety measures, highlighting the need for better support systems and recognition of their critical contributions.

Conclusion

In conclusion, while India has made strides in rural healthcare, significant disparities persist. Continuous investment in infrastructure, human resources, and innovative solutions, coupled with robust community engagement, is crucial to ensure equitable and quality healthcare services.

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