JIS Management Nexus
https://doi.org/10.5281/zenodo.21887875
Research Article
Volume 2, Issue 1, Jan-Apr (2026)

Rural Healthcare Delivery in West Bengal: A Review of Infrastructure, Human Resources, Accessibility and Emerging Challenges

Rupa Paul[1], Tithi Roy Karmakar[2], Anushka Ray[3]

[1] Assistant Professor, Department of Business Administration, JIS College of Engineering

[2,3] MBA student, Department of Business Administration, JIS College of Engineering

Abstract

Rural healthcare is an important component of an equitable public health system, particularly in states such as West Bengal where geographical, economic and social conditions vary considerably across districts. This paper reviews the major challenges affecting rural healthcare delivery in West Bengal, focusing on physical infrastructure, availability of healthcare personnel, accessibility, informal healthcare providers, financial protection and community participation. The study follows a qualitative narrative-review methodology and relies entirely on secondary information obtained from peer-reviewed journal articles, official reports and policy documents. Existing research indicates that healthcare infrastructure and service availability are unevenly distributed across the state, with notable inter-district and regional disparities. Human-resource constraints, inconsistent availability of medicines and services, distance from formal facilities, economic limitations and trust in local informal providers further influence healthcare-seeking behaviour. Recent evidence also highlights the important role played by ASHA workers and community-level health institutions. The review argues that strengthening rural healthcare requires more than increasing the number of facilities. Greater attention is required toward staffing, functionality, diagnostics, community trust, referral systems, financial protection and responsible application of digital healthcare technologies.

Keywords: Rural healthcare, West Bengal, primary healthcare, health infrastructure, healthcare accessibility, human resources, informal healthcare providers

1. Introduction

Primary healthcare represents the foundation of an effective health system because it brings preventive, promotive and basic curative services closer to communities. The World Health Organization considers primary healthcare one of the most equitable and cost-effective approaches for progressing toward universal health coverage. It involves not only clinical treatment but also disease prevention, community participation and attention to wider social determinants of health.

In rural India, however, access to healthcare continues to be influenced by geographical distance, socioeconomic position, availability of professionals, quality of public facilities and the presence of private and informal providers. Barik and Thorat (2015) observed that rural residents generally have fewer healthcare choices than their urban counterparts and that unequal access is particularly important for economically and socially disadvantaged groups. Public facilities therefore have a crucial role because dependence on expensive private care can create additional financial pressure for poorer households.

West Bengal presents an important setting for examining these concerns because healthcare availability varies substantially across its regions and districts. Hossain and Hannan (2024) found striking inter-regional and inter-district differences in health infrastructure within the state. Their analysis also indicated that the population served per rural health facility was relatively high, particularly in North Bengal, while the burden of certain communicable diseases was comparatively greater in that region. Such findings show that statewide averages can conceal substantial differences in actual healthcare availability.

Recent research suggests that the issue extends beyond the physical presence of healthcare centres. A 2026 qualitative study of rural Sub-Centres in Malda found that residents valued these facilities for affordable and accessible services, but inadequate infrastructure, irregular availability of doctors, limited medicines and gender-related barriers continued to affect service delivery. At the same time, the study identified ASHA workers as important intermediaries in building awareness and trust between rural communities and the formal healthcare system.

Against this background, the present paper reviews important dimensions of rural healthcare delivery in West Bengal. Instead of examining a particular health centre or district through primary data, it synthesizes existing research to develop a broader understanding of the challenges faced by rural healthcare systems and the possible directions for policy improvement.

2. Objectives of the Study

The study has four principal objectives:

1. To examine the major infrastructural and human-resource challenges affecting rural healthcare in West Bengal.
2. To understand the factors influencing accessibility and healthcare-seeking behaviour among rural populations.
3. To review the role of formal public institutions, frontline health workers and informal healthcare providers in rural healthcare delivery.
4. To identify policy measures that may improve the accessibility, quality and sustainability of rural healthcare services in West Bengal.

3. Research Methodology

The present study adopts a **qualitative narrative-review methodology** and is based entirely on secondary sources. No primary survey, questionnaire, interview or field observation has been conducted. Relevant material was identified from peer-reviewed journal publications, official government and institutional reports, national survey documentation and policy analyses. Searches focused on combinations of terms such as *rural healthcare West Bengal*, *primary healthcare West Bengal*, *health infrastructure West Bengal*, *rural health workforce*, *informal healthcare providers West Bengal*, *health inequality West Bengal* and *rural Sub-Centres West Bengal*.

Greater emphasis was placed on sources directly concerned with West Bengal and on recent research, while a limited number of national studies were included to provide conceptual background. Important sources reviewed include Hossain and Hannan (2024), Chatterjee et al.

(2024), Debsarma and Choudhary (2025), Kalam and Pal (2026), Barik and Thorat (2015), NFHS-5 documentation, reports of the Comptroller and Auditor General of India, and state budget analyses. The National Family Health Survey provides extensive state and district information relating to maternal and child health, nutrition, family planning and other health indicators, making it an important source for understanding the wider public-health context.

The collected literature was examined through **thematic analysis**. Findings were organized into five broad themes: health infrastructure and regional inequality, human-resource availability, accessibility and community participation, informal healthcare provision, and financing and emerging healthcare technologies. Because the paper is designed as a short student review, it does not constitute a systematic review or meta-analysis and does not claim exhaustive coverage of all research relating to healthcare in West Bengal.

4. Conceptual Perspective: Primary Healthcare, Access and Equity

The concept of primary healthcare provides an appropriate framework for understanding rural healthcare because the effectiveness of a health system cannot be judged merely by the existence of hospitals. Accessibility, continuity of care, coordination, comprehensiveness and people-centred service delivery are important functions of primary care. WHO further emphasizes that effective primary healthcare combines integrated health services with community empowerment and action on wider determinants of health.

Healthcare accessibility is therefore multidimensional. A facility may physically exist but remain functionally inaccessible when doctors are unavailable, medicines are absent, diagnostic services are limited, transport costs are high or patients do not trust the service provider. Barik and Thorat (2015) similarly distinguish between the formal availability of a health system and people's actual ability and willingness to utilize it. For rural populations, economic vulnerability and limited provider choice can magnify these barriers.

This perspective is particularly useful for West Bengal because recent studies point toward simultaneous problems of geographical inequality, workforce availability and community-level service delivery. The quality of rural healthcare must therefore be understood not simply in terms of the number of PHCs or Sub-Centres, but in terms of whether these institutions are adequately staffed, equipped, accessible and trusted.

5. Review of Literature

Table 1. Selected Literature on Rural Healthcare and Healthcare Access

Study	Area/Focus	Major Contribution
Barik & Thorat (2015)	India	Identified rural-urban and socioeconomic inequalities in healthcare access and financial burden.
Hossain & Hannan (2024)	West Bengal	Demonstrated substantial inter-regional and inter-district inequalities in healthcare infrastructure.

Chatterjee, Giri, & Bandyopadhyay (2024)	Rural West Bengal	Examined factors influencing human-resource planning and the supply-demand gap among healthcare professionals.
Debsarma & Choudhary (2025)	Rural West Bengal	Explained why rural populations continue to use unqualified/informal healthcare providers.
Kalam & Pal (2026)	Rural Malda, West Bengal	Highlighted infrastructure, staffing, accessibility, gender and community-trust issues surrounding Sub-Centres.
CAG (Report No. 03 of 2024)	West Bengal	Provides an official performance-audit framework for examining public-health infrastructure and management of health services.

Sources:

5.1 Regional Inequality and Healthcare Infrastructure

One of the clearest issues emerging from the literature is the uneven distribution of healthcare resources. Hossain and Hannan (2024) examined six regions of West Bengal and identified pronounced differences in health infrastructure across regions and districts. Their findings indicate that the state's healthcare infrastructure does not operate under uniform conditions and that North Bengal, in particular, faces comparatively high pressure in terms of population served by rural health facilities and hospital beds. The study also connects infrastructural inequality with differences in morbidity patterns.

The significance of this finding is that rural-health policy cannot rely solely on statewide numbers. Two districts with similar numbers of health institutions may experience very different levels of pressure depending on population density, geographical accessibility, disease burden and staffing. Resource allocation therefore needs to incorporate local demand and regional disadvantage rather than following a uniform allocation formula. The recent CAG performance audit specifically covers public-health infrastructure and management of health services in West Bengal up to March 2022, further demonstrating the policy importance of examining whether available health resources translate into functioning services.

5.2 Human Resources and Quality of Rural Healthcare

Infrastructure without adequate human resources cannot ensure effective healthcare. Chatterjee, Giri and Bandyopadhyay (2024) examined human-resource planning in rural healthcare centres of West Bengal through a qualitative framework. Their study focused on the disparity between demand for and supply of healthcare professionals and its implications for perceived service quality. The researchers identified technological, organisational and environmental factors as relevant to rural healthcare workforce planning.

Human-resource planning in rural healthcare therefore requires attention not simply to recruitment, but also to deployment, retention, working conditions, professional support and local service requirements. Persistent vacancies or irregular availability can reduce the practical value of even adequately constructed facilities. This problem becomes more important where patients need specialist referrals or regular treatment for chronic conditions.

Kalam and Pal (2026) add a community perspective to this issue. Their qualitative study in Malda found that irregular doctor availability and limited medicine supplies were among the factors undermining the effectiveness of Sub-Centres. Their findings demonstrate how administrative questions about staffing eventually translate into patient experiences, including waiting, uncertainty and reduced confidence in formal healthcare facilities.

5.3 Accessibility, Community Trust and Frontline Workers

Access to rural healthcare is influenced by both physical and social factors. The study by Kalam and Pal (2026) found that rural residents often valued nearby Sub-Centres because they provided affordable services and were embedded within the community. However, accessibility could still be affected by poor roads, seasonal conditions, inadequate facilities and gender dynamics within households. The researchers also found that women were major users of these services but could face restrictions in healthcare decision-making.

An especially important finding concerns the role of **Accredited Social Health Activists (ASHAs)**. Kalam and Pal observed that ASHA workers helped create awareness, promote preventive behaviour and develop trust in local health institutions. Rural healthcare policy should therefore view frontline health workers not merely as auxiliary personnel but as a bridge connecting formal institutions with communities.

These observations also show that healthcare quality includes dimensions that are difficult to capture through infrastructure counts alone. Trust, respectful interaction, convenience, continuity and local awareness can determine whether rural households actually use a facility. Consequently, community participation needs to remain a central component of primary healthcare planning.

5.4 Informal Healthcare Providers and Rural Healthcare-Seeking Behaviour

A distinctive feature of rural healthcare in West Bengal is the continuing presence of informal or unqualified healthcare providers. Debsarma and Choudhary (2025) investigated healthcare-seeking behaviour involving Rural Unqualified Health Providers and found that their continued use cannot be explained by a single factor. Their study identifies traditional beliefs, health literacy, gender, economic hardship, previous experiences and interpersonal trust as important individual and community influences.

The institutional environment also matters. The researchers found that distance from public facilities, uneven resource availability, limited services and characteristics of staff could encourage patients to seek care from informal providers. Informal providers may be attractive because they are nearby, socially connected to communities and easily approachable. Consequently, simply prohibiting or criticizing informal care without improving the reliability and accessibility of formal primary care may fail to address the reasons people use such services.

Earlier work by Debsarma (2022) examining informal practitioners in rural West Bengal also reported weaknesses in their knowledge and practices relating to diseases such as malaria and dengue. The study suggested training-oriented interventions, including structured workshops

and technology-supported learning, while emphasizing the limitations associated with unqualified practice.

5.5 Financial Protection and Healthcare Inequality

Financial accessibility remains another dimension of rural healthcare. Barik and Thorat (2015) emphasized that reliance on out-of-pocket healthcare expenditure can impose substantial burdens on households and that these burdens are not equally distributed across socioeconomic groups. Rural populations may be particularly vulnerable because they face fewer provider choices and may need to incur travel and indirect costs in addition to treatment expenses.

At the West Bengal level, Das (2020), using district-level analysis based on National Sample Survey data, found substantial variations in catastrophic health expenditure and inequality in out-of-pocket spending among districts. Although the underlying data predate several subsequent health-financing developments, the study remains useful in showing that financial vulnerability itself varies geographically within the state.

Financial-protection schemes are consequently important, but insurance or health-card coverage alone cannot substitute for well-functioning public primary care. If nearby services, medicines or personnel are unavailable, patients may still encounter travel expenses, delayed treatment or dependence on alternative providers. Universal health coverage requires not only financial protection but also actual availability of appropriate and quality healthcare services.

6. Discussion

The reviewed literature suggests that the central challenge of rural healthcare in West Bengal is not simply a shortage of facilities, but an imbalance between **availability and functionality**. Physical infrastructure, adequate staffing, medicine availability, diagnostics, transportation, financial accessibility and community trust operate together. Weakness in one part can reduce the usefulness of the entire system. This conclusion is supported by regional infrastructure research, rural workforce studies and recent community-level evidence.

A second major observation is that rural healthcare inequalities are spatially differentiated. Hossain and Hannan's findings concerning regional and district inequalities indicate that policy priorities should not be identical everywhere. Areas with larger populations per facility, greater disease burden or difficult geographical conditions may require proportionately greater resources.

Third, the persistence of informal healthcare providers illustrates a gap between formal healthcare planning and everyday patient behaviour. Their popularity is partly explained by proximity, familiarity, trust and ease of access. Strengthening formal healthcare therefore requires public facilities to become more reliable and responsive at the community level rather than focusing only on physical expansion.

Finally, current expenditure plans create an opportunity to strengthen the system. The West Bengal Budget Analysis for 2026-27 reports a budget provision of **₹25,530 crore for Health and Family Welfare**, including **₹3,164 crore for rural health services**. These are budget allocations rather than evidence of achieved outcomes, but they indicate fiscal space for further

strengthening of healthcare delivery. The policy challenge is to translate expenditure into staffed facilities, dependable diagnostics, medicines, referral capacity and measurable improvements in access.

7. Recommendations

West Bengal should increasingly adopt **district-sensitive rural health planning**, where allocation decisions reflect population pressure, disease burden, geographical accessibility and existing workforce availability. Areas experiencing relatively greater infrastructural stress should receive targeted attention rather than relying exclusively on uniform statewide expansion. This recommendation follows directly from evidence of substantial inter-regional and inter-district inequality.

Human-resource policy should place greater emphasis on recruitment and retention of doctors, nurses, laboratory personnel and other essential health workers in rural areas. Housing support, appropriate working environments, continuing professional development and more effective workforce planning may improve retention. Chatterjee et al. (2024) demonstrate that rural health human-resource planning is shaped by interacting technological, organisational and environmental conditions rather than staffing numbers alone.

The functioning of Sub-Centres and primary-care institutions should also be strengthened through reliable medicine supplies, basic diagnostics, regular staff availability and improved referral linkages. ASHA workers should receive continued institutional support because evidence from rural West Bengal demonstrates their importance in generating community awareness and trust. Gender-sensitive approaches are also necessary to ensure that women can access health services and participate effectively in health-related decision-making.

Digital health and telemedicine may complement these measures, especially where specialist availability is limited, but technology should not be treated as a replacement for functioning primary healthcare. Digital systems require connectivity, trained personnel, patient confidence and clear referral pathways. WHO's primary-care framework similarly stresses that technology must operate within integrated, people-centred health systems.

Finally, the persistence of informal providers should be addressed through a combination of stronger public-service availability, community health literacy, surveillance and carefully designed training or engagement strategies where legally and institutionally appropriate. Evidence from West Bengal suggests that informal-provider utilization reflects deeper issues of proximity, trust and availability; interventions therefore need to address the demand-side reasons behind their continued use.

8. Limitations of the Stdy

The present study is a narrative review based entirely on secondary sources and therefore does not provide new primary evidence regarding individual healthcare institutions or patients. The reviewed studies differ in geographical coverage, methodology and time period, making direct comparison difficult. Several West Bengal-specific studies focus on individual districts or selected communities and therefore cannot automatically be generalized to the entire state. For example, the 2026 study by Kalam and Pal examined two Sub-Centres in Malda, while the

work on informal healthcare providers also relied on selected rural settings. Furthermore, the review is selective rather than systematic and should therefore be understood as an introductory synthesis suitable for a short academic paper rather than a comprehensive assessment of every dimension of healthcare in West Bengal.

9. Conclusion

Rural healthcare in West Bengal has to be understood as a multidimensional challenge involving infrastructure, human resources, accessibility, affordability and community confidence. Existing research points to considerable inter-regional differences in healthcare availability, continuing concerns regarding rural workforce planning, and service-level constraints affecting the functioning of local health institutions. The continuing use of informal providers further shows that proximity, affordability and trust strongly influence healthcare decisions. At the same time, community-level institutions and ASHA workers demonstrate the potential of locally embedded primary healthcare. Strengthening rural healthcare therefore requires a shift from merely expanding facilities toward ensuring that existing facilities are functional, adequately staffed, equipped with medicines and diagnostics, connected through effective referral systems and trusted by communities. Recent increases in health-sector budgetary provisions provide an opportunity for such strengthening, but long-term success will depend on how effectively financial resources are translated into equitable improvements in actual healthcare delivery.

References

1. Barik, D., & Thorat, A. (2015). Issues of unequal access to public health in India. *Frontiers in Public Health, 3,* 245. doi:10.3389/fpubh.2015.00245.
2. Chatterjee, S., Giri, A., & Bandyopadhyay, S. N. (2024). Developing a conceptual model on human resource planning of rural healthcare centers of West Bengal based on TOE framework: A qualitative study using NVIVO. *Prabandhan: Indian Journal of Management, 17*(1), 60-69. doi:10.17010/pijom/2024/v17i1/173277.
3. Comptroller and Auditor General of India. (2024). *Performance Audit Report on Public Health Infrastructure and Management of Health Services in West Bengal for the year ended March 2022, Report No. 03 of 2024*. Government of India.
4. Das, P. K. (2020). *Catastrophic health expenditure and inequalities: A district level study of West Bengal*. arXiv:2010.06856.
5. Debsarma, D. (2022). Exploring the strategies for upgrading the rural unqualified health practitioners in West Bengal, India: A knowledge, attitude and practices assessment-based approach. *Health Policy OPEN, 3,* 100083. doi:10.1016/j.hpopen.2022.100083.
6. Debsarma, D., & Choudhary, B. K. (2025). Exploring the socio-ecological factors of healthcare-seeking behaviour among patients/people from Rural Unqualified Health Providers in the rural settings in West Bengal, India. *SSM - Health Systems, 4,* 100046. doi:10.1016/j.ssmhs.2024.100046.
7. Hossain, F., & Hannan, A. (2024). Levels of regional inequality of health infrastructure and morbidity pattern in West Bengal. *Vision: The Journal of Business Perspective*. doi:10.1177/09722629231212318.

8. International Institute for Population Sciences (IIPS) & ICF. (2021/2022). *National Family Health Survey (NFHS-5), 2019-21: West Bengal*. Mumbai: IIPS.
9. Kalam, M. A., & Pal, S. (2026). Experiences of trust, accessibility and community participation in rural sub health centres in West Bengal. *Discover Health Systems, 5*, 54. doi:10.1007/s44250-026-00394-z.
10. PRS Legislative Research. (2026). *West Bengal Budget Analysis 2026-27*.
11. World Health Organization. (2026). *Primary health care*.