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NAVIGATING CHALLENGES IN CHRONIC DISEASE CARE: BARRIERS AND SOLUTIONS

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Abstract

Chronic illnesses such as diabetes, chronic obstructive pulmonary disease, and cardiovascular diseases pose a significant public health issue worldwide. Even with the significant progress made in healthcare technology and medical treatments, managing these conditions effectively can still be quite challenging. The obstacles in treating chronic illnesses can be felt at the level of patients, healthcare providers, and even the system as a whole. To truly handle these conditions effectively, it requires a team-based approach. The challenges include barriers to accessing healthcare, financial obstacles, fragmented care systems, patient's difficulty to follow their treatment plans, and varying levels of health literacy among people. On top of that, they also have to deal with provider burnout and the lack of effective digital health solutions, which can complicate the management of these conditions. This review is all about highlighting the main challenges and diving into some evidence-based solutions that could really enhance care and outcomes. Patient education and involvement through tailored care plans, promotes a comprehensive strategy and can boost adherence and achieve improved outcomes. On top of that, policy changes that back integrated care models and promote value-based healthcare can really enhance coordination among providers, leading to a more seamless experience for patients. Expanding telemedicine and digital health tools is an excellent way to close accessibility gaps, especially for individuals in rural or underserved communities. Lastly, rolling out financial assistance programs and broadening insurance coverage can significantly lighten the financial load, making long-term care much more manageable for patients.

Keywords: *Chronic illness, Obstacles, Barriers, Provider burnout, Adherence, Telemedicine.*

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INTRODUCTION

Global morbidity and mortality are heavily impacted by chronic diseases like diabetes mellitus (DM), cardiovascular diseases (CVD), and chronic obstructive pulmonary disease (COPD). According to the World Health Organization (WHO), cardiovascular disease (CVD) is the leading cause of mortality worldwide, responsible for approximately 31% of total deaths (World Health Organization, 2020). More than 460 million individuals across the globe have diabetes, an epidemic that continues to worsen, and approximately 384 million individuals have COPD, both of which add considerably to the disability burden [1]. Despite significant advances in the treatment and management of chronic diseases, patients continue to often face a variety of barriers that diminish the quality of their care. These obstacles fall into three main categories: those that affect patients, providers, and systems. For people with chronic illnesses, each category has different difficulties that must be overcome in order to maximize care and enhance results. This review will examine these obstacles in depth and provide possible ways to lessen them.

Definition

The World Health Organization states that chronic diseases are not passed from person to person. They are of long duration and generally slow progression. The four main types are cardiovascular diseases (like heart attacks and stroke), cancers, chronic respiratory diseases (such as chronic obstructed pulmonary disease and asthma) and diabetes [2].

List of Chronic Diseases

As per the Delaware Chronic Disease Coalition the list of chronic diseases is:

- Arthritis
- Asthma

- Atrial Fibrillation
- Chronic Obstructive Pulmonary Disease
- Cancer
- Chronic Kidney Disease
- Depression
- Diabetes
- Heart Failure
- Hepatitis (B & C)
- AIDS
- Hyperlipidemia
- Hypertension
- Ischemic Heart Disease
- Stroke [3].

COLLABORATIVE CHRONIC DISEASE CARE

Collaborative care is a health care model where there is an agreement between many healthcare professionals from various disciplines to deliver patient-centered care. It includes physicians, nurses, mental health professionals, dietitians, pharmacists, social workers, and other experts. Priority is placed on treating the entire person's total health needs, not only physical but also emotional and social well-being, and to enhance mutual decision-making between the patient and the health care team [4]. Chronic diseases are complex and require long-term, multi-faceted treatment programs. Collaborative care facilitates co-ordinated care through integrating the expertise of various specialists to improve the overall health of the patient and ensure that the treatment plan is comprehensive and coordinated [5]. The emphasis placed on patient participation and active engagement in decision-making under the model translates into increased adherence to treatment, leading to improved outcomes in the long run.

ADVANTAGES OF COLLABORATIVE CARE IN CHRONIC DISEASE MANAGEMENT

The collaborative care model has the following advantages for chronic disease management:

Enhanced Health Outcomes

Regular check-up and diagnostic testing help to find hypertension, diabetes, and cancer in their preclinical development phase, increasing therapy effectiveness [6].

Encouragement of healthy nutrition, exercise routinely, and cigarette smoking cessation is able to dramatically reduce the development of chronic ailments. Evidence has established that collaborative care results in remarkable clinical improvement in patients with chronic diseases. Diabetic patients under collaborative care programs have better glycemic control [7], and hypertensive patients have better blood pressure control [8]. Collaborative care treats the physical, psychological, and social needs of the patient for an effective and comprehensive treatment plan.

Improved Patient Satisfaction

More satisfied are also those patients whose care is managed under a collaborative model. The model's focus on communication, shared decision-making, and care integration makes the patient feel heard, valued, and included in decisions regarding his or her care.

Cost-Effectiveness

Collaborative care has the ability to reduce the cost of healthcare by preventing disease worsening, reducing hospitalization and reducing the need for emergency services. Through improving the management of chronic disease and preventing complications, the model has been shown to save healthcare systems in the long run.

HEALTHCARE BARRIERS

A healthcare barrier was defined as something that restricts the use of a health service and/or reflects lack of access to evidence-based care. [9]

Types of Barriers:

- Patient based barriers
- Provider based barriers
- System based barriers

PATIENT-LEVEL BARRIERS

Non-Adherence to Treatment

Non-Adherence to recommended treatment plans is one of the biggest obstacles to managing chronic illnesses effectively. According to studies, a significant percentage of people with long- term illnesses like diabetes, heart disease, and chronic obstructive pulmonary disease (COPD) do not completely follow their prescribed treatment plans or suggested lifestyle changes. For example, up to 50% of patients do not stick to their prescribed regimens for insulin therapy and oral hypoglycemic medications, which are commonly used in the management of diabetes. [10]. Multifaceted prescription regimens, side effects, forgetfulness, and lack of information regarding the disease are some of the reasons for non-adherence. If treatment is perceived as ineffective, patients become discouraged, especially if no changes are observed immediately. Noncompliance can lead to poorer management of the illness, more complications, and higher medical care costs [11].

Health Literacy and Self-Management

Another significant barrier to chronic disease management is health literacy. Most patients don't have the necessary knowledge to manage their diseases effectively, particularly in intricate disorders such as diabetes where dietary changes, insulin administration, and home glucose monitoring are crucial [12]. Patients with low health literacy are less likely to understand the importance of taking medication, dietary changes, and regular follow-upsall of which are essential to prevent issues and improve long-term outcomes [13]. Patients also need to be engaged in their care including following a healthy diet, exercising, and monitoring their symptoms, to self-manage chronic diseases such as COPD and CVD. Most patients however struggle with these responsibilities, often due to mental illness such as anxiety and depression, lack of support, or lack of knowledge.

Socioeconomic and Psychological Factors

The treatment of chronic illnesses is also greatly influenced by economic constraints. Because they tend to prioritize basic needs over healthcare, poor individuals often receive delayed or inadequate treatment. One of the biggest financial burdens is the cost of drugs, particularly for chronic conditions such as diabetes and cardiovascular disease [14]. Additionally, patients within lower socioeconomic classes will be less likely to have insurance coverage for all the needs of chronic disease management, leading to missed care. Chronic disease patients also have psychosocial issues like social isolation, anxiety, and depression. Such mental health complications can further complicate the management of the disease by having a negative impact on self-care behaviors and treatment adherence [15]. For example, there are greater chances of adverse effects when individuals with depression are less compliant with taking medications as directed or attending follow-up visits.

PROVIDER-LEVEL BARRIERS

Time Constrains and Provider turn out

Time Limits and Provider Burnout Chronic disease management poses some challenges to medical providers, particularly for primary care practitioners where the greatest proportion of chronic illness treatment occurs. Given that primary care physicians often have a large number of patients to see and few minutes per patient, time limitations are one of the most common issues. This could result in inadequate discussions of how to control the disease, and this would lead to opportunities lost for counseling and educating patients. Another emerging concern in chronic disease care is burnout on the part of providers. The escalating numbers of patients with chronic disease and the affective burden of caring for complex, longitudinal cases expose healthcare providers to burnout, particularly those who labor within high-stress environments. Studies have shown that physician burnout is associated with reduced patient satisfaction, increased error rates, and decreased service quality [16]. Burnout can result in less empathy and worse relationships between patients and providers, both of which have an adverse effect on patient outcomes.

Fragmented Care and Lack of Coordination

Numerous experts, including cardiologists, endocrinologists, pulmonologists, and mental health professionals, are often required to treat chronic diseases. Yet a lack of coordination and communication among these professionals leads to fragmented care in most healthcare systems. It may be difficult for patients to care for multiple chronic diseases, and a lack of a unified treatment plan can lead to overlapping testing, conflicting recommendations, and suboptimal care [17]. Effective provider-to-provider communication may sometimes be hindered by the lack of integrated electronic health records (EHRs). This may lead to inconsistent management strategies, unnecessary testing, and delayed treatment, all of which could interfere with patient outcomes.

SYSTEM-LEVEL BARRIERS

Access to Healthcare and Infrastructure

Reasonably limited access to care is among the largest challenges to the treatment of chronic illness, particularly in rural or underserved communities. In such cases, specialized care access is often limited, and there may be distance between medical centers. While telemedicine can help to be one, it isn't everywhere, and it could not be accessible for individuals lacking reliable internet services. Rural patients might also have difficulty accessing medication and equipment used to manage disease such as COPD and diabetes. In addition, the facilities required to provide timely and comprehensive care are not available in some countries' under-resourced healthcare systems. For example, patients might wait for a long time to see specialists, which can lead to a delay in diagnosis and initiation of treatment [18].

Insurance and Financial Barriers

Management of chronic disease is also greatly impeded by the cost of healthcare, particularly in countries without universal coverage of healthcare. Most patients may not be able to cover the cost of the long-term medications required for treating chronic conditions, especially those with limited incomes. Prescription medication, hospitalization, and outpatient visits may be out of their affordability, making them miss important medical care [19]. Lack of proper insurance coverage also prevents patients from receiving the care they require. Individuals suffering from chronic diseases often struggle to pay for regular check-ups with the doctor or medicines required to regulate their symptoms even with insurance coverage because of substantial copayments or deductibles.

Policy and Healthcare System Limitations

In most countries, chronic diseases are not prioritized in health care policies. Most health systems focus primarily on acute care, while chronic diseases require ongoing, coordinated care. Acute treatment is often promoted at the expense of long-term disease management, partly due to the design of healthcare financing. Non-uniform care in various settings of care may also be caused by a lack of prescribed treatment guidelines for chronic conditions. The development and management of chronic diseases are also strongly influenced by socioeconomic determinants of health, which are often neglected by public health programs. These determinants are poverty, education, and access to wholesome food [20]. Public health approaches must be more integrated to enhance overall outcomes, addressing the root causes of chronic diseases and promoting prevention.

SOLUTIONS TO OVERCOME BARRIERS

Patient-Centered Solutions

Education is the solution to the elimination of barriers at

the patient level. Evidence-based patient education programs focusing on medication compliance, disease control, and lifestyle modification can significantly improve health outcomes and self-management. Streamline therapies, review prescriptions, and monitor compliance. Combination therapy, which consolidates numerous drugs in one pill, is utilized in treatments with fixed dosages [21]. For improved adherence, psychosocial concerns such as anxiety and depression need to be addressed.

Quality of life and disease control have been shown to improve when mental health support is integrated into chronic illness treatment via interventions such as support groups or cognitive- behavioral therapy (CBT) [22]. Patients may be provided with ongoing education and support via telemedicine and mobile health applications, which can aid in the management of their condition remotely [23].

Provider-Centered Solutions

Provider-level obstacles may be addressed effectively by team-based care. Medical staff (doctors, nurses, pharmacists, etc.) learns motivational clinical interviews as part of undergraduate and postgraduate training. Ensure that the electronic prescription does not alter the shape or size of the medication. Telemedicine and remote monitoring provide useful alternatives for the treatment of chronic diseases in low-resource settings. These technologies allow medical staff to monitor patients' health remotely, offer timely responses, and change treatment plans without having to physically visit patients. Minimize provider burnout by delegating tasks to competent medical assistants and leveraging AI-driven automation. Burnout can be prevented among healthcare professionals through stress management interventions and wellness initiatives. Continuing education on managing chronic diseases can enhance the knowledge and confidence of providers.

System-Level Solutions

Improving insurance access can reduce the cost of care. Many individuals currently have better access to healthcare due to government initiatives such as Medicaid expansion. Physician shortages can be reduced by offering loan forgiveness programs and expanding clinical staff members through graduate medical education residency positions. In addition, reducing barriers to the practice of foreign medical graduates can enhance access to care. Individuals residing in underserved regions or lacking automobiles can be treated via tele health and remote patient monitoring, enhancing convenience and accessibility. Utilizing patient engagement tools, including electronic questionnaires that collect and analyze patient-reported outcomes, can enhance compliance with treatment plans and inform changes to care [24]. By training and educating health workers, we can reduce stigma and discrimination and promote inclusion, equity, and diversity within the health system. All care team members should have simple access to patient information, and electronic health records (EHRs) facilitate communication. The socioeconomic factors that influence health, including access to safe and secure housing, good food, and education, should also be the central focus of public health programs [25].

CONCLUSION

Managing chronic illnesses can be quite a challenge, because of the factors like patient involvement, healthcare access, system based, and technological gaps. These hurdles can lead to worse health outcomes, increased costs, and inconsistent care. However, we can address many of these issues directly by embracing patient-centered strategies, improving access to healthcare, simplifying care coordination, leveraging digital health innovations, and offering support to healthcare providers. More telehealth utilization, expanded insurance coverage, and enhanced health literacy via patient education can all contribute to filling accessibility gaps. Redistributing the burden, providing mental health support, and continuing education to alleviate provider burnout would ensure a sustainable and efficient healthcare workforce. By prioritizing these strategies at the top of their agendas, healthcare systems can address chronic diseases in a patient-centered, efficient, and equitable manner.

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CONFLICTS OF INTEREST

The authors declare no conflict of interest.

AUTHOR CONTRIBUTION

All are contributed equally

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