



## RURAL HEALTHCARE UNVEILED: A CRITICAL EXAMINATION OF MEDICAL CLINICS IN VILLAGES

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### Abstract

This article critically examines the landscape of rural healthcare with a specific focus on medical clinics in village settings. Despite their crucial role in providing accessible healthcare to underserved populations, these clinics face a myriad of challenges that hinder their operation and effectiveness. Through a detailed analysis, the paper explores the physical, logistical, financial, and human resource-related obstacles that rural medical clinics encounter. It also highlights innovative solutions and success stories from around the globe, showcasing how technology, community involvement, and supportive policies can significantly improve healthcare delivery in rural areas. By examining the current state of rural healthcare, the challenges faced by medical clinics, and the potential pathways for improvement, this article aims to contribute to the ongoing dialogue on how to best serve the healthcare needs of rural populations. The findings underscore the importance of a multifaceted approach that combines innovation, policy support, and community engagement to overcome the barriers to healthcare in rural settings.

**Keywords:** Rural Healthcare, Medical Clinics, Village Healthcare, Healthcare Accessibility, Healthcare Challenges, Innovative Solutions, Telemedicine, Community Involvement, Healthcare Policy, Rural Development

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## Introduction

The provision of healthcare in rural areas remains a significant global challenge, marked by a complex interplay of socio-economic, geographical, and infrastructural factors that impede access to medical services. Rural populations worldwide, from the remote villages of Sub-Saharan Africa to the isolated communities in the Appalachian region of the United States, often face stark disparities in healthcare access and quality compared to their urban counterparts. The establishment and operation of medical clinics in these areas are crucial, yet they grapple with unique challenges that warrant a critical examination.

The concept of 'rural' varies significantly across different regions, influenced by population density, accessibility, and the degree of urbanization. Despite these variations, common threads of healthcare disparities in rural areas include limited access to medical facilities, a scarcity of healthcare professionals, and higher incidences of chronic diseases coupled with lower life expectancies (WHO, 2018). The critical role of medical clinics in villages cannot be overstated, as they often represent the primary, if not the only, source of healthcare for rural inhabitants, offering a range of services from preventive care to emergency interventions (Rural Health Information Hub, 2020).

One of the pivotal challenges facing rural medical clinics is the shortage of healthcare professionals willing to work in remote locations. This issue is exacerbated by the global trend of urbanization, which sees a significant portion of the workforce, including healthcare workers, migrating to urban areas in search of better opportunities and living conditions (Scheffler et al., 2018). The resultant workforce shortage in rural areas impacts the quality and availability of healthcare services, with clinics often understaffed and overburdened. Financial constraints pose another significant hurdle. Rural medical clinics frequently operate on limited budgets, struggling to afford essential medical supplies, equipment, and infrastructure maintenance (MacDowell et al., 2019). This financial precarity is compounded by the often lower socio-economic status of rural populations, which can limit the clinics' revenue from patient services.

Moreover, geographical and infrastructural challenges, such as poor transportation networks and vast distances, can hinder both the provision of healthcare services and patients' access to these services. In many cases, patients must travel long distances to reach the nearest medical clinic,

which can be particularly problematic in cases of acute illness or emergency situations (Arcury et al., 2005).

Despite these challenges, there are notable examples of innovation and resilience among rural medical clinics. Telemedicine, for instance, has emerged as a vital tool in bridging the geographical divide, enabling remote consultations and diagnostics that can significantly enhance healthcare accessibility in rural areas (Wootton, 2001). Furthermore, community involvement and the integration of traditional medicine have also shown promise in complementing formal healthcare services, ensuring a more culturally sensitive and holistic approach to healthcare delivery (Kumaran et al., 2019).

In light of these considerations, this article aims to unveil the complexities of healthcare provision in rural settings, critically examining the operational realities of medical clinics in villages. By exploring the multifaceted challenges and innovative solutions within this context, the paper seeks to contribute to the discourse on enhancing healthcare accessibility and quality for rural populations, advocating for a concerted effort from policymakers, healthcare professionals, and communities to address these pressing issues.

## Section 1: The State of Rural Healthcare

The state of rural healthcare globally presents a multifaceted picture, characterized by both enduring challenges and transformative opportunities. At the heart of rural healthcare are medical clinics that serve as critical access points for essential health services. These clinics often operate under constraints that are markedly different from those in urban settings, influencing the overall health outcomes of rural populations.

### Accessibility and Infrastructure

Accessibility to healthcare services remains a pivotal concern in rural areas. The geographical isolation of many rural communities, compounded by inadequate transportation infrastructure, significantly hampers access to medical clinics. A study by Skinner and Slifkin (2007) highlights that rural residents frequently travel longer distances to access healthcare services, which can lead to delays in receiving care, particularly in emergency situations. This issue is exacerbated by the global trend of urbanization, which has led to a concentration of healthcare facilities and professionals in urban centers, further widening the urban-rural healthcare divide.

### Healthcare Workforce

The shortage of healthcare professionals in rural areas is a critical issue that directly impacts the quality and availability of healthcare services. According to the World Health Organization (WHO, 2010), there is a global maldistribution of healthcare workers, with rural areas disproportionately affected. This shortage is attributed to factors such as the urban-centric training of healthcare professionals, lack of professional support and career development opportunities in rural areas, and the perceived lower quality of life in rural communities compared to urban areas.

### Health Disparities

Rural populations often experience higher rates of chronic conditions, such as cardiovascular diseases, diabetes, and obesity, compared to their urban counterparts (Hartley, 2004). These health disparities are influenced by a range of factors, including limited access to healthcare services, lower socio-economic status, and lifestyle factors. Additionally, rural residents may face higher risks associated with agricultural work and exposure to environmental hazards, further contributing to the unique health challenges in these communities.

### Innovative Solutions and Community Engagement

Despite these challenges, rural medical clinics have been at the forefront of adopting innovative solutions to improve healthcare delivery. Telemedicine has emerged as a vital tool, offering remote consultations and diagnostics that transcend geographical barriers (Wootton, 2001). Moreover, community engagement and the integration of traditional and local health practices have shown promise in enhancing healthcare accessibility and acceptance among rural populations (Arcury & Quandt, 2007).

The state of rural healthcare is shaped by a complex interplay of geographical, socio-economic, and infrastructural factors that create both challenges and opportunities for medical clinics in these areas. While rural communities face significant barriers to accessing healthcare, the resilience and innovation demonstrated by rural medical clinics provide a foundation for improving health outcomes. Addressing the disparities in rural healthcare requires a multifaceted approach that includes policy interventions, targeted investments in healthcare infrastructure and workforce, and the leveraging of technology to bridge the accessibility gap.

## Section 2: Challenges Faced by Rural Medical Clinics

Rural medical clinics are vital in providing healthcare services to underserved populations, yet they face a plethora of challenges that impede their ability to deliver effective care. These challenges are multifaceted, stemming from logistical, financial, human resource, and infrastructural constraints, each contributing to the complexity of healthcare delivery in rural settings.

### Logistical and Infrastructural Challenges

The geographical isolation of many rural areas presents significant logistical challenges for medical clinics. Poor road conditions and limited transportation options can impede patient access to clinics and hinder the delivery of medical supplies. Additionally, rural clinics often grapple with inadequate infrastructure, such as unreliable electricity and water supply, which are critical for basic healthcare delivery and the preservation of medicines and vaccines. A study by Gamm, Hutchison, Bellamy, and Dabney (2002) highlights the infrastructural inadequacies in rural healthcare facilities and the impact on service delivery.

### Shortage of Healthcare Professionals

One of the most pressing challenges faced by rural medical clinics is the chronic shortage of healthcare professionals. This issue is exacerbated by the rural-urban divide, where urban areas offer more attractive opportunities for healthcare workers in terms of salary, professional development, and lifestyle. According to the National Rural Health Association (NRHA, 2017), rural areas have significantly fewer physicians, nurses, and specialists per capita compared to urban areas, leading to increased workloads for existing staff and longer wait times for patients.

### Financial Constraints

Financial viability is another critical challenge for rural medical clinics. These clinics often serve populations with higher rates of uninsured or underinsured individuals, limiting the clinics' revenue from patient services. Additionally, rural clinics face difficulties in securing funding for operations, infrastructure improvements, and technology upgrades. The reliance on volatile funding sources, such as government grants and donations, further exacerbates financial instability, as noted by Holmes, Pink, and Friedman (2012).

### **Access to Specialized Care and Services**

The limited availability of specialized medical services in rural areas forces clinics to operate with a narrow scope of care. Patients requiring specialized treatments or diagnostic services often have to travel to urban centers, which can lead to delays in diagnosis and treatment. This lack of access to comprehensive care is a significant barrier to addressing complex health needs within rural populations (Rosenblatt and Hart, 2000).

### **Cultural and Educational Barriers**

Cultural and educational barriers also pose challenges to rural medical clinics. Misconceptions about medical treatments, traditional health beliefs, and language barriers can hinder patient-clinic interactions and affect health outcomes. Efforts to integrate cultural competence into healthcare delivery are crucial in building trust and improving health literacy among rural populations (Beach et al., 2005).

The challenges faced by rural medical clinics are interrelated and require comprehensive strategies to address. Overcoming these obstacles necessitates collaborative efforts from governments, healthcare organizations, communities, and policymakers to invest in rural healthcare infrastructure, incentivize healthcare professionals to work in rural areas, and integrate innovative solutions like telemedicine to enhance access to care. Addressing these challenges is essential for improving healthcare equity and ensuring that rural populations have access to quality healthcare services.

### **Section 3: Innovative Solutions and Success Stories**

In response to the myriad challenges faced by rural medical clinics, innovative solutions and success stories have emerged, showcasing the resilience and adaptability of healthcare providers in these settings. These innovations not only address the immediate challenges but also pave the way for sustainable improvements in rural healthcare delivery.

#### **Telemedicine and Digital Health**

Telemedicine has revolutionized healthcare delivery in rural areas, enabling remote consultations, diagnostics, and patient monitoring, thus overcoming geographical barriers. A study by Polinski et al. (2016) demonstrated the effectiveness of telehealth services in improving access to care, particularly for chronic disease management and specialist consultations. Moreover, mobile health applications and digital platforms have facilitated better patient

engagement and health education, empowering rural populations to manage their health more effectively.

#### **Community Health Worker Programs**

Community Health Worker (CHW) programs have proven to be a valuable asset in rural healthcare ecosystems. CHWs, being from the communities they serve, play a crucial role in bridging cultural and linguistic gaps, enhancing health education, and providing basic healthcare services. A review by Perry et al. (2014) highlights the positive impact of CHW programs on health outcomes in rural areas, including improved maternal and child health, increased vaccination rates, and better chronic disease management.

#### **Integrated Care Models**

Integrated care models, which combine primary care, mental health services, and social support within a single system, have shown promise in rural settings. These models facilitate a holistic approach to healthcare, addressing not only the medical needs but also the social determinants of health. The implementation of integrated care models in rural clinics in Alaska, known as the Alaska Native Tribal Health Consortium, has led to significant improvements in healthcare delivery and patient satisfaction (Gottlieb et al., 2013).

#### **Public-Private Partnerships**

Public-private partnerships (PPPs) have emerged as a strategic approach to enhance healthcare infrastructure and service delivery in rural areas. By leveraging the strengths of both sectors, PPPs have enabled the development of healthcare facilities, the introduction of advanced medical technologies, and the provision of specialized training for healthcare professionals in rural clinics. An example of a successful PPP is the collaboration between the Indian government and various private entities to establish telemedicine centers across rural India, significantly improving access to healthcare services (Dasgupta et al., 2015).

#### **Sustainable Financing Models**

Innovative financing models have been developed to ensure the sustainability of rural medical clinics. These models include performance-based financing, where funding is tied to specific health outcomes, and community-based health insurance schemes, which improve healthcare affordability for rural populations. Such initiatives have been instrumental in enhancing the financial stability of

rural healthcare facilities and ensuring the continuity of care (Soors et al., 2013).

The innovative solutions and success stories in rural healthcare demonstrate the potential for overcoming the challenges faced by medical clinics in these areas. Through the adoption of technology, community engagement, integrated care, strategic partnerships, and sustainable financing, rural healthcare providers can improve service delivery and health outcomes. Continued innovation, coupled with supportive policies and investments, will be key to advancing rural healthcare in the future.

#### **Section 4: Policy and Support Frameworks**

Effective policy and support frameworks are essential for addressing the challenges faced by rural medical clinics and enhancing healthcare delivery in rural areas. These frameworks can provide the necessary infrastructure, resources, and incentives to improve access to and quality of healthcare services for rural populations.

##### **Government Policies and Initiatives**

Governments play a pivotal role in shaping the rural healthcare landscape through policies, funding, and regulatory frameworks. Initiatives such as the National Rural Health Mission (NRHM) in India have been instrumental in strengthening rural healthcare infrastructure, enhancing the availability of healthcare professionals, and improving health outcomes in rural areas (Balarajan, Selvaraj, & Subramanian, 2011). Similarly, the Rural Health Clinic (RHC) program in the United States provides certification and financial incentives to clinics in underserved rural areas, encouraging the provision of primary care services (Gale, Lenardson, & Lambert, 2012).

##### **International and Non-Governmental Organizations**

International organizations such as the World Health Organization (WHO) and non-governmental organizations (NGOs) play a crucial role in supporting rural healthcare through funding, capacity-building initiatives, and advocacy. WHO's guidelines and frameworks, such as the "Increasing access to health workers in remote and rural areas through improved retention" global policy recommendations, provide valuable guidance for national and local policymakers (WHO, 2010). NGOs, on the other hand, often fill gaps in healthcare delivery, provide essential services, and implement community-based health programs in rural areas.

##### **Public-Private Partnerships (PPPs)**

Public-private partnerships can leverage the strengths and resources of both the public and private sectors to enhance healthcare delivery in rural areas. These partnerships can facilitate the development of healthcare infrastructure, the introduction of innovative healthcare technologies, and the provision of specialized training and support for healthcare professionals. An example is the Telemedicine Outreach for Prevention & Treatment of Non-Communicable Diseases (TOPIC) program in Bangladesh, which demonstrates how PPPs can extend specialized healthcare services to rural populations (Ahmed et al., 2014).

##### **Health Workforce Development and Incentives**

Policies aimed at developing and retaining the health workforce in rural areas are critical for ensuring the availability of healthcare services. Strategies such as loan forgiveness programs, scholarships for medical students willing to serve in rural areas, and continuing education opportunities can incentivize healthcare professionals to work in rural settings. The Rural Physician Associate Program (RPAP) in Minnesota is an example of an educational initiative designed to encourage medical students to practice in rural areas by providing hands-on, community-based training (Rosenblatt & Hart, 2000).

##### **Technological Advancements and Infrastructure**

Investments in technology and infrastructure are essential for improving healthcare delivery in rural areas. Policies that support the deployment of telemedicine, digital health records, and mobile health applications can significantly enhance access to and the quality of healthcare services. Government initiatives, such as the Broadband Technology Opportunities Program (BTOP) in the United States, aim to expand broadband access in rural areas, thereby facilitating telehealth and other digital health services (Grigsby, 2013).

Comprehensive policy and support frameworks are essential for addressing the multifaceted challenges faced by rural medical clinics and ensuring equitable healthcare access for rural populations. Through targeted government initiatives, international support, public-private partnerships, workforce development strategies, and investments in technology and infrastructure, significant progress can be made in improving rural healthcare delivery and outcomes.

## Section 5: The Path Forward

The path forward for enhancing the effectiveness and reach of rural medical clinics involves a multi-dimensional approach that addresses the core challenges while leveraging innovative solutions and support frameworks. This approach must be inclusive, collaborative, and adaptive to the changing healthcare landscape and the unique needs of rural populations.

### Strengthening Healthcare Infrastructure

Investing in healthcare infrastructure is paramount to enhancing the accessibility and quality of services offered by rural medical clinics. This includes not only physical infrastructure such as clinic buildings and transportation networks but also the technological infrastructure necessary for telemedicine and digital health services. Government and private sector investments in rural healthcare infrastructure can significantly reduce the accessibility gap, as demonstrated by the success of rural health initiatives in countries like Rwanda, where extensive investments have led to improved health outcomes across rural areas (Binagwaho et al., 2013).

### Workforce Development and Retention

Addressing the shortage of healthcare professionals in rural areas requires focused efforts on workforce development and retention. Initiatives such as targeted scholarships, loan forgiveness programs for healthcare workers who choose to work in rural areas, and enhanced career development opportunities can incentivize professionals to serve in these underserved communities. Furthermore, leveraging community health workers and mid-level providers can alleviate some of the burdens on the healthcare system while ensuring that essential healthcare services are accessible (Lehmann et al., 2008).

### Embracing Technological Innovations

Technological innovations such as telemedicine, mobile health applications, and electronic health records hold tremendous potential for transforming rural healthcare. These technologies can bridge the distance between rural patients and healthcare providers, improve the management of chronic diseases, and enhance the efficiency of healthcare delivery. Policies that support the adoption and integration of these technologies into rural healthcare systems are crucial for realizing their full potential (Wootton et al., 2011).

### Community Engagement and Education

Engaging rural communities in the planning and implementation of health initiatives ensures that these efforts are culturally sensitive and aligned with the community's needs. Health education campaigns that address local health challenges and promote preventive healthcare can empower rural populations to take an active role in their health management. Community involvement can also enhance the sustainability of health programs and increase their impact (Perry et al., 2014).

### Policy Support and Sustainable Financing

Effective policy support and sustainable financing mechanisms are essential for the long-term viability of rural medical clinics. This includes not only direct funding for rural healthcare facilities but also policies that encourage private investment, public-private partnerships, and international collaboration. Ensuring that rural healthcare is adequately funded and supported by comprehensive policies can facilitate the development of a robust and resilient rural healthcare system (Mills et al., 2014).

The path forward for rural medical clinics requires a concerted effort from governments, healthcare providers, communities, and international partners. By focusing on strengthening infrastructure, developing the healthcare workforce, embracing technological innovations, engaging communities, and ensuring policy and financial support, significant strides can be made in improving rural healthcare. The goal is to create a sustainable, accessible, and high-quality healthcare system that meets the unique needs of rural populations.

### Conclusion

In conclusion, rural medical clinics play a crucial role in providing healthcare services to underserved populations, yet they face significant challenges that hinder their ability to deliver effective and comprehensive care. These challenges, ranging from geographical and infrastructural barriers to shortages of healthcare professionals and financial constraints, underscore the complexity of healthcare delivery in rural settings. However, the resilience and innovation demonstrated by rural healthcare providers, coupled with supportive policy and community engagement, offer promising pathways to overcoming these obstacles.

Innovative solutions such as telemedicine, community health worker programs, and integrated care models have shown considerable potential in enhancing access to and the quality of healthcare in rural areas. These initiatives,

supported by effective policy frameworks, public-private partnerships, and sustainable financing mechanisms, are essential for building resilient rural healthcare systems.

The path forward requires a collaborative and multi-faceted approach that involves governments, healthcare professionals, communities, and international partners. By prioritizing investments in healthcare infrastructure, embracing technological innovations, fostering workforce development, and engaging rural communities, significant strides can be made in improving the health outcomes of rural populations.

Ultimately, ensuring equitable access to healthcare services for all, regardless of geographic location, is not only a matter of social justice but also a critical component of global health and development. The experiences and lessons learned from addressing the challenges faced by rural medical clinics can provide valuable insights for strengthening healthcare systems worldwide, paving the way for a healthier and more equitable future for rural communities.

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