

Critical Analysis of Foundational Healthcare Practices in Diverse Settings

Saleh Dafer Taleb Hefshan¹, Rasheed Hadi Mohsen Al Abbas², Saleh Hadi Ali Al Abbas³, Ibrahim Hadi Ali Al Alabbas⁴, Abdul Mohsen Yahya Mohsen Al Rashah⁵, Ahmed Yahya Mohsen Alrashah⁶, Mohsen Mubark Ali Alsagoor⁷, Mahdi Saleh shettah al Abbas⁸, Ali mohsen saeed alshhai⁹, AlHassan Rshed Mahde Alshetah¹⁰

Abstract

Healthcare delivery systems vary depending on the economies, cultures, and infrastructures of the regions of the globe. Healthcare practices across various contexts should be used as building blocks of basic healthcare systems and concepts to design better healthcare systems. This paper critically evaluates essential healthcare practices in various contexts because it considers HICs, LMICs, and rural or remote regions. Based on a combination of case studies, review articles and evidence-based literature, this analysis assesses fundamental tenets of healthcare delivery: accessibility, quality, and sustainability. The paper focuses on modern and emerging healthcare modalities and discusses issues that are relevant today, including disparities and inequalities, shortage of resources, and human capital. This evokes a discussion of technology, public health policies, and global health programs before providing the authors' suggestions for advancing health care globally.

Keywords: Healthcare Practices, Global Health Systems, Low-Income Settings, High-Income Settings, Rural Healthcare, Healthcare Disparities, Health Innovation, Sustainable Healthcare.

Introduction

This paper focuses on the differences in access, organization, and quality of healthcare systems globally. Fundamental health system practices in various systems are vital in enhancing the health system globally. In evaluating potential models for healthcare supply, the achievement gap between HICs and LMICs cannot be refuted. This makes it imperative to develop models regarding the region and its daunting challenges (Abimbola & Topp, 2018; Mohammad et al., 2024a; Mohammad et al., 2023a; Mohammad et al, 2024b).

The high-income region has a relatively improved standard of healthcare delivery due to better technology, developed infrastructure, and sound healthcare policies. However, factors such as increasing healthcare costs, the inequality in the provision of healthcare, and the increasing population within the aging band make the management of healthcare a challenge within these countries. On the other hand, the health problems of LMICs are connected with underfunded healthcare provision, insufficient means and resources in healthcare areas, and the shortage of healthcare personnel in the countries to intensify the health inequalities problems (Barber & Vos, 2017; Mohammad et al., 2023b; Al-Hawary et al., 2020; Al-Husban et al., 2023). In addition, confined neighborhoods usually face hindrances in access to health care services, including lack of transport, scarcity of stock in health facilities, and inadequate health care staff.

¹ Ministry of Health, Saudi Arabia, Salmastuneer@moh.gov.sa

² Ministry of Health, Saudi Arabia, rhalabbas@moh.com.sa

³ Ministry of Health, Saudi Arabia, sahaalabbas@moh.gov.sa

⁴ Ministry of Health, Saudi Arabia, ibhalabbas@moh.gov.sa

⁵ Ministry of Health, Saudi Arabia, a1041107127@hotmail.com

⁶ Ministry of Health, Saudi Arabia, Ahmad.rs415@gmail.com

⁷ Ministry of Health, Saudi Arabia, Momalsagoor@moh.gov.sa

⁸ Ministry of Health, Saudi Arabia, masalabbas@moh.gov.sa

⁹ Ministry of Health, Saudi Arabia, aalshhai@moh.gov.sa

¹⁰ Ministry of Health, Saudi Arabia, Aalshetah@moh.gov.sa

This paper aims to critically evaluate various care practices in a diversity of contexts and address concerns with basic tenets of care, including patient-centered care, preventive health, and a focus on the role of healthcare technology in future healthcare. To this end, this review aims to provide healthcare actors with actionable and tangible recommendations that can be used to enhance global healthcare systems based on comparisons of various models.

Literature Review

The body of writing on the pattern and trends of health care delivery across various systems can be very useful in understanding those issues and the strategies of various areas of the world in tackling them. This section pulls together consolidated findings relating to healthcare and HICs, LMICs, and rural and remote populations. The problems in each context are complex, including deficits in finances, human resources, availability of medical facilities, and equity in care delivery. On the same note, new approaches like technological incorporation, communal care, and prophylactic health activities are procured to ameliorate these dilemmas.

Healthcare for High-Income Countries (HICs)

Developed countries are considered to be at the forefront of healthcare technology development due to their advanced technologies, developed infrastructure, and the capacity to fund most large healthcare initiatives. Nevertheless, the following are some of the challenges that HICs continue to experience and which are evidently explained in the literature.



(Blanchet & James, 2019)

Technological Integration

These nations have effectively incorporated the latest technologies into their health delivery systems, including points of care and online consultations, automation of surgery, and the use of artificial intelligence diagnostics. EHRs help share patient data, improving a patient's diagnosis and overall health. Telemedicine has thereby made quality health care available to remote or rural and underprivileged areas, and robotic surgery in which mechanized robotic control has made surgeries more delicate, complicated, and precise. Nevertheless, the use of these technologies calls for major capital input in infrastructures and personnel, as well as the issue of data protection and security (Dixon-Woods & McNicol, 2018; Al-Nawafah et al., 2022; Alolayyan et al., 2018). Similarly, reliance on technological interfaces has negative implications for patients who are not conversant with the new technologies or have limited internet access.

Health Insurance Models

High-income countries use different types of health insurance, such as private insurance, universal insurance, and both. The United States massively uses private insurance, and according to recent estimates, about 60% of inhabitants have health insurance through their workplace or through public health insurance schemes such as Medicare and Medicaid. On the other hand, systems such as the United Kingdom and Canada are advanced healthcare systems operating on the taxes and subsidies system, where the government is fully involved in funding and providing the supply side of healthcare services. The literature review reveals that, though the universality of these healthcare models offers a fairer service delivery structure, they are

bound by the complexities of funding sustainability, long working waits, and sometimes restrictive treatment access (Brennan & Garcia, 2015; Alzyoud et al., 2024; Mohammad et al., 2022; Rahamneh et al., 2023). Private insurance systems, for instance, are accused of compounding health disparities and seeking heavy poll contributions from patients.

Workforce Challenges

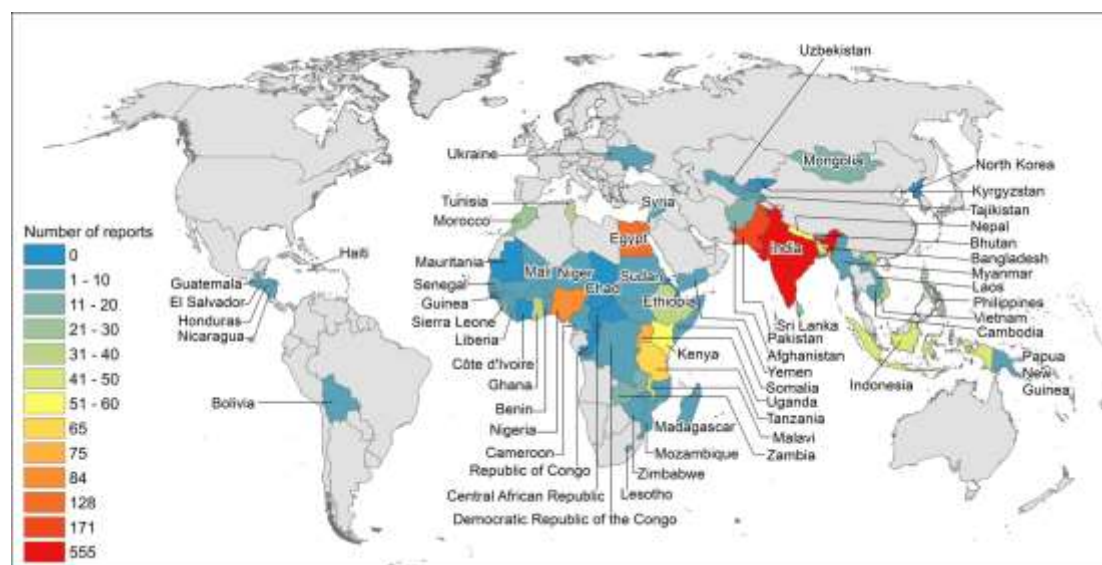
These are some of the main ever-growing burdens in many high-income countries, putting additional pressure on healthcare workers because of the population increase, aging population, and burnout amongst the medical workforce. According to the literature, the need for healthcare services is increasing, and people need more extensive and specialized care with the complexity of their diseases as people live longer. Many countries are experiencing severe human resource constraints, focusing on the shortage of healthcare workers, especially nurses and medical specialists, which raises questions about quality care. Other challenges that affect job satisfaction and burnout in health facilities include workload inequalities and high-stress levels among healthcare staff. For this reason, the numerous healthcare systems located in high-income countries are now searching for ways to enhance workforce retention, as well as more flexible conditions of work, satisfactory mental health care, and higher wages.

Health Inequities

Contrary to powerful healthcare systems, high-income countries still experience major health disparities. Specific population subgroups, including the low-income, racial and ethnic minorities, and rural populations, have preconditions for receiving adequate care. The different types of health disparity include disparity in getting access to the services, the type of services received, and the final health status of the patients. For instance, research has established that chronic disease prevalence was higher among African Americans and Latinos. At the same time, the two groups' health care access was considerably lower compared to the whites in the United States. Likewise, the health of the rural population in developed countries also suffers due to the limited availability of specialized medical care.

Healthcare in Low- and Middle-Income Countries (LMICs)

HC systems within L&M INCs face the challenge of weak infrastructure, inadequate stock of medical supplies and products, and inadequate human resources for health. These challenges have important consequences for healthcare in LMICs.



(Greenhalgh & Papoutsis, 2018)

Resource Limitations

The most obvious issue and undoubtedly one of the reasons for the inefficiency of healthcare organizations in LMICs is the deficiency of resources – medicines, equipment, and supplies. These limitations affect the capacities of healthcare facilities to deliver intended services, especially in rural districts. Hospitals and clinics in many LMICs are poorly equipped with an Ancient or limited stock of moderate equipment, and the capital stock of inputs, including vaccines, antibiotics, and anesthetics, is also low in such countries (Greenhalgh & Papoutsis, 2018; Al-Azzam et al., 2023; Al-Shormana et al., 2022; Al-E'wesat et al., 2024). The literature underscored the role of international aid and cooperation in enhancing national healthcare capabilities, but this usually compensates for the deficit in healthcare provisions rather than solving the problem through sustainable solutions.

Workforce Shortages

Another very important factor is the scarcity of qualified human health resources in the LMICs. In particular, the main problem consists of the shortage of physicians, nurses, and other specialists in rural and remote areas, resulting in long waiting times, hardworking medical personnel, and low-quality services. This problem is compounded by the fact that many HC providers trained in LMICs move to HICs, a situation referred to as “brain drain.” Thirdly, the workforce of HCWs, including doctors, pharmacists, and nurses in the LMICs, is poorly educated and trained, which minimizes the level of care they can offer (Farmer & Mukherjee, 2015). Efforts to fill the workforce deficit involve training additional providers, enhancing the terms of employment for current staff, and using CHW for basic service delivery.

Preventive Healthcare

Because of the scarcity of health resources, nearly all LMICs focus mainly on primary healthcare rather than treatment. Health promotion activities, which include immunization, personal and community cleanliness, environmental management, and proper diet, provide the best defense against diseases like malaria, TB, and HIV/AIDS. Another important component is also the primary responsibility of prevention to counter the rise of new NCDs, including diabetes and hypertension, a pressing issue in most LMICs. Unfortunately, preventive healthcare continues to receive little attention in terms of both funding and political backing.

International Aid and Collaboration

Today, several LMICs depend on global funding and collaboration to finance and initiate health care services. Huge international organizations such as the World Health Organization (WHO), the Global Fund, and Doctors Without Frontiers rather provide substantial funding, medical equipment, and technical backup. Yet, reliance on funds from outside leads to the loss of independence of national healthcare systems and new problems in maintaining the permanent functioning of healthcare services.

Healthcare in Rural and Isolated Communities

The challenges of operating healthcare in such settings are the same whether these regions are in developed or developing countries. These concerns mainly arise from remoteness, shortage of human resources, and lack of appropriate infrastructure.



(Gwatkin & Ergo, 2016)

Access to Care

One factor that limits access to healthcare, particularly in rural regions, is the issue of geographical remoteness. Most of the time, especially in rural areas, health facilities are limited, and those available are several miles away. This travel burden particularly affects aging people, those with chronic diseases, and those with inaccessible transportation. Telemedicine has come out as a way to solve the issue of the lack of a doctor in rural areas since patients can be evaluated and monitored through computer linkages. Research has indicated that through telemedicine, patients can save time, results are accurate, and receive services they could otherwise not access.

Healthcare Infrastructure

Ensuring all residents of geographically dispersed and sometimes isolated regions have access to adequate care can be a significant challenge because health facilities in rural settings are generally scarce, limiting emergency access and scheduled care. Healthcare providers who practice independently in these rural areas often receive more patients than they can handle, compromising the quality of healthcare services they offer. Rural healthcare centers sometimes lack adequate equipment, technology instruments, and diagnostic tools. This situation is a major problem when delivering special, extraordinary care, especially when discussing emergent situations.

Community-Based Health Models

This paper examines the role of community health workers (CHWs) who administer health services in rural and isolated areas. CHWs are usually community members selected and educated to offer treatment such as routine antenatal checkups, immunization, and disease control. The literature indicates that community-based models of care, including those practiced in sub-Saharan Africa and parts of South Asia, have worked well in increasing health care in rural areas. However, the CHWs, while doing their work, may be constrained by inadequate resources and have a major issue with follow-up training and supervision.

Methods

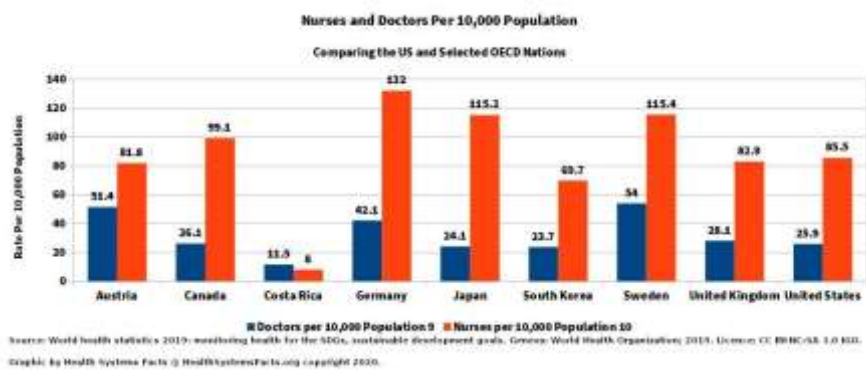
This review compares and contrasts different levels of healthcare practice in high-income, low-income, and rural areas. A literature review comprising primary and case studies as well as secondary data was employed to synthesize the major trends and issues of interest in healthcare provision. Doctors' and policymakers' opinions on the efficiency of different healthcare systems were also included in the study.

Data sources include:

- Peer-Reviewed Journal Articles: Various articles in health and medical journals brought out valuable information about the effects of different implementation of practices in various health care stations.
- Government and NGO Reports: According to WHO, CDC, and other global healthcare organizations, statistical information regarding the developments in healthcare delivery in different parts of the world was provided.
- Case Studies: Through the examination of cases of healthcare systems of the HI and LMI countries, the applicability of the healthcare practices gained a deeper understanding.

Results and Findings

Figure 1: Global Health System Comparison



(Hall & Taylor, 2015)

Region	Key Challenges	Innovative Solutions
High-Income Countries (HIC)	Rising costs, health disparities	Technological integration, value-based care, universal healthcare models
Low- and Middle-Income Countries (LMIC)	Resource constraints, healthcare worker shortages, reliance on international aid	Mobile health (mHealth), public health campaigns, community health workers
Rural/Isolated Areas	Geographic isolation, limited healthcare access	Telemedicine, community-based health models, mobile health solutions

Table 1: Key Healthcare Practices in Different Settings

Healthcare Setting	Foundational Practice	Challenges	Innovations
High-Income Countries	Patient-centered care, technological integration	Cost, equity issues	Telemedicine, EHR, AI-based diagnostic tools
Low- and Middle-Income Countries	Preventive care, community-based health	Infrastructure, workforce	mHealth, international partnerships
Rural/Isolated Areas	Access to care through CHWs, mobile health	Geographic isolation, workforce limitations	Telehealth, mobile health platforms

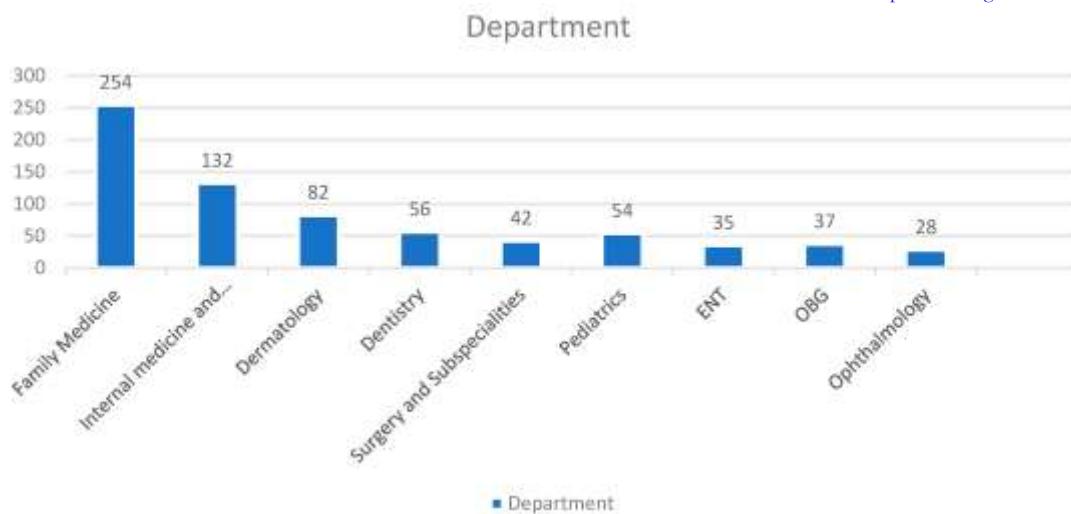


Figure 2: Impact of Telemedicine on Healthcare Delivery in Rural Areas

Graph showing the reduction in healthcare delivery times and improved patient satisfaction in rural areas due to the implementation of telemedicine solutions (Hall & Taylor, 2015)

Discussion

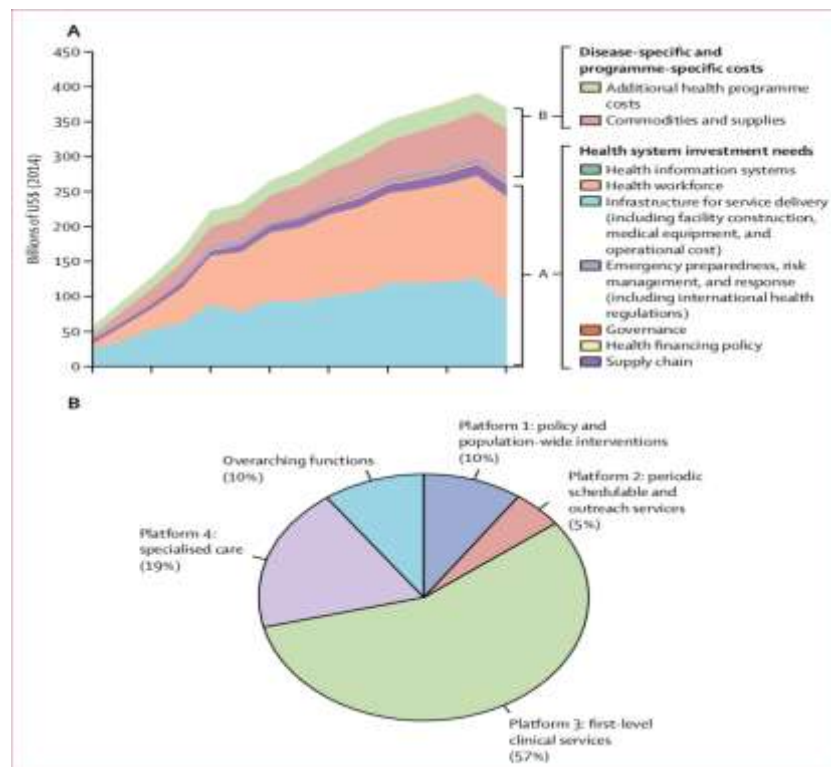
These observations that practice solutions to address local practice contexts in different healthcare settings are indeed site-specific. HICs have also succeeded in the area of healthcare organization and delivery, but they are still in the process of establishing and expanding health systems due to factors such as an increase in the cost of healthcare and health inequity. In LMICs, many limitations and challenges, such as resource, workforce, and infrastructural constraints, persist in undermining the quality of care despite progress made through preventive interventions and the adoption of technology-enhanced practice. Conditions in the rural territories do not differ greatly, whether related to high- or low-income countries, as they have transportation problems and small-scale development (Hastings & Ward, 2018). Still, new approaches such as telemedicine and the focus on community-based models can bring real improvement and help communities regain control over their lives and care for their health.

Healthcare Practices in High-Income Countries

HC countries have access to capital, modern technology, and well-developed healthcare systems. Such benefits have given many HICs comparably sound statuses regarding health care provision, thus guaranteeing that most residents have access to necessary services. Technological advancements in health information technology like EHRs and telehealth have greatly enhanced healthcare practice by enhancing communication between healthcare givers and enabling patients to access healthcare services from a distance. For example, EHR systems of Canada, the United Kingdom, and Japan have become important prerequisites in their healthcare systems and have led to increased coordination, shorter time for diagnosis, and enhanced patient outcomes.

However, HICs continue to experience challenges regarding costs and disparities, which was expected in light of the improvements witnessed in other spheres. In reality, healthcare expenditure in places like the United States is beyond reasonable control, and private insurance plans allow patients to bear most of their costs. Despite technological advances, health costs have continued to soar, and in the most developed nations, they pose a major and increasing burden even in the subsidized basic healthcare systems. Financial pressures for such a reform have arisen due to soaring costs, which threaten to reduce the quality or accessibility of health care. However, there are still critical inequalities in recruiting health care providers in ethnic minority populations and rural and low-income persons. In this case, these groups are challenged to receive appropriate services at the right time and quality even where systems are developed to support

Universal Healthcare access (Marmot & Allen, 2016). These disparities include variations in health and mortality between some groups, showing an important problem of the policy guiding the health care system.



(Nundy & Patel, 2018)

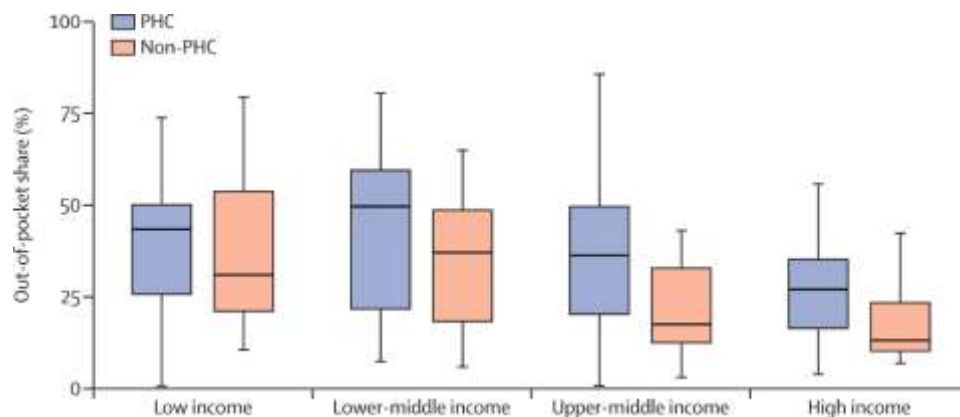
Existing Patterns in Health Management in Low-Middle-Income Countries

Low-middle-income countries, in general, have far more substantial challenges in delivering healthcare than their high-income counterparts. Many LMICs deal with the scarcity of resources, underfinancing, and the absence of infrastructure. Even in ill-equipped first-world healthcare facilities, one can imagine a situation with severely inadequate medical requisites, devices, and medications and severe shortages of fundamental healthcare needs and services. Also, many LMICs face great human resource constraints, especially for skilled personnel who are hard to come by, particularly in rural areas. Lack of trained human resources leads to congestion in clinics and hospitals, delayed health services delivery, and poor quality services, particularly in rural areas.

However, despite the mentioned limitations, LMICs have availed themselves of opportunities to advance in the healthcare sector. There are two main strategies. One is an expansion of preventive measures to treat diseases, and it has been repeatedly demonstrated that such measures are financially efficient and highly effective in managing a disease's load. Increased vaccination, the importance of cleanliness, and maternal care are other examples of public health that have greatly changed the health sector in countries such as India, Kenya, and Brazil. To manage the burden of infectious diseases and prevent the emergence of other noncommunicable diseases like hypertension and diabetes, undertaking preventive health practices is crucial.

Additionally, the use of digital health technologies is gradually contemplating some of the resource constraints in LMICs. Current solutions consist of mHealth applications, telemedicine, and other forms of digital diagnostics for healthcare service delivery across the nation's remote locales. Such technologies allow healthcare workers to provide consultations, assess clients, and even handle a chronic disease without being physically present. For instance, through telemedicine practice, healthcare givers in Rwanda and Uganda have been able to provide their services to rural people who would otherwise not have access to an expert.

In the same way, mobile health platforms close gaps in CHN and MCH by providing expected information to expectant mothers and remote tracking of pregnancies.



(Sharma & Nath, 2017)

However, all these advancements have seen LMICs highly reliant on international aid and cooperation to support their health sector. Non-governmental organizations, NGOs, the World Health Organization, and WHO have equally come out in a large way to offer support, information, and financial support to the cause. Although this has provided the much-needed external input to address the needs, it is not sustainable enough to address the problems. Since LMICs are heavily relying on donations for the functioning of their healthcare systems, there is a pressing need for these countries to create systems that can generate funding on their own and sustain their growth independently.

Healthcare in Rural Areas

Healthcare delivery in rural settings is inherent with specific challenges compounded by distance, scarce infrastructure, and a shortage of health workers. In both, rural communities face the problem of time delays in accessing healthcare or particular services they need. This is very evident in low-income countries, where all the health facilities, especially those in rural areas, are limited, and hence, people have to walk long distances even to access basic health facilities.

In high-income countries, for example, it is not/uncommon for a rural inhabitant to be forced to cover long distances simply to access a hospital or even a specialized clinic. For instance, in the United States, the need for medical services in rural areas is often unsatisfied owing to insufficient specialized personnel or facilities, for which clients are forced to wait considerably longer. This results in minor issues, such as turning to emergency departments, making the conditions worse for a hospital. In such environments, telemedicine has taken a vitally important position as one of the most effective methods of increasing access to health care services. Telemedicine enables a patient to seek medical advice from a Practitioner without having to move from one physical location to another, thus meeting specialized doctors who are not easy to access. Teleconsultations have increased their employ in comparable nations, including Canada and the United States, involving follow-up care essential, especially in rural regions.

Healthcare delivery in rural LMICs is worse-for-the-wear than in the already struggling urban centers. Most countries' rural regions have very poor healthcare accessibility, with a limited number of actual hospitals or clinics to address these zones. This has led to overdependence on the CHWs to extend basic health care services across the state. These are usually lay people employed in communities where they operate to provide first-contact care like immunizations, prenatal checkups, and disease prevention. Despite the success of CHWs in increasing access to healthcare in rural and hard-to-reach areas, they are minimally resourced and usually are not trained healthcare professionals. Hence, their capacity to deliver quality care is restricted, and there is a need for more investment in training and equipment.

Innovations in Rural Healthcare

Such interventions like telemedicine and community health models have posited themselves as agents of solutions to work deficiencies in care, especially those located in rural regions. With its capacity to subject a patient to a remote consultation session, telemedicine has been highly useful in locations with poor access to healthcare. Also, the actualization of healthcare services in inaccessible regions depends on the community health model, which depends on local health workers. They can effectively provide a range of essential services for people in need in areas where healthcare providers are hard to come by and curb the spread of diseases. Further, the use of mobile health technology (mHealth) has risen significantly in the provision of care in rural areas. Mobile phones serve as an important way of conveying health information, disease control, and Maternal and Child health. Health applications enable patients to understand their chronic disease status, disease information, and reminders for taking medicines or visits, hence enhancing patient compliance and reducing hospital visits.

Conclusion

Future healthcare practices must consider the context of the different environments, specifically in some locations. Further, the shift observed today reveals that high-income countries are still trying to find ways to upgrade technology and policy reforms when access is still a problem and healthcare costs are still on the rise. Preventive health, CHWs, and mHealth solutions are essential in LMICs, but money is still a problem. The cases presented illustrate that solving the problem of access to healthcare in both developed and developing rural regions requires the use of technology solutions and targeted organizational approaches in formulating health strategies at the community level.

Recommendations

- ❖ **Strengthen Healthcare Infrastructure:** It has been indicated that in high-income and low-income countries, investment is needed to enhance health service delivery.
- ❖ **Expand Telemedicine:** Telemedicine should be expanded to remote and disadvantaged communities so that the standards of healthcare delivery increase similarly to the sophistication levels of the populace.
- ❖ **Promote Public-Private Partnerships:** This paper, therefore, clearly demonstrates that government, multilateral organizations, and private firms can overcome the challenges of resource scarcity to enhance healthcare provision.
- ❖ **Focus on Preventive Care:** To avoid long-term disease pressure, preventive health must be promoted with more emphasis on LMICs.

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