

Synthesis of Literature: Integrating Disability Models into Non-communicable Diseases and HIV Care

Mwape Muyembe Besa ^{1*} 

¹Department of Public Health, School of Medicine and Health Sciences, University of Lusaka, Lusaka, Zambia.

*Corresponding author: mwapebesa65@gmail.com

Abstract

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Background: The coexistence of NCDs and HIV poses complex healthcare challenges, requiring integrated care models for improved patient outcomes. This paper explores three integrated service models and examines disability models' relevance to better understand the context. Additionally, it discusses the impact of COVID-19 on individuals with NCDs and HIV, further highlighting the need for comprehensive approaches to address existing disparities.

Methods: A literature review was conducted to identify and analyze three integrated care models: Model 1 - NCD programs merged with existing HIV support institutions; Model 2 - Incorporating NCD services into established HIV care settings; and Model 3 - Jointly launched HIV and NCD programs. The paper also delves into disability models, including welfare, medical, and educational/social models.

Results: The literature review revealed that Model 1 allows for holistic care during single visits, with AMPATH in Kenya showcasing its effectiveness. Model 2 enhances efficiency by integrating NCD services into primary health care systems, while Model 3 presents implementation challenges that need careful consideration. Disability models provide critical insights into the diverse perspectives surrounding disabilities in the context of integrated care. Individuals with NCDs and HIV encountered heightened vulnerability to severe COVID-19 outcomes. Disruptions in healthcare services affected regular medical check-ups and treatments, potentially impacting disease management. The pandemic exacerbated mental health issues, such as anxiety and depression. Moreover, existing disparities were amplified, resulting in limited access to resources and healthcare facilities.

Conclusion: The integration of care for individuals with NCDs and HIV necessitates innovative, patient-centered approaches. Model 1, 2, and 3 offer viable solutions, but their successful implementation requires collaboration and addressing contextual challenges. Disability models aid in comprehending the nuances of integrated care, promoting a holistic understanding of disabilities. The COVID-19 pandemic has further underscored the urgency of integrated care and calls for equitable healthcare systems that address existing disparities. By embracing disability models and comprehensive strategies, healthcare providers can create resilient systems to better serve individuals with NCDs and HIV during pandemics and beyond.

Keywords: *Integration, Non-Communicable Diseases, NCDs, HIV, COVID-19, Healthcare, Disability Models*

INTRODUCTION

This synthesis of literature delves into the crucial aspect of integrating disability models into the management of non-communicable diseases (NCDs) and HIV care. It aims to shed light on the existing gaps in healthcare delivery for individuals living with disabilities who also face the challenges of NCDs and HIV. By examining various studies and research, we explore the potential benefits and the urgent need for a disability-inclusive approach in healthcare systems [1].

Studies have consistently shown that people with disabilities are disproportionately affected by NCDs and HIV. However, the response from healthcare systems has often been limited, failing to adequately address the unique needs of this vulnerable population. A disability-inclusive approach encompasses a range of strategies and adjustments designed to ensure equitable and accessible care for all individuals, regardless of their disability status [2].

Central to this approach is empowering healthcare providers with the knowledge and skills to communicate effectively with patients with disabilities. Providing accessible information and education about NCDs, HIV, and related health issues is crucial in enabling individuals with disabilities to actively participate in their care decisions. Tailoring treatment plans to individual needs, preferences, and capacities is equally vital to ensure optimal health outcomes [3].

Beyond the patient-provider relationship, a disability-inclusive approach also calls for structural changes within healthcare facilities. This involves removing physical barriers and making necessary adjustments to medical equipment to accommodate the needs of people with disabilities. By creating a more accessible environment, healthcare facilities can enhance the overall healthcare experience and encourage regular attendance for check-ups and treatments [4].

Moreover, prevention efforts targeting NCDs and HIV transmission should consider the specific vulnerabilities faced by people with disabilities. Addressing social determinants of health, such as poverty, limited access to education, and inadequate healthcare services, can significantly reduce the risk of developing NCDs and HIV in this population [5].

The synthesis of literature emphasizes

that incorporating disability models into NCDs and HIV care is not just an optional addition to healthcare systems; it is an essential step towards achieving health equity for all. By taking this comprehensive and inclusive approach, healthcare providers and policymakers can bridge existing gaps in care and ensure that no one is left behind in the pursuit of better health [6].

In conclusion, this synthesis reinforces the urgency of integrating disability models into NCDs and HIV care. By understanding the diverse needs and experiences of individuals living with disabilities, healthcare systems can enhance their responsiveness, improve health outcomes, and create a more inclusive and equitable healthcare landscape for all. Through collaboration, education, and a commitment to inclusivity, we can take significant strides towards ensuring that every individual, regardless of disability status, has equal access to quality healthcare and support [7].

In low-nations, 80% of such deaths occur. The incidence of NCDs is predicted to dramatically rise by 2030 and could surpass transmissible diseases as the world's most common triggers for death [8]. Because of the effective treatment of Medicine, NCDs have been the leading cause of morbidity in this population as HIV- (PL HIV) in low-countries is surviving longer. In certain trials, the prevalence of NCDs in PLHIV was higher than that of HIV negative patients whereas a detail on co-morbidity rates is scarce [3,4]. Such growing co-morbidity challenges success in lowering global HIV mortality. This growing comorbidity challenges success in the reduction of global HIV mortality. A substantial increase in People Living with HIV in impoverished countries, over half a century old country with a chance of developing chronic NCDs has been the product of effective antiretroviral therapy in minimizing mortality [9].

The treatment of NCDs episodically places patients in danger of long-term problems and mortality in most low-income countries [5,6]. In contrast, NCDs are decreased morbidity and mortality in patients with exposure to long-term care and treatment [10]. HIV services were effective, by comparison, in the creation of clinical treatment models based on quality and maintenance, regular supervision and promotion of the healthier lifestyle, the treatment characteristics required for both NCD and HIV to achieve positive outcomes [11, 12].

The combination of NCD and HIV could expand on the basis of an improvement in the consistency and reliability of the services and care of NCDs within PLHIV dependent on the HIV treatment programme. Addressing the maintenance of patients with HIV / NCDs can also be improved by lowering appointee levels, decreasing disregard of certain clinical concerns that are sometimes neglected by the introduction of centralised systems, which can also be cost-effective because services are pooled rather than siled, best structured to meet patients' various needs [13, 14-15]. This review describes existing models of disability models and they may be incorporated in the integration of NCD and HIV care. The context reviewed can reveal many gaps within low-income countries in relation to NCD and HIV care and thus improve health service delivery.

MATERIALS AND METHODS

To conduct this synthesis of literature, a systematic search of academic databases was performed to identify relevant studies related to the integration of disability models into non-communicable diseases (NCDs) and HIV care. PubMed, Scopus, Google Scholar, and other reputable databases were used to search for peer-reviewed articles, reports, and academic publications. The search was conducted using specific keywords, including "disability models," "non-communicable diseases," "HIV care," "inclusivity in healthcare," and related terms.

The inclusion criteria for selecting studies were as follows

Studies published in peer-reviewed journals or academic reports.

Articles discussing the integration of

disability models into NCDs and HIV care.

Research focusing on the development and implementation of disability-inclusive approaches in healthcare settings.

Studies exploring the impact of disability-inclusive interventions on health outcomes, patient experiences, and healthcare delivery.

Screening and Selection of Articles

The initial literature search yielded a considerable number of articles related to disability models, NCDs, and HIV care. To ensure relevance and quality, two independent reviewers conducted a thorough screening of titles, abstracts, and full texts of the identified articles. Any discrepancies in article selection were resolved through discussion and consensus.

Data Extraction and Analysis

Data extraction was performed to capture key information from the selected studies, including author(s), publication year, study design, sample size, objectives, disability models employed, interventions or strategies used to integrate disability models into NCDs and HIV care, and reported outcomes. The extracted data were organized into a tabular format to facilitate comparative analysis.

Synthesis of Literature

The selected articles were critically reviewed and synthesized to identify common themes, trends, and insights regarding the integration of disability models into NCDs and HIV care. The findings from individual studies were analyzed collectively to draw comprehensive conclusions and implications for healthcare policy, practice, and future research.

RESULTS AND DISCUSSION

Expanding on the Integration of Care for NCDs & HIV

Effective integration of care for individuals living with both non-communicable diseases (NCDs) and HIV requires a comprehensive and patient-centered approach. By understanding the background and rationale behind this integration, healthcare systems can better address the complex healthcare needs of this vulnerable population. The coexistence of NCDs and HIV is a growing concern in global

health. People living with HIV have a higher risk of developing NCDs due to various factors, including the long-term effects of antiretroviral therapy, lifestyle changes, and aging. Moreover, certain NCDs, such as diabetes and cardiovascular diseases, can worsen the outcomes for individuals with HIV if not adequately managed. Therefore, it is crucial to develop integrated care models to effectively address the dual burden of NCDs and HIV [16]. One of the primary reasons for integration is to

ensure that the healthcare system can accommodate the chronic treatment needs of individuals with both conditions. Integrating care offers an opportunity to optimize resources, coordinate efforts, and create synergies between programs, thereby reducing duplication of services and improving overall efficiency. Additionally, integrated care can lead to improved health outcomes, better quality of life, and increased patient satisfaction [17].

Three Models of Integrated Services

NCD Facilities Merged into HIV Support Centers

In this model, institutions initially established to provide support for HIV patients expand their services to include NCD care. By merging NCD facilities into existing HIV support centers, healthcare providers can offer comprehensive care to patients during a single visit. This model has shown promise, particularly in low and middle-income countries. The AMPATH program in Kenya is a notable example, where home-based HIV testing and counseling clinics evolved to offer services for diabetes and hypertension throughout different regions. The success of this model lies in the fact that individuals, regardless of their HIV status, can receive treatment for a range of diseases, including HIV and NCDs [18].

HIV Care Providing NCD Programs within Primary Health Care

Model 2 involves expanding primary health services to include HIV testing and counseling for patients already accessing NCD care. This approach ensures that individuals receiving NCD services also benefit from additional HIV-related care. By routinely screening for both conditions, healthcare providers can offer comprehensive healthcare, including immediate cervical cancer screening for HIV-positive patients. This model enhances healthcare access, quality, and efficiency, leading to better health outcomes for those living with both HIV and NCDs [19].

Jointly Launched Integrated HIV and NCD Programs

Model 3 involves jointly launching integrated services for HIV and NCDs, providing comprehensive care for patients with probable high blood pressure, high blood sugar, and/or HIV. While this model offers the potential for comprehensive care, it has faced challenges, such as a lack of cooperation between NCD and HIV departments in some instances. To

implement this model successfully, new clinical guidelines and additional personnel may be required. Despite these challenges, Model 3 has the potential to significantly improve healthcare services for individuals with both NCDs and HIV [20].

Disability Models and Their Implications in Integrated Care

In the context of integrated health service delivery for NCDs and HIV, disability models play a crucial role in shaping healthcare approaches for individuals with disabilities.

Welfare Model:

The welfare model, also known as the charity model, perceives individuals with disabilities, including those with NCDs and HIV, as vulnerable and in need of protection and support. In the context of healthcare, this model may lead to the establishment of specialized clinics or services exclusively catering to NCDs and HIV. While these efforts may be well-intentioned, they can inadvertently result in the segregation of individuals based on their conditions. Such isolation can hinder the integration of care and overlook the importance of a holistic approach to healthcare [21].

Medical Model:

The medical model views disability as a medical condition residing solely within the individual. It emphasizes medical interventions, treatments, and rehabilitation to manage the effects of NCDs and HIV. In the context of healthcare services, the medical model plays a crucial role in diagnosing and managing specific medical aspects of these chronic conditions. However, a limitation of this model is that it may not fully address the broader social determinants and dimensions of NCDs and HIV. NCDs and HIV are influenced not only by physiological factors but also by various social, economic, and environmental determinants. For example, factors like lifestyle choices, access to healthcare, social support networks, and socioeconomic status can significantly impact disease progression and management. Therefore, adopting a solely medical approach may neglect essential aspects of patient care that extend beyond clinical treatment [22].

Educational/Social Model:

The educational/social model takes a more comprehensive and societal perspective on disabilities, including NCDs and HIV. This model recognizes that these chronic conditions

are influenced not only by individual health factors but also by broader social structures and environments. It emphasizes the importance of considering various social determinants of health, such as education, housing, employment, and community support, in shaping health outcomes.

In the context of integrated care services, adopting the educational/social model is crucial for understanding the complexities surrounding NCDs and HIV within a social context. It allows healthcare providers to go beyond treating symptoms and delve into the root causes of health disparities and inequities. By addressing these determinants, integrated care services can provide more comprehensive support to individuals with NCDs and HIV, leading to improved health outcomes and a better quality of life [23].

Incorporating the educational/social model into integrated care means recognizing that healthcare extends beyond the confines of medical treatments. It involves collaboration with various stakeholders, including social workers, community organizations, and public health experts, to create a supportive environment that promotes health and well-being for those with NCDs and HIV. By embracing this holistic approach, healthcare providers can develop more effective and patient-centered care plans that consider the full spectrum of an individual's needs and challenges. This, in turn, can lead to more positive and sustainable health outcomes for individuals living with NCDs and HIV [24].

The integration of care for NCDs and HIV is a multifaceted process that requires careful consideration of diverse healthcare needs and societal dimensions. By adopting patient-centered models and embracing disability models that encompass social determinants of health, healthcare systems can develop effective strategies for integrated care. The success of integrated care lies in collaboration between NCD and HIV departments, the implementation of comprehensive clinical guidelines, and the dedication of qualified personnel. By offering holistic and inclusive care, healthcare systems can enhance the well-being and quality of life for individuals living with NCDs and HIV, ultimately leading to healthier communities and improved health

outcomes [15, 18].

Challenges Faced by Individuals with NCDs and HIV During COVID-19

Increased Vulnerability: The COVID-19 pandemic has posed significant risks to individuals with non-communicable diseases (NCDs) and HIV. People living with conditions like diabetes, cardiovascular diseases, and respiratory conditions have been identified as being at a higher risk of experiencing severe outcomes if they contract the virus. Similarly, individuals with HIV, particularly those with compromised immune systems and advanced disease, may also face an elevated vulnerability to COVID-19.

Disruption of Healthcare Services: The pandemic has put immense strain on healthcare systems worldwide, leading to disruptions in routine healthcare services for individuals with NCDs and HIV. Lockdowns, overwhelmed hospitals, and redirection of resources to COVID-19 response efforts have resulted in limited access to regular medical check-ups, medications, and treatments. These disruptions could potentially lead to disease progression, complications, and challenges in managing both NCDs and HIV [16].

Mental Health Impact: COVID-19-related stress, isolation, and uncertainty have taken a toll on mental health globally. This impact is particularly pronounced for individuals with NCDs and HIV, who may already be coping with various emotional challenges related to their conditions. The fear of infection, social isolation, and limited support during lockdowns have contributed to increased anxiety, depression, and other psychological issues in this population [25].

Inequities and Disparities: The pandemic has exposed and exacerbated pre-existing social and economic disparities, disproportionately affecting vulnerable populations, including those living with NCDs and HIV. Individuals from marginalized communities often face barriers to accessing healthcare and resources, leading to worse health outcomes. Lack of access to proper sanitation, crowded living conditions, and inadequate healthcare facilities can increase the risk of COVID-19 transmission and negatively impact disease management [26].

Reduced Support Services: Many support services for individuals with NCDs and HIV

have been disrupted or shifted to virtual platforms during the pandemic. Support groups, counseling, and community-based services that play a crucial role in managing these chronic conditions may not be as accessible during periods of lockdown or restricted movement.

Delayed Diagnoses and Treatments: The focus on COVID-19 response has led to delays in diagnosing and treating other health conditions. Some individuals with NCDs and HIV may have faced challenges in seeking medical attention for new symptoms or managing existing conditions, potentially resulting in delayed diagnoses and adverse health outcomes.

Access to Vaccination: While vaccination campaigns have been rolled out globally, individuals with NCDs and HIV may face barriers in accessing vaccines, especially in low-resource settings. Ensuring equitable vaccine distribution and prioritizing those with underlying health conditions is essential to protect this vulnerable population [27-31].

Addressing these challenges requires a comprehensive approach that considers the unique needs of individuals with NCDs and HIV during the COVID-19 pandemic. It involves strengthening healthcare systems to continue providing essential services, increasing mental health support, addressing inequities, and ensuring equitable vaccine distribution. Collaborative efforts from governments, healthcare providers, and community organizations are crucial to safeguarding the health and well-being of individuals living with NCDs and HIV during these challenging times.

CONCLUSION

The integration of care for individuals living with both non-communicable diseases (NCDs) and HIV presents a promising approach to tackle the complex challenges posed by these chronic conditions. However, successful integration requires a careful examination of existing healthcare systems and the identification of opportunities for coordination and synergy between programs.

Three models of integrated services have been identified to address the needs of individuals with NCDs and HIV. The first model involves merging NCD programs into existing institutions that primarily offer HIV support. This approach allows for a range of services to be provided during a single visit, enhancing efficiency and convenience for patients. The second model

incorporates NCD programs into primary health care services that already offer HIV care, promoting logical and holistic care. The third model, though promising, faces implementation challenges, such as the need for new clinical guidelines and additional personnel.

As we explore integration further, it is crucial to consider disability models and their impact on the delivery of integrated health services for NCDs and HIV. The welfare model, while emphasizing protection and support, may lead to unintended segregation of individuals. The medical model, while essential for treatment and rehabilitation, may not fully address the broader social determinants of these conditions. The educational/social model, on the other hand, offers a more holistic perspective that considers the complex interplay of social, economic, and environmental factors contributing to NCDs and HIV.

The COVID-19 pandemic has added new dimensions to the challenges faced by individuals with NCDs and HIV. They have become more vulnerable to severe COVID-19 outcomes, and disruptions in healthcare services have further complicated disease management. Moreover, the pandemic has worsened mental health issues among this population and magnified existing inequities in healthcare access. Integrating care for individuals with NCDs and HIV is essential to provide comprehensive and effective healthcare. By adopting a holistic approach that addresses medical, social, and psychological aspects, we can improve health outcomes and reduce disparities. The COVID-19 pandemic has highlighted the urgency of strengthening healthcare systems, addressing inequalities, and supporting vulnerable populations. Only through collaborative efforts and a commitment to inclusivity can we build resilient healthcare systems capable of providing quality care for all, regardless of their health conditions or backgrounds. Integrating disability models into care will further enhance our understanding and responsiveness to the diverse needs of individuals with NCDs and HIV. As we navigate the challenges posed by COVID-19 and beyond, a collective commitment to integrated care will pave the way for a healthier and more equitable future.

DECLARATION

Competing interests There were no competing interests from all authors in this study.

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