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Challenges of Rural Health Infrastructure in India - A Review of Literature

Dr. Ritu Pandhi Nayyar

Assistant Professor in Economics, Baring Union Christian College, Batala, India-143505
(Email id:- ritu.pandhi@yahoo.com)

ABSTRACT

This paper reviews the current body of literature concerning rural health infrastructure in India. Although numerous policy initiatives have been introduced over the years, rural regions still face persistent issues such as insufficient healthcare facilities, a lack of medical personnel, and restricted access to quality services. Drawing upon academic research and official reports, an attempt has been made to understand the various factors that affect the rural health care sector in India, the paper highlighted major challenges and propose policy directions that could support future efforts to improve the rural healthcare system.

Keyword: rural health, Infrastructure, Causes

Overview

A developed health infrastructure guarantees a country of strong and healthy manpower for the production of goods and services. Health infrastructure includes advanced medicines, specialist doctors, nurses, and other paramedical professionals and pharmaceutical industries. The health care infrastructure in rural areas has been developed as a three tier system as Sub Centre, Primary Health Centre and Community Health Centre. In India, multiple sources are used for the position of health care data, and these include national health surveys, rural health statistics, census and civil registration systems, and routine reporting systems. There are numerous challenges to be faced by rural healthcare sector which includes uneven quality, high cost, workforce shortages, transportation issues, health literacy and stigma in rural communities and lack of access to healthcare.

Justification and Need for the Study:

Even though India has made many policy efforts over the years, the healthcare system-especially in rural areas—still struggles with major problems that prevent fair and easy access to health services. The COVID-19 pandemic clearly revealed deeper problems in the system, especially in remote and underdeveloped regions. Because these issues keep appearing, it's important to review existing research and government reports to understand how rural healthcare has developed, what problems remain, and what can be done moving forward.

A review-based study like this is valuable for several reasons. First, it brings together different studies and policy reviews to provide a full picture of rural health infrastructure. Second, it helps identify common issues and repeated failures in policy across various regions and time periods. Third, it creates a strong base for making evidence-based suggestions for improvement without needing to collect new data. This makes it a useful tool for improving future discussions and decisions about public health reforms in India.

By using only secondary sources, this paper gives a broad perspective that helps policymakers, scholars, and planners better understand the current challenges and think about future actions without needing original field data.

Objectives:

1. To develop a clear understanding of what health infrastructure means and its importance in delivering healthcare services in India.
2. To analyze previous studies that have explored the key problems within India's healthcare system, such as staff shortages, lack of resources, and limited access to services.
3. To study the major government programs and policy strategies aimed at improving health infrastructure across all levels of care.
4. To offer a comprehensive summary of existing research, expert views, and policy evaluations that can guide future planning and studies in this field.

Review of Literature

1. **Banerji (1976)** realized that new policy related to health sector was a different from the earlier national policy comprised of health, nutrition and family planning services. According to the author, some corrective steps were needed for its successful implementation.

2. **Maru (1976)** made an attempt to compare the strategies related to health manpower adopted in India and China and revealed some implications of the strategies for birth control programmes. The author addressed the three sectors such as (i) Coaching to medical manpower; (ii) reallocation of manpower related to health from urban to rural areas; and (iii) usage of practitioners of native medicine. There were two suggestions made by the author, first of which was to reduce the amount of bureaucracy involved in decision making and second is the disperse of power to the general public.

3. **Banerji (1978)** expressed his views about political dimensions of health and health services in third world countries. According to the author, political forces played significant role in shaping the health services of a community. The author realized that health services could generate self-confidence among exploited masses.

4. **Nichter (1980)** enquired about the Community Health Worker scheme (CHW). Scheme launched by the then Government of India and realized that the implementation of the same was poor. The author admitted that the founding principles of the said scheme were having some serious defects due to which scheme failed.

5. **Jeffery (1982)** used the experiences of African and Latin American countries for studying the new pattern in health sector aid in India since 1947. In his study, the author found that it focused towards the primary health care sector. The author concluded that the need for a political economy of health care in India should not be declined.

6. **Padhmanabha (1982)** gathered the information on major causes of high rates of Infant Mortality in India. The period taken for the study was 1970-78 and the data used were on the basis of results of the sample registration system. As per his findings, Improvement in medicare in rural areas and reduction in infant mortality and child mortality were the factors for reduction in death rate.

7. Using the information on Jamaican health needs services, social problems and maternal health, **Feifer (1990)** realized that the distrust between men and women had an impact on health outcomes. The author concluded that in India, it is the small section of the rich and the middle class, which are being provided with health care and benefits from the public services.

8. **Bracken and Kasl (1973)** gathered information on Jamaican society. According to him, there were considerable improvements in the women's social status if marriage was entered into subsequent life.

9. **Kethineni (1991)** studied the nature of state intervention in the production and distribution of health care services in India. In his article, he talked about state intervention in a capitalist economy, especially in health care by referring to the Keynesians's and Marxian's views.

10. In his article, **George and Nandraj (1993)** analyzed the health development in Maharashtra with regards to other socio-economic indicators. According to them, the two states namely Maharashtra and Punjab have achieved high growth with respect to health indicators. The author considered that socio-political & geographic traits of Kerala were the root causes for the pattern followed in this particular state.

11. **Nandraj (1994)** gathered information on the quality of private health care in India. The author in his article viewed that private health sector is a considerable and prime component in health care delivery system in India. The author remarked that the size of private hospitals was much larger than the official data brought out by the government. He observed that private hospitals provided much of the indoor care especially in urban areas. Further, he indicated the accountability to the people was much less in case of private hospitals.

12. **Gupta *et. al* (1998)** in their paper indicated that the economic growth could be increased with public spending on health because of its positive effects on the formation of human capital. According to the authors, in transition economies the real per capita expenditure on health, on an average has been declining in comparison to developing countries.

13. **Au *et. al* (2001)** made an attempt to understand the regional variation in the physical and mental health of patient receiving primary care in the United States. The authors by performing a mailed cross sectional survey of 54,844 patients in VA general internal medicines clinics, reached at a conclusion that the substantial differences in the health of the patients have considerable implication for the evaluation of clinical performance and health outcomes.

14. **Rabalino *et. al* (2001)** examined the linkage between fiscal decentralization and infant mortality rates. The study covered the period of 1970-1995 and used the panel of developed and developing countries. The major findings from he study were: 1. Lower mortality rates could be achieved by higher physical decentralization, 2. Advantages from physical decentralization were especially important for poor countries, 3. Health outcomes in the environments with higher levels of corruption could be improved by fiscal decentralization.

15. **Dinesha *et. al* (2010)** talked about health infrastructure in India. The author discussed the status of health indicators and come to conclusion that the health status of population could be improved by fulfilling their requirements of education, safe drinking water, nutrition, and better housing and sanitations.

16. **Wani *et. al* (2013)** in their paper compared the few selected Indian states on the basis of health indicators. The authors came to conclusion that the countries like USA, Canada, China and Brazil were having better health scenario than India. However, Pakistan and Bangladesh were lagging behind in

terms of health status than India. As per the authors, huge disparities were observed across Indian states also. They further stressed that for increasing GDP of the country, health sector should be given proper attention.

17. **Jayswal (2015)** in his paper talked about the key challenges of rural health system in rural India and possible strategies taken by the state for overcoming them. As per his findings, the most neglected sector in Indian economy was health sector in rural areas specifically. The author came out with certain findings that firstly, there should be adoption of some administrative measures like human resource development, and capacity building, population stabilization for improving the current position of public health in country; secondly, the vacant posts of the medical professionals should be filled with immediate effect; thirdly, rural population of the country should be provided with treatment for basic ailments; fourthly, health sector should have the system of decentralized planning.

18. **Veena (2015)** analyzed the need for sufficient and appropriate health infrastructure. Consequences of urban development in health sector were also explored. The author came out with certain implications first of which was that the improved urban health infrastructure was an urgent requirement of the Indian urban economy, second implication was about the drafting of healthy public policy at the local level of Shimoga and it could only be achieved through health promotion.

19. **Ghosh (2017)** studied varied aspects related to health care facilities and health infrastructure available in India. According to the authors, India has achieved a wonderful progress in the distribution of health facilities as well as in providing health infrastructure except the states of Bihar and Uttar Pradesh. In their study, the authors stressed upon the fact that economic development in India could not be achieved without improving the health infrastructure of the country.

20. **Kumar (2019)** examined the nature of rural urban disparity in socio-economic indicators in India. The author viewed that for achieving development in the rural and urban areas of India, there should be adoption of long term policy. According to author, in India the backseat has always been reserved for villages in almost every aspect of socio-economic analysis. According to author, for achieving the centre government's objective of "Sabka Sath Sabka Vikas" there should be the appropriate balance between the rural and urban development in the economy.

21. **Chopra (2006)** the authors concluded that socio-demographic parameters have shown progress yet the situation was not much satisfactory. He added further that in terms of various health indicators, urban areas have faired better than the rural areas in India.

22. **C. Manju (2020)** analyzed the health infrastructure in rural India. They also reviewed the availability of basic health care services in health centres of rural India. According to authors, economic growth of a country is based on good health of its population. As per their study, rural health care infrastructure was in very sad conditions.

23. **Sendil (2021)** explored the challenges of health care in rural and urban India. In their study, the authors found significant health disparities in safety and quality living status of the overall population of the country. According to authors, to provide improved quality care and health care for the Indian population, there should be proper management and evaluation of the investments in the health sector of the economy.

24. **Gogoi (2021)** studied the status of birth rate, death rate, natural growth rate and IMR so as to analyze the present status of rural health care infrastructure in north eastern region of India. According to author, NER was standing at good position in terms of death rate because all the states of NER were observing lower death rate than all India level but so far other indicators were concerned, the picture was not so good. As per the suggestions of the authors, there should be proper improvement in the existing health infrastructure and government should also take urgent steps for the establishment of some new SCs and PHCs in the rural areas of NER states.

25. **Muniswamy and Rayipati (2021)** analyzed the gap between required and actual available rural health infrastructure in India. As per the authors, for overall development of rural healthcare infrastructure, there should be comprehensive strategy for rural areas in particular and for India in general. In their study, the authors stressed upon an urgent attention and action from the government as the conditions of highly populated states and UTs were worrisome in terms of rural health infrastructure.

Challenges in the Health Sector

Despite various government efforts over the years, rural India continues to face significant challenges in the health sector. Addressing these challenges is critical because a large portion of India's population lives in rural areas, and their well-being directly affects the country's overall development. Some of these are as follows:

- **Lack of Basic Facilities:** Many villages still don't have well-equipped Primary Health Centres (PHCs) or Community Health Centres (CHCs), and there are serious shortages of hospital beds, clean sanitation, and necessary medical tools.
- **Insufficient Healthcare Staff:** There is a consistent lack of doctors, specialists, nurses, and support staff in rural areas, which lowers the quality and reach of healthcare services.
- **Uneven Distribution of Services:** Most advanced healthcare services and professionals are located in cities, while people in rural areas continue to struggle with limited access.
- **Healthcare Costs Too High:** Poor families often cannot afford the high cost of medical treatment, especially expenses related to hospital stays and medicines, which prevents them from getting proper care.

- **Low Health Awareness:** Due to limited education and health knowledge, many people in rural areas don't use available services properly or delay seeking treatment.
- **Weak Coordination in Management:** Health programs often suffer due to poor coordination among central, state, and local governments, leading to gaps in service delivery and program execution.

Government Initiatives and Schemes

The Government of India has launched several initiatives to tackle the health issues faced by rural areas. One major step was the National Rural Health Mission (NRHM), introduced in 2005 (now integrated into the National Health Mission), which aimed to make healthcare more accessible and affordable by upgrading Primary Health Centres (PHCs), Community Health Centres (CHCs), and sub-centres. This mission also introduced ASHA workers and focused on enhancing maternal and child healthcare services. Another key programme is the Ayushman Bharat – Pradhan Mantri Jan Arogya Yojana (AB-PMJAY), launched in 2018, which provides health insurance to poor and vulnerable families while transforming existing sub-centres into Health and Wellness Centres (HWCs) to offer comprehensive primary healthcare. Additionally, the National Health Policy of 2017 aims to raise public healthcare spending to 2.5% of the GDP, improve overall health outcomes, and emphasize preventive care and digital health services. The **Rashtriya Swasthya Bima Yojana (RSBY)** also provides financial risk protection for low-income families.

These government efforts have contributed to noticeable improvements, such as wider access to healthcare services, better maternal health outcomes, and a rise in the number of people covered under health insurance schemes. Despite these achievements, evaluations reveal ongoing challenges like uneven implementation, low awareness among intended beneficiaries, and delays in establishing Health and Wellness Centres (HWCs). Research by Garg & Nath (2015) and Sharma & Singh (2021) highlights that the success of these initiatives largely relies on strong political commitment, effective execution at the state level, and active involvement of local communities.

Current Status of Health Infrastructure in India

According to the Rural Health Statistics Report 2022–23 released by the Ministry of Health and Family Welfare (MoHFW), India's public health system includes 1,58,417 Sub-Centres (SCs), 30,801 Primary Health Centres (PHCs), and 6,064 Community Health Centres (CHCs). While the number of facilities has grown, many still fall short in quality. A significant portion of these centres do not comply with the Indian Public Health Standards (IPHS) regarding infrastructure, staffing, and medical equipment.

There is a 29% shortfall in CHCs and a 6% shortfall in PHCs compared to official requirements. Furthermore, over 70% of CHCs lack specialist doctors, and half of all PHCs do not have laboratory technicians or pharmacists(MoHFW, 2023). The urban-rural gap remains substantial, with rural populations facing serious shortages in both the availability and reach of healthcare services.

The National Health Accounts 2020–21 also report that government health spending is still around 1.28% of the GDP, significantly lower than the global average. While schemes such as Ayushman Bharat and the rollout of Health and Wellness Centres (HWCs) have improved access, the effectiveness of service delivery is still weakened by poor infrastructure, irregular water and electricity supply, a lack of digital access, and low motivation among healthcare workers. Additionally, health resources are unevenly distributed, with poorer and less developed states experiencing greater shortages. The COVID-19 pandemic further highlighted these deep-rooted issues, especially the lack of ICU beds, oxygen supply, and preparedness in rural areas (Lancet, 2021).

Conclusion & Policy Recommendations

The review of literature shows that health infrastructure is key to providing fair, affordable, and quality healthcare in India. Although many schemes have been launched, problems like poor facilities, staff shortages, and uneven access still exist—especially between urban and rural areas.

By identifying and analyzing these persistent problems, this paper aims to highlight the urgent need for targeted policy reforms and increased investment to improve rural health outcomes.

1. **Strengthen Primary Healthcare Systems**: Greater investment and focus on primary health centres (PHCs) and sub-centres to improve accessibility, especially in rural and tribal regions.
2. **Human Resource Development**: Address the shortage and uneven distribution of healthcare professionals through better training, recruitment, and retention strategies.
3. **Public-Private Partnerships (PPPs)**: Encourage collaborations to expand infrastructure and improve service delivery without overburdening the public sector.
4. **Technology Integration**: Promote telemedicine, digital health records, and e-health platforms to enhance outreach and efficiency.
5. **Infrastructure Financing and Planning**: Increase public health expenditure and ensure long-term infrastructure planning aligned with population needs.

6. **Monitoring and Evaluation**: Establish robust mechanisms for performance monitoring and accountability of health infrastructure development projects.
7. **Decentralized Governance**: Empower local bodies and state governments for context-specific planning and implementation of health infrastructure programs.
8. **Inclusive Health Policies**: Ensure infrastructure development is inclusive of marginalized groups, with a focus on gender, disability, and socio-economic equity.

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