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IMPACT OF NURSE-LED HIV/AIDS CARE AND TREATMENT PROGRAMS ON PATIENT OUTCOMES

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Abstract

Home-based care is used in several nations as a means to enhance quality of life and reduce hospitalization, especially in situations when public health facilities are overwhelmed. The goals of home-based care for HIV/AIDS may include medical treatment, administration of antiretroviral therapy, and provision of psychological assistance. This evaluation evaluates the impact of home-based nursing on the incidence of illness in individuals affected by HIV/AIDS. The studies included in this study include both HIV positive adults and children, without any consideration for gender or location, and all of them were conducted using a randomized controlled design. A comparison was made between home-based care administered by competent nurses and therapy delivered in hospitals or health facilities. The electronic databases AIDSearch, CINAHL, Cochrane Register of Controlled Trials, EMBASE, MEDLINE, and PsycINFO/LIT were searched. Nurse-led home-based care resulted in an increase in reported adherence to antiretroviral medicines, however, it did not have an impact on viral load. Psychiatric nurse assistance enhanced mental health and alleviated depressed symptoms in individuals with preexisting mental health issues. Psychological assistance provided at home had a significant effect in reducing HIV stigma, concern, and physical impairment. In some instances, it even helped alleviate depressed symptoms. Home-based programs guided by nurses have the potential to enhance adherence to antiretroviral medication and promote better mental health. Additional comprehensive research is required to thoroughly investigate the enhancement of medical treatment for HIV, particularly in regards to the screening and management of opportunistic infections and co-morbidities.

Keywords: HIV/AIDS, nurse staff, nurse intervention, review, treatment program, Home-based care.

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1. Introduction

HIV/AIDS is a major contributor to illness and death in low and middle-income countries (LMICs), where healthcare systems already face challenges due to inadequate infrastructure and insufficient resources such as personnel, medications, and equipment. There are about 36.7 million individuals now infected with HIV, with approximately 52% of these cases occurring in Sub-Saharan Africa [1]. According to data from 2015, around 2.1 million individuals acquired new HIV/AIDS infections, whereas 1.1 million persons with HIV/AIDS passed away [1].

The 2016 recommendations from the World Health Organisation (WHO) expand the population of individuals who are eligible to begin life-saving antiretroviral medication (ART) [2]. While these modifications have the potential to enhance clinical results and decrease the occurrence of HIV, they provide a difficulty for public health services that are already overwhelmed by restricted human and financial resources. By the end of 2015, the worldwide implementation of antiretroviral therapy reached a coverage rate of 46%. However, there are still significant differences in access to this treatment across countries with high and low income levels [1].

Some of the obstacles to getting and maintaining healthcare include transportation expenses, extended wait periods, and a scarcity of healthcare personnel [3]. Implementing a decentralized approach to HIV treatment by providing it in community or home-based settings, and moving the responsibility of initiating and maintaining antiretroviral therapy (ART) to non-physician health professionals, will assist address these issues. These approaches are being recognized and implemented as important methods for managing HIV. [4,5,6]

Home-based care refers to medical or non-medical services provided to individuals in their own homes, rather than at a hospital or other healthcare facility. Home-based care (HBC) is defined by the World Health Organization (WHO) as any kind of care provided to individuals who are unwell in their own homes. This care encompasses a range of activities, including physical, psychological, palliative, and spiritual support [7]. There are many categories of HBC, including integrated HBC which involves all service providers, single service HBC which involves just one organization, and informal HBC which lacks a formal support structure [8]. Home-based care (HBC) may be provided by a range of individuals, such as certified healthcare professionals, nurses, trained community health workers, peer health workers, and HBC volunteers [9].

Delivering care at home may effectively address some obstacles to receiving treatment, such as expenses related to transportation and lengthy waiting periods, while also alleviating the strain on healthcare institutions [10]. Additional advantages of HBC include reduced expenses on both an individual and national scale, customized healthcare, and the comfort of being in a familiar environment. Additionally, it has the potential to decrease the need for hospital beds and optimize the use of time in hospitals [10].

2. HIV home care

HBC, as described by the Committee on a National Strategy for AIDS (CNSA) in the USA, refers to care provided to patients in their own homes to either augment or replace hospital treatment. This care includes medical management, palliative care, and social support [8]. The aims of Home-based care (HBC) for HIV/AIDS might include enhancing medical treatment, providing antiretroviral therapy (ART), and enhancing psychosocial welfare (Figure 1: Home-based care as a management approach for individuals with HIV). By mitigating the stigma associated with HIV, it has the potential to provide good social consequences such as enhanced support, increased access to and compliance with antiretroviral therapy (ART), and greater uptake of testing [10, 11]. A proposal has been made to use an integrated strategy including HBC (Home-Based Care) to provide coordinated care for many illnesses. One example of this method is the combination of HIV and TB management [12, 13].

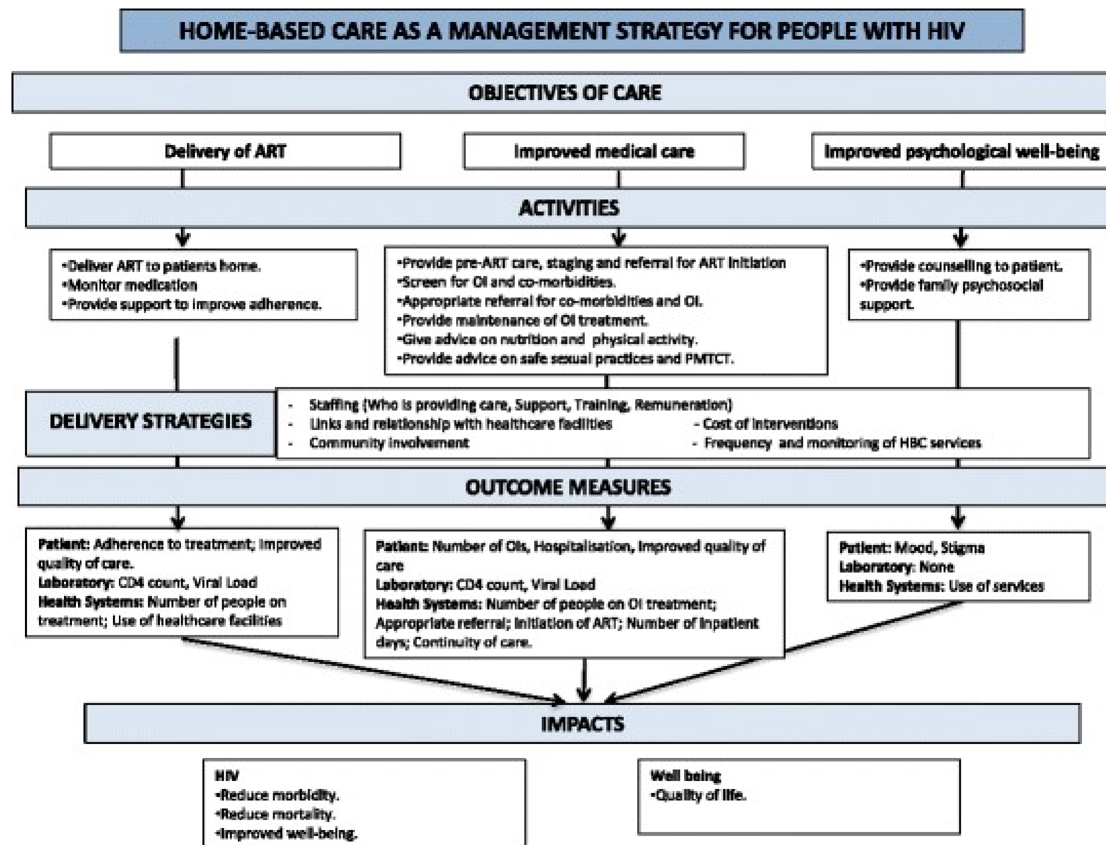

Figure 1. The use of home-based care as a strategic approach for managing individuals with HIV.

The recent growth of antiretroviral therapy (ART) programs has resulted in an increasing focus on the decentralization of HIV treatment in low- and middle-income countries (LMICs).

Kredo evaluated the impact of decentralized HIV care on the beginning and continuation of antiretroviral therapy (ART) [5]. Wringe assessed the presence of necessary factors such as human resources, health systems, and financial methods to determine whether the circumstances are suitable for expanding HBC programs for increasing ART. The researchers reached the determination that it is important to provide long-term financial support, and that there is a need for policies that promote the retention of workers and the integration of services [10].

3. Home-based treatment for various medical problems

Several evaluations have analyzed the impact of home care on various conditions. Okwundu discovered that implementing home or community-based programs for malaria treatment might enhance the accessibility of adequate anti-malarial therapy and perhaps decrease overall death rates [14]. Clark discovered that home-based secondary prevention programs for cardiovascular disease, led by healthcare experts, are as successful as hospital-based cardiac rehabilitation programs, but much more cost-effective [15]. A research examining end-of-life care for terminal patients found that home care programs effectively increase the proportion of patients who pass away in their own homes [16]. However, Smeenk's analysis determined that the efficacy of home care programs for patients with terminal cancer is still uncertain [17].

4. Task-shifting

Transferring tasks from medical physicians to nurses is a potentially useful technique to deal with the scarcity of medical professionals and to meet the demands related to chronic HIV/AIDS [13]. The growing use of lay health workers to address workforce shortages brings up concerns over the necessary training and the level of treatment delivered. An analysis investigating the use of lay health workers in the treatment of infectious illnesses found that they were successful in enhancing TB outcomes. However, there was little information to draw a definitive judgment about their effectiveness in providing adherence support for HIV/AIDS [18].

Kredo discovered that the initiation and maintenance of antiretroviral therapy (ART) by trained nurses or community health workers likely does not result in a decrease in the quality of treatment. When nurses start and continue antiretroviral therapy (ART), there may be a reduced rate of patients discontinuing treatment compared to physicians [6]. Further investigation is necessary to determine the necessary amount of training and the capacity of these personnel to successfully execute numerous responsibilities [9, 19].

5. Nurse-led home-based care

Nurse-led home-based care resulted in an increase in reported adherence to antiretroviral therapy (ART). Self-reported adherence measures may be susceptible to a social desirability bias, whereby participants may feel compelled to claim improved adherence at the conclusion of the trial due to their awareness of the intervention's goal. Furthermore, objective measures of adherence, such as pharmacy medicine refill, also corroborated this finding. Although there was an improvement in adherence to antiretroviral therapy (ART), the treatments did not seem to

have any impact on biological markers. Curiously, a comprehensive analysis of firsthand observation in HIV treatment, mostly conducted in the community, likewise found no impact on virological suppression [20]. Possible factors contributing to a high viral load despite adherence may include the presence of medication resistance, therapy not being effective, or adherence being sufficient regardless of any interventions [20]. A different systematic review, which investigated treatments aimed at improving adherence to antiretroviral therapy (ART), likewise found that initiatives guided by nurses in a home-based setting were beneficial [21].

Psychiatric nurse home treatments were shown to enhance depressed symptoms in individuals with preexisting mental health conditions, hence providing valuable psychological support. The results of home-based psychological assistance were inconclusive. Two studies saw a decrease in symptoms of depression, whereas another study did not detect any variation. However, improvements were seen in stigma scores and physical functioning. This emphasizes the possible psychological advantages of home-based care. However, it is important to note that the self-reported measures used in the study may introduce a social desirability bias, especially because the participants were not kept unaware of the study's objectives. According to Wouters (2012), community-based programs that provide social support and counseling to those with HIV may successfully enhance and assist in medical treatment [9].

None of the research included in the analysis examined the impact of enhanced medical treatment (Figure 1). Given the current shift towards testing and treating, pre-ART care has become less significant. However, it is still crucial to prioritize additional medical care, such as screening for opportunistic infections and co-morbidities, as well as making appropriate referrals. Oni et al. discovered a significant occurrence of numerous coexisting medical conditions among patients receiving antiretroviral therapy who were younger than 45 years old [22]. The rising prevalence of lifestyle-related disorders, such as diabetes and hypertension, underscores the need of early detection and treatment of co-existing medical conditions [22].

6. Conclusion

The findings suggest that nurse-led interventions conducted in patients' homes might enhance adherence to antiretroviral therapy (ART). Psychiatric nurse assistance enhanced mental well-being and alleviated depressed symptoms in individuals with pre-existing mental health disorders. Psychological assistance provided at home had a significant effect in reducing HIV stigma, concern, and physical impairment. In some instances, it even alleviated depressed symptoms.

Nevertheless, the investigations were often of a small scale and performed within restricted geographical regions, so limiting the reliability of the results. Additional extensive investigations are required to thoroughly examine the enhancement of home-based medical treatment for HIV, specifically focusing on the screening of opportunistic infections and co-morbidities.

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