

Contemporary Schemes on Healthcare Access in Rural Areas: Attention to Overcome Diagnostic Barriers

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How to cite this article:

K. Madhumitha, Rajathi.S, M. Hemamalini. Contemporary Schemes on Healthcare Access in Rural Areas - Attention to Overcome Diagnostic Barriers. J of Emer and Trauma Nurs. 2024;5(1):25-28.

Abstract

Rural Health is one of the vital elements of global health. India being a nation of villages requires an intensive approach towards rural health. Significant challenges are being faced in obtaining timely and proper medical diagnoses, which can negatively impact their health outcomes. Diagnostic gaps and limited access to healthcare in rural communities lead to consequences such as delayed diagnosis, and increased risk for disease, which impacts their lifestyle and Quality of life. Various schemes and policies have been formulated by the Government of India, aiming to bridge the diagnostic divide through leveraging advancements in telehealth and mobile diagnostics, investing in healthcare, workforce development, and empowering rural communities through education and engagement. Hence, all medical and paramedical professionals have a responsibility to ensure equitable access to quality healthcare for all. Hence, healthcare workers can take steps to create awareness regarding facilities implemented by the Government and its benefits is need an hour.

Keywords: Contemporary schemes; Health care access; Diagnostic barriers; Rural Areas; Quality of life.

INTRODUCTION

Access to healthcare is a fundamental right that forms the cornerstone of a thriving and equitable society. However, in rural areas, individuals often face unique challenges that impede their ability to obtain timely and effective diagnostic services. The intersection of diagnostic barriers and limited healthcare access in rural regions creates a complex

web of obstacles, adversely impacting the health outcomes of the population. This issue is multifaceted, encompassing factors such as Scarcity of diagnostic resources and expertise, Transportation and financial burdens, Social and cultural factors, lack of awareness and education, inadequate infrastructure and facilities, limited access to specialists, ineffective patient-provider communication, geographic remoteness and isolation, socioeconomic disparities, and poverty. Targeted interventions are developed that bridge the gap and ensure that individuals in these underserved regions receive the healthcare they need. In this exploration, need to delve into the potential solutions such as telemedicine and mobile health units, training and deployment of community health workers, enhanced infrastructure and telecommunication, public-private partnerships, health information systems, community engagement, health literacy, subsidized healthcare services, research, and innovation to enhance the overall health and well-being of these communities.^{1,2}

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Received on: 31-01-2024

Accepted on: 29-05-2024



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Sources of Diagnostic Barriers

Scarcity of diagnostic resources and expertise: Rural areas often lack access to advanced diagnostic technologies, such as laboratory tests and imaging equipment. Additionally, there is a shortage of trained medical professionals, particularly specialists in pathology and radiology.

Transportation and financial burdens: Travelling long distances to access specialized diagnostic facilities can be time-consuming, expensive, and impractical for rural residents.

Social and cultural factors: Cultural norms and beliefs may discourage individuals from seeking medical attention, particularly for stigmatized conditions. Additionally, language barriers can impede communication between healthcare providers and patients.

Lack of awareness and education: Rural residents may not be aware of the importance of early diagnosis and treatment, or they may not know where to go to access diagnostic services.

Inadequate infrastructure and facilities: Rural areas often lack adequate healthcare infrastructure, such as hospitals and clinics, and these facilities may not be equipped with the latest diagnostic technologies.

Limited access to specialists: Rural residents may have difficulty accessing specialists who can provide expert diagnosis and treatment.

Ineffective patient-provider communication: Poor communication between patients and providers can lead to missed diagnoses and delays in treatment.

Geographic remoteness and isolation: Rural areas are often located far from major medical centres, making it difficult for residents to access diagnostic services.

Socioeconomic disparities and poverty: Rural residents are often more likely to live in poverty and have lower levels of education, which can make it difficult for them to access healthcare.^{3,4,5}

Consequences of Diagnostic Barriers

Delayed Diagnosis and Treatment: It can have negative effects on health outcomes. It can lead to diseases progressing to more severe stages, making treatment more challenging and potentially less effective. Additionally, it causes prolonged suffering and reduces the quality of life associated with undiagnosed illnesses. Early detection and intervention are crucial for preventing diseases from progressing into more serious conditions,

but diagnostic barriers hinder these opportunities, increasing the risk of avoidable complications and long-term health issues.

Increased Risk of Preventable Deaths: Delayed diagnosis can have devastating consequences, especially for individuals with chronic or life-threatening conditions. It can lead to fatal complications arising from untreated or poorly managed illnesses. Moreover, certain diseases require early intervention within critical treatment windows to ensure survival and diagnostic barriers can hinder timely access to care, increasing the likelihood of preventable deaths. Tragically, the lack of accurate and prompt diagnosis further contributes to the loss of lives in rural communities, prematurely depriving families and communities of their loved ones.

Financial Burden and Healthcare Utilization: Accessing necessary healthcare services can be a significant financial burden for rural residents. Travel expenses to urban areas for diagnostic services can strain limited resources. Additionally, the cost of tests and procedures can be overwhelming, especially for those without adequate insurance or financial assistance. Moreover, delayed diagnosis and treatment lead to increased healthcare utilization, resulting in more intensive and prolonged treatments for advanced illnesses. This surge in demand puts a strain on rural healthcare systems that may lack the necessary resources to effectively meet the needs of their communities.

Reduced Quality of Life and Social Stigma: Undiagnosed or poorly managed chronic health conditions can greatly impact a person's daily life. They may experience ongoing pain, discomfort, and limitations in their everyday activities. Mental health conditions, in particular, can cause significant stress and anxiety, affecting emotional well-being and overall quality of life. Seeking healthcare for these conditions, especially in rural communities, can be accompanied by social stigma and isolation. This stigma may be associated with mental health issues or sexually transmitted infections, leading to feelings of shame and discouraging people from seeking necessary care.⁶

Attention to Overcome Diagnostic Barriers

Telemedicine, mobile clinics, community health worker training, point-of-care testing, health camps, community outreach programs, leveraging local resources, public-private partnerships, innovative transportation solutions, empowering local facilities, digital health records, government

initiatives, low-cost diagnostic technologies, education and awareness programs, and multi-sectoral collaboration are all strategies to improve healthcare in rural areas. Telemedicine allows remote consultations and diagnostics, mobile clinics provide on-the-spot services, and community health workers are trained for basic diagnostics and healthcare delivery. Point-of-care testing introduces portable diagnostic tools, health camps raise awareness about preventive healthcare, and public-private partnerships establish diagnostic facilities.^{7,8}

Contemporary Schemes on Health Care Access

To realize the goal of Universal Health Coverage (UHC), the Government of India introduced Ayushman Bharat, a flagship program, as advised by the National Health Policy 2017. The Sustainable Development Goals (SDGs) and their core promise to “leave no one behind” are being addressed by this project. This comprehensive, need-based program intends to healthcare system holistically address and implement ground-breaking interventions. The goal of Ayushman Bharat is to transition the delivery of health services from a sectoral and segmented model to address ambulatory care, promotion, and prevention at the primary, secondary, and tertiary levels. Using a continuum of care method, Ayushman Bharat consists of two interconnected components:

Health and Wellness Centres (HWCs)

Pradhan Mantri Jan Arogya Yojana (PM-JAY)

Health and Wellness Centres (HWCs)

To overcome the diagnostic barriers in rural areas Government of India in February 2018, announced the creation of 1,50,000 Health and Wellness Centres (HWCs) by transforming the existing sub-centres and primary health centres. These centres are to deliver Comprehensive Primary Health Care (CPHC) bringing healthcare closer to the homes of people. As of current status, the Government of India has established healthcare centres in rural and tribal areas that as effectively diminished the bridge between healthcare access. These centres cover both, maternal and child health services and non-communicable diseases, including free essential drugs and diagnostic services.⁹

Pradhan Mantri Jan Arogya Yojana (PM-JAY)

The second component under Ayushman Bharat is the Pradhan Mantri Jan Arogya Yojana or PM-JAY. This scheme was launched on 23rd September 2018 and is the largest health assurance scheme in

the world which aims at providing health cover up to Rs. 5 lakhs per family per year for secondary and tertiary care hospitalization to over 12 crores of poor and vulnerable families that form the bottom 40% of the Indian population. The households included are based on the deprivation and occupational criteria of the Socio-Economic Caste Census 2011 (SECC 2011) for rural areas. PM-JAY is fully funded by the Government and the cost of implementation is shared between the Central and State Governments.

Jan Aushadhi Medical Stores: This initiative provides affordable generic medicines across rural India, reducing the financial burden on patients and improving access to essential medications.

Free Diagnostics and Free Drug Services: Various schemes were formulated by the Indian Government to improve diagnostic barriers in rural health - National Health Mission (NHM), Pradhan Mantri Jan Arogya Yojana (PMJAY), National Rural Health Mission (NRHM), National Digital Health Mission (NDHM), Rashtriya Swasthya Bima Yojana (RSBY), Janani Shishu Suraksha Karyakram (JSSK).^{5,10,11}

Enhancing Healthcare Access

National Health Mission (NHM): It launched in 2005, and is the government’s flagship program for improving rural healthcare. It focuses on strengthening primary healthcare infrastructure, deploying healthcare workers, and providing essential services like maternal and child health care, immunization, and communicable disease control.¹²

Mobile Medical Units (MMUs): It is equipped with diagnostic facilities and medical personnel and travels to remote villages to provide basic healthcare services and referrals to higher-level facilities.

Telemedicine: The government is promoting telemedicine initiatives to connect rural patients with specialists in urban centres for consultations and diagnosis. This reduces travel costs and improves access to specialist care.¹³

Addressing Human Resource Challenges

Nurse Practitioner in Midwifery (NPM) Scheme: This scheme is an initiative in India aimed at improving maternal and newborn healthcare by creating a new cadre of highly skilled and autonomous midwives. The main objectives of the scheme are to Improve quality of care, increase access to care, and Reduce maternal and newborn mortality. NPMs undergo an 18-month

intensive program following their existing nursing qualification, acquire advanced skills in midwifery, and can independently manage low-risk pregnancies, deliveries, and postnatal care. The scheme is still in its early stages, with the first batch of NPMs graduating in 2020. Several states in India are actively implementing the program, establishing training centres, and integrating NPMs into their healthcare systems.¹⁴

Community Health Worker (CHW) Program: CHWs are trained community members who provide basic healthcare services, promote health awareness, and bridge the gap between communities and healthcare facilities.⁵

Additional Measures

Janani Express Yojana: This scheme provides free ambulance services to all pregnant women to reach healthcare facilities.

Arogya Setu App: This mobile app provides information on healthcare facilities, COVID-19 updates, and telemedicine consultations.

CONCLUSION

Overcoming the diagnostic barriers in rural healthcare requires a multifaceted approach that addresses both technological and systemic challenges. Leveraging advancements in telehealth and mobile diagnostics, investing in healthcare workforce development, and empowering rural communities through education and engagement, can bridge the diagnostic divide and ensure equitable access to quality healthcare for all. Hence, all paramedical professionals and community health nurses have urgent attention and take responsibility to create awareness of various schemes and their benefits to reduce the consequences of delayed management and increase the quality of life care services of rural peoples.

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