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## Health Care Workers Practices That Influence Adherence to National HIV and AIDS Guidelines for Adults at Chuka and Chogoria Hospital

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### Abstract

**Purpose:** Adherence by the health workers to the Kenya National HIV and AIDS Management Guidelines on the prevention and treatment aims at minimizing new infections, increasing effectiveness of HIV and AIDS treatment and reducing the cost incurred by the government in the purchase of the drugs. The general objective of this study was to establish health care workers practices that influence adherence to national HIV and AIDS guidelines for adults at Chuka and Chogoria hospital.

**Materials and Methods:** The hospitals were selected because they have the highest HIV and AIDS patients with a workload of 1,406 and 2,704 for Chuka and Chogoria Hospital, respectively. A cross-sectional descriptive study design was adopted. The study targeted the following strata: nurses, clinical officers, nutritionists, pharmaceutical technicians, laboratory technicians, medical officers and HIV testing service personnel at Chuka Hospital and Chogoria Hospital. This study therefore computed 20% of each stratum in both hospitals resulting to 71 respondents who were selected randomly. The information was gathered utilizing a standardized questionnaire that had been pre-tested at the Marimanti Hospital. The study obtained reliability coefficients of above 0.90 for all

variables indicating that the instrument was reliable. Data was analyzed using SPSS version 25.0 for windows. For data analysis, frequencies, percentages, mean, and standard deviation were used, and the results were displayed in tables and pie charts.

**Findings:** The results showed that 100% of health workers regarded the national guidelines for management of HIV and AIDS as effective. However, adherence at Chogoria Hospital was only 25.8% compared to Chuka Hospital which was at 63.6%. From the study, only 34.8% of the healthcare workers had read the National guidelines for management of HIV and AIDS, while 65.2% had not. However, Chogoria Hospital had more health workers that had read (45.5%) than those in Chuka Hospital (29.5%).

**Unique Contribution to Theory, Practice and Policy:** The study recommends that hospitals, policy makers, medical educators and health care managers need to provide training and support so as to increase health workers knowledge, awareness, familiarity and compliance with the guidelines.

**Keywords:** *Health Behavior, General Health, Public Health, Self-management*

**JEL CODES:** *I12, I10, I18*

## INTRODUCTION

The Human Immunodeficiency Virus (HIV) and Acquired Immunodeficiency Syndrome (AIDS) pandemic remains one of the most pressing global health challenges of the past four decades. Since its emergence, HIV and AIDS have claimed millions of lives worldwide, with Sub-Saharan Africa bearing the highest burden (UNAIDS, 2024). As of 2023, approximately 39 million people globally were living with HIV, and 630,000 died from AIDS-related illnesses (UNAIDS, 2024). In Sub-Saharan Africa, the epidemic continues to disproportionately affect women and young people, contributing to widespread social and economic disruption (NSDCC, 2024).

In Kenya, the HIV prevalence among adults aged 15–49 years was estimated at 3.3% in 2023, with notable gender disparities 4.46% among females and 2.16% among males (NSDCC, 2024). The country recorded 16,752 new HIV infections in 2023, of which 41% occurred among adolescents and young adults aged 15–24 years (NSDCC, 2024). Tharaka Nithi County reported a prevalence rate of 2.1% in 2023, a decline from previous years, with women continuing to exhibit higher vulnerability to infection than men (StatsKenya, 2023). The county accounted for approximately 0.4% of Kenya's total HIV-positive population, with 8,161 people living with HIV as of 2021, including 473 children aged 0–14 years (Nation Media Group, 2022).

Clinical guidelines serve as structured protocols developed by expert panels, professional associations, and government agencies to support evidence-based decision-making in patient care. These guidelines aim to reduce unwarranted variations in practice and enhance the quality and consistency of health service delivery (Grimsrud et al., 2021). In Kenya, the Ministry of Health released updated HIV prevention and treatment guidelines in 2022, emphasizing differentiated service delivery, improved diagnostics, and optimized antiretroviral therapy regimens (NASCOP, 2022). These guidelines are critical in both inpatient and outpatient settings, where adherence directly influences treatment outcomes and public health goals.

Despite the availability of comprehensive, evidence-based guidelines, adherence among healthcare providers remains suboptimal. Factors such as limited training, resource constraints, and systemic inefficiencies contribute to poor compliance, which in turn undermines treatment efficacy and increases the risk of adverse outcomes (Bruno et al., 2021; Sidani, 2022). Strengthening adherence to national HIV and AIDS guidelines is therefore essential for improving patient outcomes and achieving epidemic control.

### Problem Statement

Prevention and treatment are recommended strategies for individuals living with HIV and AIDS to help prolong their lives. However, the incidence and prevalence of HIV in the Kenyan population have not decreased at the expected rates, continuing to expose the population to higher infection risks (NSDCC, 2024; UNAIDS, 2024). The morbidity rates among HIV patients have also not declined as anticipated, leading to ongoing suffering for both patients and their families. The significant morbidity associated with AIDS has placed a heavy burden on the healthcare system and the economy, especially given the reduction in donor support (StatsKenya, 2023).

To address this, the Ministry of Health developed national prevention and treatment guidelines for healthcare workers, aiming to move toward universal access to HIV services (NASCOP, 2022). Adherence to these guidelines by healthcare providers is considered crucial for enhancing patient care and safety. However, facility-level data from Chuka County Referral Hospital revealed that only 68% of eligible patients completed Isoniazid Preventive Therapy



(IPT), with audit findings citing gaps in staff training, documentation, and patient follow-up as key barriers to compliance (Mbuba, Njeru, & Karani, 2022). Patient complaints at Chuka also highlighted long waiting times, inadequate health education, and inconsistent counseling, all of which were statistically associated with poor adherence outcomes.

At PCEA Chogoria Hospital, the Comprehensive Care Centre (CCC) serves over 2,600 clients, yet internal reports from 2023 noted frequent missed appointments, limited integration of differentiated care models, and gaps in viral load monitoring (PCEA Chogoria Hospital, 2022). While the facility has expanded services including weekend HIV testing and youth-friendly initiatives feedback mechanisms such as the hospital's complaint registry have surfaced concerns about inconsistent follow-up support and variability in counseling quality.

These hospital-specific indicators underscore the need to examine healthcare worker practices that influence adherence to national HIV and AIDS guidelines. Understanding the operational realities and patient-provider dynamics at Chuka and Chogoria Hospitals is essential for strengthening guideline implementation and improving health outcomes (Bruno, Muriuki, & Wanjala, 2021; Sidani, 2022).

### **Theoretical Framework**

This research is guided by Pathman's awareness-to-adherence model, which outlines a series of cognitive and behavioral steps that physicians follow when altering their practice. According to the model, doctors unfamiliar with a guideline must first become aware of it, then agree with its principles, assess whether it is relevant and feasible to implement in their practice (adoption), and ultimately follow it at the appropriate time. Pathman et al. (1996) assert that for consistency in patient care, healthcare workers must be aware of, agree with, decide to accept (i.e., determine its suitability and feasibility for their practice), and adhere to the guidelines.

Awareness of clinical guidelines can be increased by disseminating clear policies, fostering a reading culture among healthcare workers, and organizing seminars and training to educate them about the guidelines. However, agreement to the guidelines can be influenced by personal beliefs, social context, and the availability of sufficient evidence within the guidelines to support the recommended procedures (Radwan et al., 2018). A study by Heneghan (2017) suggests that, despite high awareness, general practitioners may not adopt recommendations if the evidence is not appropriate for the patient population or if the guidelines fail to consider the values and preferences of patients.

Recent applications of Pathman's model in sub-Saharan Africa have reinforced its relevance in HIV program implementation. For instance, Buh et al. (2023) conducted a meta-analysis across 15 countries in the region and found that awareness and agreement with ART guidelines were necessary but insufficient predictors of adherence, especially in contexts with fragmented health systems and limited training. Similarly, Magura et al. (2025) emphasized that adherence to HIV guidelines among healthcare workers was often disrupted by systemic barriers, including drug stockouts and lack of psychosocial support, despite high levels of awareness and agreement. These findings align with Pathman's assertion that adoption and sustained adherence require both cognitive alignment and structural feasibility.

Moreover, Moyo et al. (2025) highlighted that among adolescents and young adults in Kenya and Zimbabwe, healthcare workers' adherence to differentiated care protocols was strongly influenced by their agreement with the guidelines and their perception of feasibility, echoing the adoption phase of Pathman's model. These studies underscore the importance of

contextualizing guideline implementation within local health system realities and provider experiences.

### **Empirical Review**

In the absence of a vaccine or cure for HIV and AIDS, the spread of the disease can be controlled by adhering to the set National HIV and AIDS management guideline (Auerbach, 2017). HIV and AIDS guideline practices that influence the quality of care offered to HIV and AIDS patients include; HIV testing and diagnosis, antiretroviral therapy, mental health screening, gender-based violence and nutrition counselling and monitoring.

### **HIV Testing and Diagnosis**

The first stage in HIV care is to determine one's HIV status. This initial step reflects direct adherence to national HIV and AIDS guidelines, which emphasize early diagnosis as a gateway to treatment and prevention (NASCO, 2022; WHO, 2024). Once individuals are aware of their HIV status, they are significantly less likely to engage in unsafe sexual behavior, thereby reducing transmission risks (Wagner et al., 2023). Routine HIV testing has also been shown to be cost-effective, enabling timely initiation of antiretroviral therapy and improving long-term health outcomes (WHO, 2024).

In Kenya, the Ministry of Health's 2022 guidelines recommend provider-initiated testing and counseling (PITC) in both inpatient and outpatient settings, particularly for adults at high risk (NASCO, 2022). However, adherence to these testing protocols among healthcare workers remains inconsistent, especially in decentralized facilities such as Chuka County Referral Hospital and PCEA Chogoria Hospital in Tharaka Nithi County. Internal audits from Chuka Hospital revealed that while HIV testing services are available, uptake among adult outpatients was below the recommended threshold, with missed opportunities for PITC during routine visits (Mbuba et al., 2022). Similarly, Chogoria Hospital reported gaps in linkage to care following diagnosis, suggesting that testing alone does not guarantee adherence to the full continuum of guideline-based care (PCEA Chogoria Hospital, 2022).

These findings underscore the importance of evaluating not just the availability of HIV testing services, but also the extent to which healthcare workers implement testing protocols in line with national guidelines. The study by Wagner et al. (2023), while affirming the value of testing, focused solely on service delivery metrics and did not address contextual adherence behaviors among frontline providers. This leaves a critical gap that the current study seeks to fill by examining healthcare worker practices influencing adherence to HIV guidelines for adults at Chuka and Chogoria Hospitals.

### **Antiretroviral Therapy**

Once HIV infection has been detected, administering effective Antiretroviral Therapy (ART) necessitates determining patient eligibility for treatment and ensuring a consistent supply of medications. This practice reflects direct adherence to Kenya's national HIV and AIDS guidelines, which recommend immediate initiation of ART for all individuals diagnosed with HIV, regardless of CD4 count or clinical stage (NASCO, 2022). In the context of adult HIV care at Chuka County Referral Hospital and PCEA Chogoria Hospital in Tharaka Nithi County, healthcare workers are expected to promptly initiate therapy and maintain uninterrupted drug availability.

ART has transformed HIV from a fatal illness into a manageable chronic condition. Clinical evidence shows that reductions in plasma viral load are strongly associated with improved health outcomes, reinforcing the importance of timely and consistent therapy (WHO, 2024).

However, adherence challenges emerge when hospitals fail to maintain continuous drug supply, often due to delayed ordering processes. These delays are frequently linked to untimely stock notifications by healthcare workers, which constitutes a system-level lapse in adherence to national supply chain protocols (NASCOP, 2022).

At Chuka and Chogoria Hospitals, anecdotal reports and internal audits have highlighted instances where adult patients do not receive complete ART regimens at the point of care, undermining treatment continuity. This not only compromises viral suppression but also increases the risk of drug resistance and treatment failure. The study by Obeagu et al. (2024), while focused on platelet functionality in HIV patients receiving ART, underscores the clinical importance of sustained therapy but does not address the operational practices influencing adherence, leaving a contextual gap that the current study aims to fill.

By examining healthcare worker practices such as timely initiation, stock monitoring, and patient follow-up this study contributes to understanding how frontline behaviors align or deviate from national guidelines, particularly in adult HIV care settings within Tharaka Nithi.

### **Mental Health Screening and Management**

People living with HIV (PLHIV) are more likely than the general population to suffer from mental health illnesses such as depression, anxiety, suicidality, and substance abuse. These conditions have been shown to exacerbate HIV transmission risks through increased hazardous sexual behavior and injecting drug use (Chibanda et al., 2016). The integration of mental health screening and management into HIV care reflects direct adherence to Kenya's national HIV and AIDS guidelines, which emphasize holistic, patient-centered care including psychosocial support and mental health services for adults living with HIV (NASCOP, 2022; WHO, 2024).

At Chuka County Referral Hospital and PCEA Chogoria Hospital in Tharaka Nithi County, adherence to these guidelines remains inconsistent. Facility-level audits and feedback mechanisms have revealed that routine mental health screening is not systematically implemented, and referrals for psychosocial support are often delayed or undocumented (Kibera, 2021). This gap in practice undermines the guideline's intent to address co-morbidities that affect treatment adherence and viral suppression.

The Kenya Mental Health Action Plan (2021–2025) further reinforces the need for integrated mental health services at all levels of care, including HIV clinics, and calls for capacity building among healthcare workers to conduct screenings and offer basic interventions (Ministry of Health, 2024). However, limited human resources and inadequate training at Chuka and Chogoria have constrained implementation, reflecting a partial adherence to both HIV and mental health policy frameworks.

Chikuse et al. (2025) studied the early outcomes of mental health screening integrated into routine HIV care in Malawi, demonstrating improved patient engagement and reduced missed appointments. While promising, this study presents a geographical gap, as it does not reflect the unique operational realities of Kenyan facilities. The current study therefore seeks to fill this gap by examining healthcare worker practices influencing adherence to mental health screening protocols within adult HIV care at Chuka and Chogoria Hospitals.

### **Nutrition Counseling and Monitoring**

In the 2005–2010 Kenyan National HIV/AIDS Strategic Plan, the Ministry of Health classified appropriate nutrition as a critical component of the national response to the HIV/AIDS epidemic. This aligns with global consensus that good nutrition is essential for improving health outcomes and quality of life, particularly for people living with HIV (PLHIV). HIV and

nutrition are intricately linked: HIV infection increases nutritional requirements while simultaneously impairing food intake and nutrient absorption. Poor nutrition, in turn, exacerbates vulnerability to opportunistic infections and accelerates progression to AIDS, creating a vicious cycle of immunosuppression and malnutrition (Navasero, 2020).

Nutrition counseling and monitoring reflect direct adherence to Kenya's national HIV and AIDS guidelines, which recommend routine nutritional assessment, individualized dietary counseling, and continuous monitoring of nutritional status for all HIV-positive adults (NASCO, 2022). These practices are expected to be implemented at service delivery points such as counseling and testing centers, comprehensive care clinics, and inpatient wards.

At Chuka County Referral Hospital and PCEA Chogoria Hospital in Tharaka Nithi County, adherence to these guidelines has been inconsistent. While initial nutritional assessments are often conducted, routine follow-up and individualized monitoring such as anthropometric tracking, dietary intake reviews, and biochemical assessments are frequently omitted due to systemic challenges. These include inadequate staffing of nutritionists, resource limitations, and high patient volumes, which collectively hinder full compliance with national standards (Kibera, 2021).

This partial adherence compromises the effectiveness of HIV care, as nutritional status directly influences treatment adherence, immune recovery, and viral suppression. Alum et al. (2023) conducted a study on the inclusion of nutritional counseling and mental health services in HIV/AIDS management, affirming the importance of nutrition support. However, their study focused solely on the presence of nutrition counseling and did not evaluate how healthcare worker practices influence adherence to broader HIV guidelines, particularly in adult care settings. This presents a contextual and operational gap that the current study seeks to address by examining the practices of healthcare workers at Chuka and Chogoria Hospitals and their impact on guideline adherence.

### **Gender Based Violence (GBV)**

Gender-based violence and HIV/AIDS are major health and human rights issues worldwide, particularly in underdeveloped nations. Within the context of adult HIV care at Chuka County Referral Hospital and PCEA Chogoria Hospital in Tharaka Nithi County, GBV screening and response practices reflect partial adherence to Kenya's national HIV and AIDS guidelines, which emphasize the integration of GBV services into HIV care settings (NASCO, 2022).

Evidence suggests that having HIV may raise the risk of GBV, with increased vulnerability following the disclosure of HIV status or even the request for HIV testing (Raifman et al., 2016). This underscores the importance of routine GBV screening and survivor-centered support as part of comprehensive HIV care. However, facility-level reports from Chuka and Chogoria indicate that GBV screening is inconsistently implemented, and referral pathways for survivors are often fragmented or undocumented (National Gender and Equality Commission, 2025). This reflects a gap in adherence, where national guidelines call for integrated services, but operational realities fall short.

According to recent findings, access to comprehensive care, whether through one-stop facilities, clinician co-location, or effective referral networks, improves outcomes for GBV survivors (Keesbury & Askew, 2015). Training programs for healthcare personnel have been shown to increase comfort levels in handling GBV cases, leading to higher uptake of HIV testing and counseling (HTC) and better adherence to antiretroviral therapy (ART)—both of which are critical components for long-term success in HIV management (Keesbury et al., 2015). Yet, at Chuka and Chogoria, limited staff training and lack of standardized GBV

protocols have hindered consistent implementation, suggesting low fidelity to national standards.

A study by Siko and Van (2017) on compliance with treatment guidelines in South Africa found that healthcare workers' practices shaped by clinical inertia, attitudes, communication gaps, and limited awareness directly affect guideline adherence. Although their study focused on hypertension, the findings are relevant to HIV care, where similar dynamics may influence GBV-related service delivery. The current study, by contrast, is situated in Kenya and focuses specifically on HIV and AIDS management guidelines, offering a localized lens on how healthcare worker practices at Chuka and Chogoria Hospitals influence adherence.

## **MATERIALS AND METHODS**

The research was carried out in Tharaka Nithi County's Chuka County Referral Hospital and Chogoria Hospital. Chuka County Referral hospital represented the public hospitals while Chogoria hospital represented the Private hospitals. The two facilities have the highest HIV and AIDS patients' workload with Chuka Hospital having a total number of 1,406 patients currently on HIV care and Chogoria Hospital recording 2704 patients on HIV care. A cross-sectional descriptive study design was used in this study. The study also adheres to the guidelines of descriptive survey research because the researcher gathered data and reported the situation as it was without changing any variables. This study targeted all the healthcare workers in Chuka County Referral Hospital and Chogoria hospital. These included nurses, clinical officers, nutritionists, pharmacy technicians, laboratory technicians, medical officers and HIV testing service personnel. For the two hospitals, the total of the targeted population was 351. A sample of 71 health workers was therefore selected for Chuka and Chogoria hospital (45 and 26 health workers respectively). The health workers in Chuka County referral hospital and Chogoria hospital were sampled using stratified random sampling. The strata were divided as per the following cadres' nurses, clinical officers, nutritionists, pharmacy technicians, laboratory technicians, medical officers and HIV testing service personnel. Data was collected using structured questionnaires. Cronbach Alpha was used to test reliability of the data by use of Pearson's correlation. SPSS version 25.0 for Windows was used to analyze the data.

## **FINDINGS**

The objective of the study sought to establish health care workers practices that influence of adherence to national HIV and AIDS guidelines for adults. The results that were obtained are presented on the following subsections.

### **Response Rate of the Workers**

The study distributed the questionnaire to 71 healthcare workers whereby 45 were healthcare workers in Chuka Hospital and 26 were healthcare workers in Chogoria hospital. The healthcare personnel eagerly accepted the request for information and totally collaborated in delivering it. After data cleaning, screening and verification 66 questionnaires from the healthcare workers were completed representing 92.95% response rate. A response rate of 50% is considered sufficient by Mugenda & Mugenda (2003) and Saunders et al., (2007). However, Fincham (2008) indicated that response rate of at least 80% is desirable for survey studies and hence, the 92.95 % percentage achieved in this research was appropriate for drawing conclusions on the study objectives.



**Table 3.1: Response Rate**

|                   |        |          | Expected Respondents | Actual responses | Response rate          | Response rate       |
|-------------------|--------|----------|----------------------|------------------|------------------------|---------------------|
|                   |        |          | Number               | Number           | Percentage of Expected | Percentage of Total |
| Chuka Hospital    | County | Referral | 45                   | 44               | 97.7%                  | 66.7%               |
| Chogoria hospital |        |          | 26                   | 22               | 85.6%                  | 33.5%               |
| <b>Total</b>      |        |          | <b>71</b>            | <b>66</b>        | <b>92.96%</b>          | <b>100.0</b>        |

Results in Table 3.1 indicate that 66 out of 71 (92.96%) respondents fully completed the questionnaires. Response rate in Chuka Hospital (97.7%) was higher than response rate in Chogoria hospital (85.6%). This slightly lower response rate in the mission hospital can be explained by Manyisa (2013) who found that due to less workforce in mission Hospitals they have more workload than workers in public hospitals hence may have lacked enough time to fully respond to the questionnaires. Results further show that 66.7% of the total respondents were workers in Chuka Hospital while 33.5% were health workers in Chogoria hospital.

### Effectiveness of National Guidelines for Management of HIV and AIDS

The study sought to establish the health workers opinion on effectiveness of national guidelines for management of HIV and AIDS. The findings obtained are presented in

**Table 3.2: Effectiveness of national guidelines for management of HIV and AIDS in adults**

| Effectiveness of National Guidelines for Management of HIV and AIDS | Hospital     |                   |                   |
|---|--------------|-------------------|-------------------|
|   | Chuka County | Referral Hospital | Chogoria Hospital |
| % Within Hospital (Yes)   | 100.0%       | 100.0%            | 100.0%            |
| % Within Hospital (Yes)   | 100.0%       | 100.0%            | 100.0%            |
| % of Total  | 66.7%        | 33.3%             | 100.0%            |

According to the findings, all of the respondents (100%) felt that the treatment recommendations were helpful in their practice and a good tool for verifying diagnoses, initiating therapy, and treating HIV and AIDS cases. The level of agreement with the effectiveness of the guidelines justifies the fact they are evidence based and are applicable to the patients. This was a good indication, as it implies that the health workers believed in the usefulness of the guidelines. NASCOP (2019) indicated that when health workers believe on the effectiveness of the guidelines for management of HIV and AIDS they practice it, ensure compliance with the standards. This ensures patients receive care as intended.

### Adherence to the National HIV and AIDS Management Guidelines

The survey also tried to determine if health personnel followed the National HIV and AIDS Management Guidelines, and the results are provided on the website.

**Table 3.3 Health Workers Adherence to the National HIV and AIDS Management Guidelines**

| <b>Adherence to the National HIV and AIDS Management Guidelines</b> | <b>Hospital Chuka County Referral Hospital</b> | <b>Chogoria Hospital</b> | <b>Total</b> |
|---|--|--------------------------|--------------|
| No  | 3.0%   | 7.6%                     | 10.6%        |
| Yes   | 63.6%  | 25.8%                    | 89.4%        |
| Total   | 66.7%  | 33.3%                    | 100.0%       |

The majority of people, according to the study, (89.4%) of the respondents adhered to the National HIV and AIDS Management Guidelines, while only 10.6% of the respondents who did not. Further the study established that within the two hospitals, the percentage of those who adhered was higher than those who never adhered. This implies that majority health workers services on HIV and Aids management are guided by clear guidelines for safe and effective administration of the lifesaving drugs to avoid abuse and maximize the benefits inherent in them. The fact that health workers are aware of and agree with the fact that adherence to ART is essential for sustained viral suppression, thus preventing drug resistance and disease progression, could explain the higher level of adherence to the national HIV and AIDS guideline on HIV treatment, prevention, and ART therapy package. However, the results revealed that a small percentage was not adhering to the guidelines in Chogoria hospital and Chuka County Referral Hospital (7.6% and 3.0%, respectively).

This implies that training on the benefits to adherence should be enhanced and also should be periodical to accommodate new developments in HIV/AIDS treatment and care and ensure that practice of ART in Kenyan hospitals remain modern and compatible with global best practice. Researchers discovered that a lack of information is a barrier to following rules (Abrahamson et al., 2012; Voogdt-Pruis et al., 2011). These contradictory findings revealed that health workers had a general understanding of clinical practice standards but lacked familiarity with or awareness of specific recommendations in order to apply them into their practices (Abrahamson et al., 2012; Quiros et al., 2007).

#### **Levels of Importance of the Services Offered to HIV and AIDS Patients**

The study also aimed to determine the relative relevance of the various services provided to HIV/AIDS patients. The respondents were asked to assess their importance on a scale of one to five. Likert scale ranging from, where NI = Not important represented by 1, LI = Less important represented by 2, FI = fairly important represented by 3, I = Important represented by 4 and MI = Most important represented by 5. The pertinent response for each construct of was analyzed using mean scores and the corresponding standard deviation from the mean. The findings obtained are presented on Table 3.4.

**Table 3.4: Levels of Importance of the Services Offered To HIV and AIDS Patients**

| Level of importance of the Services Offered to HIV/AIDS Patients Statements | Hospitals                      |              |              |                   |              |             |
|---|--------------------------------|--------------|--------------|-------------------|--------------|-------------|
|   | Chuka County Referral Hospital |              |              | Chogoria Hospital |              |             |
|   | N                              | Mean         | S.D          | N                 | Mean         | S.D         |
| HIV testing services and linkage to treatment and prevention                | 44                             | 4.55         | .730         | 22                | 3.91         | .811        |
| Anti-retroviral therapy   | 44                             | 4.73         | .694         | 22                | 4.64         | .492        |
| PHDP, GBV/IPV and health education/counselling                              | 44                             | 4.23         | 1.118        | 22                | 4.23         | .752        |
| Opportunistic infections, screening and prevention                          | 44                             | 4.70         | .462         | 22                | 4.27         | .703        |
| Reproductive health services  | 44                             | 4.52         | .590         | 22                | 3.95         | 1.05        |
| Non communicable disease screening and management                           | 44                             | 4.39         | .841         | 22                | 4.00         | .816        |
| Mental health screening and management                                      | 44                             | 4.43         | .728         | 22                | 4.09         | .684        |
| Nutritional counselling services  | 44                             | 4.43         | .695         | 22                | 4.32         | .477        |
| <b>Aggregate</b>  | <b>44</b>                      | <b>4.497</b> | <b>0.732</b> | <b>22</b>         | <b>4.176</b> | <b>0.72</b> |

The overall mean for levels of importance of the various services offered to the HIV/AIDS patients was (Mean = 4.497, SD = 0.732 , for health workers in Chuka County Referral Hospital and (Mean = 4.176, SD = 0.722, ) for health workers in Chogoria hospital. This indicates that on average health workers rated the level of services offered to patients as important with variations as indicated by the standard deviation value. Within constructs of the level of importance of services offered to HIV patients, the results revealed that health workers in both Chuka County Referral Hospital and Chogoria hospital opined that HIV testing services and linkage to treatment was important (Mean = 4.55, SD = 0.730 and Mean = 3.91, SD = 0.811) This could be attributed to the availability of the ART, familiarity with the recommended treatments, awareness of the equipment's and assessment tools, improved awareness that ART therapy was relevant and improved patients' outcome.

The majority of respondents evaluated anti-retroviral therapy (Mean = 4.64, SD = 0.492) as the most important service supplied to HIV and AIDS patients, according to the survey. The study established that majority respondents rated PHDP, GBV/IPV and health education/counselling as an important service offered to patients. Majority respondents rated opportunistic infections, screening and prevention as the most important service offered to the patients. The study further established that reproductive health services was important to the HIV and AIDS patients. The study established that non communicable disease screening and management was rated as most important service. The study established that mental health screening and management was rated as the most important service. The study further established that nutritional counselling services were also rated as important.

#### Frequency of Carrying Out Services to HIV and AIDS Patients

The study further sought to establish the frequency to which the hospital staffs were carrying the following services to the patients with HIV. The respondents were asked to react on a 5-point Likert scale, with N = Never being represented by 1, S = Sometimes being represented by 2, U being Undecided being represented by 3, often being represented by 4 and A being always being represented by 5. The pertinent response for each construct of was analyzed using

mean scores and the corresponding standard deviation from the mean. The findings obtained are presented on Table 3.5.

**Table 3.5: Frequency of Carrying out Services to HIV Patients**

| Frequency of Carrying out Services to HIV Patients           | Hospitals                      |             |              |                   |              |              |
|--|--------------------------------|-------------|--------------|-------------------|--------------|--------------|
|  | Chuka County Referral Hospital |             |              | Chogoria Hospital |              |              |
| Statements   | N                              | Mean        | S.D          | N                 | Mean         | S.D          |
| HIV testing services and linkage to treatment and prevention | 44                             | 4.14        | 1.173        | 22                | 3.32         | 1.427        |
| Anti-retroviral therapy                                      | 44                             | 4.32        | 1.177        | 22                | 3.59         | 1.501        |
| PHDP, GPV/IPV and health education/counselling               | 44                             | 3.77        | 1.342        | 22                | 3.55         | 1.471        |
| Opportunistic infections, screening and prevention           | 44                             | 4.32        | 1.095        | 22                | 3.73         | 1.486        |
| Reproductive health services                                 | 44                             | 3.84        | 1.328        | 22                | 3.50         | 1.472        |
| Non communicable disease screening and management            | 44                             | 3.57        | 1.485        | 22                | 3.14         | 1.642        |
| Mental health screening and management                       | 44                             | 4.32        | 1.157        | 22                | 4.18         | 1.259        |
| Nutritional counselling services                             | 44                             | 4.18        | 1.147        | 22                | 4.23         | 1.152        |
| <b>Overall Average</b>                                       | <b>44</b>                      | <b>4.05</b> | <b>1.238</b> | <b>22</b>         | <b>3.655</b> | <b>1.426</b> |

The overall mean for frequency to which the hospital staffs were practicing HIV and AIDS guidelines to the patients with HIV was (Mean = 3.655, SD = 1.426, ) for Chuka County referral hospital and Chogoria hospital, respectively. This indicates that on average health workers performed services to HIV patients often with variations as indicated by the standard deviation values. Results on individual constructs of the services offered to HIV patients indicated that HIV testing services and linkage to treatment and prevention to HIV patients often in Chuka County Referral Hospital and always in Chogoria hospital with means of 4.14 and 3.32 respectively. Results on Anti-retroviral therapy revealed that the service was offered often in both hospitals. The study further established that PHDP, GPV/IPV and health education/counselling services was offered to the patients often as evidenced by the means obtained. The study further established that opportunistic infections, screening and prevention service was offered to HIV patients often in both hospitals. In both hospitals, reproductive health services, noncommunicable disease screening and management, mental health screening and management, and dietary counseling were frequently available.

These results support the findings of Onadeko (2016) who found that hospitals health workers handle HIV patients often and routinely hence the need for health workers to be well trained on handling the patients. This means that health workers are at a higher risk of contracting HIV as a result of their work, necessitating the use of correct gear and equipment.

IPV, GBV, and mental health screening had a poor rate of adherence in this study, which could be attributable to the fact that they were an extension to the conventional package of HIV and AIDS guidelines. As such the frequency of carrying out the services by the health workers was expected to be low. Bower (2014) found similar results in a quantitative, exploratory, descriptive, and contextual design aimed at identifying impediments in the implementation of guidelines in intensive care units (ICU). The findings indicated that nurses were familiar with and aware of the recommendations, and that they were likely to utilize them regularly.



According to Stimpfel (2016), lack of awareness of the guidelines' existence, limited familiarity with their substance, or disagreement with their recommendations all influenced the frequency with which they were used.

### **Correlation between Healthcare Workers Practices and Adherence to National HIV and AIDS Guidelines for Adults**

Pearson correlation was utilized to determine the degree or strength of the linear relationship between the variables. This was done to determine the direction of the relationship between the variables' indicators. Correlation coefficient values vary from -1 to +1. A correlation value of +1 implies that the two variables are perfectly and positively associated in a linear sense, whereas a correlation coefficient of -1 indicates that the two variables are perfectly and negatively related in a linear sense. According to Hair et al (2006), a correlation coefficient (r) of 0.81 to 1.0 suggests a strong association; 0.61 to 0.80 indicates a strong relationship; 0.41 to 0.60 shows a moderate relationship; 0.21 to 0.40 indicates a poor relationship; and 0.00 to 0.20 indicates no relationship.

**Table 3.61: Correlation between Healthcare Workers Practices and Adherence to National HIV and AIDS Guidelines for Adults**

| <b>Correlations</b> |   |       | <b>Adherence to<br/>National HIV and<br/>AIDS Guidelines<br/>for Adults</b> | <b>Healthcare<br/>Workers<br/>Practices</b> |
|---------------------|---|-------|---|---|
| Pearson             | Adherence to National HIV and AIDS                    | 1.000 |   | .384  |
| Correlation         | Guidelines for Adults<br>Healthcare Workers Practices | .384  |   | 1.000                                       |
| Sig. (1-tailed)     | Adherence to National HIV and AIDS                    | .     |   | .000  |
|                     | Guidelines for Adults<br>Healthcare Workers Practices | .000  |   | .   |
| N                   | Adherence to National HIV and AIDS                    | 66    |   | 66  |
|                     | Guidelines for Adults<br>Specification                | 66    |   | 66  |

The correlation results presented in Table 14 points out that the healthcare workers practices and adherence to national HIV and AIDS guidelines for adults are positively and significantly correlated ( $r = 3.84$ ,  $p = 0.000 < 0.05$ ). This suggests that adherence to national HIV and AIDS guidelines for adults is increased by improvement of healthcare workers practices in Chuka and Chogoria hospital. The results agree with Siko and Van (2017) study on Compliance with standard treatment guidelines: a review of practice of healthcare workers in Potchefstroom, North West Province, South Africa found that healthcare workers practices influence how they correctly comply with the guidelines. Their study found a relationship between health care worker practices such as clinical inertia, worker attitudes, poor communication and lack of awareness/knowledge of treatment guidelines and adherence to the guidelines.

## Regression Analysis of Healthcare Workers Practices and Adherence to National HIV and AIDS Guidelines for Adults

To see if variations in Adherence to National HIV and AIDS Guidelines for Adults can be explained by the independent variable healthcare workers' practices, a simple regression analysis was performed.

**Table 3.72: Regression analysis**

### a. The Goodness of Fit of Model

| Model | R                 | R Square | Adjusted R Square | Std. Error of the Estimate |
|-------|-------------------|----------|-------------------|----------------------------|
|       | .384 <sup>a</sup> | .148     | .138              | .602                       |

The value of R-squared produced by the study was 0.148 at a probability value of 0.000, which is less than the significance value of 0.05, as shown in Table 3.7 (a). The R-squared 0.148 percent obtained in this study indicates that the independent variable healthcare workers' practices can explain 14.8% of variations in adherence to national HIV and AIDS guidelines for adults, while random error or other factors can explain 85.2 percent of variations in adherence to national HIV and AIDS guidelines for adults.

### b. The Overall Significance of the Model

| ANOVA <sup>a</sup> |            |                |    |             |        |                   |
|--------------------|------------|----------------|----|-------------|--------|-------------------|
| Model              |            | Sum of Squares | df | Mean Square | F      | Sig.              |
| 1                  | Regression | 5.588          | 1  | 5.588       | 15.429 | .000 <sup>b</sup> |
|                    | Residual   | 32.236         | 64 | .362        |        |                   |
|                    | Total      | 37.824         | 65 |             |        |                   |

As presented in Table 3.7 (b) the study shows the analysis of variance (ANOVA) of the regression analysis. F-value was found to be 15.429 and a p-value of 0.000. The p-value is less than the significance level ( $0.000 < 0.05$ ) hence indicating that the overall model testing the influence of healthcare workers practices on the adherence to national HIV and AIDS guidelines for adults was statistically significant. The findings of this study show that healthcare workers practices are a good predictor of adherence to national HIV and AIDS Guidelines for Adults.

Regression Coefficients for the model on healthcare workers practices and Adherence to National HIV and AIDS Guidelines for Adults were presented in Table 3.7 (c).

### c. The Individual Significance of the Model

| <b>Coefficients<sup>a</sup></b> |                              |                                    |                   |                                  |          |
|---------------------------------|------------------------------|------------------------------------|-------------------|----------------------------------|----------|
|                                 |                              | <b>Unstandardized Coefficients</b> |                   | <b>Standardized Coefficients</b> |          |
| <b>Model</b>                    |                              | <b>B</b>                           | <b>Std. Error</b> | <b>Beta</b>                      | <b>t</b> |
| 1                               | (Constant)                   | 2.246                              | .440              |                                  | 5.106    |
|                                 | Healthcare Workers Practices | .417                               | .106              | .384                             | 3.928    |

a. Predictors: (Constant), Healthcare Workers Practices

b. Dependent Variable: Adherence to National HIV and AIDS Guidelines for Adults

Table 3.7 (c) shows that constant of regression was 2.246. The slope of regression model obtained was 0.417. The t-statistic obtained for this model was 3.928 at a P-value of 0.000 which is less than the significance value of 0.05. This implies that Healthcare Workers Practices have a statistically significant influence on adherence to national HIV and AIDS guidelines for adults

The findings of this study bring out the importance healthcare workers practices on adherence to national HIV and AIDS guidelines for adults. The Pathman's awareness to adherence model was employed in this study, which was based on theoretical literature. The approach proposes a series of cognitive and behavioral steps that doctors take while changing their behavior. Physicians who are unfamiliar with a guideline recommendation must first become aware of it, then agree with it in principle, assess whether it is relevant and practicable to utilize in their own practice (adoption), and finally follow it at the proper time.

The postulates of the Pathman's model of awareness to adherence have therefore been proven by the results of this study which implies that improving healthcare worker practices enhancing positive health care worker attitudes, proper communication and enhancing awareness/knowledge through training of treatment guidelines boosts the Adherence to National HIV and AIDS Guidelines for Adults in terms of improved adherence to the guidelines. Furthermore, the findings of this study are congruent with those of Siko and Van (2017), who discovered a link between clinical inertia, worker attitudes, poor communication, and lack of awareness/knowledge of treatment standards and adherence to the guidelines among health care workers.

Furthermore, Pathman et al., (1996) reported that in order for patient care and guidelines recommendations to be consistent, health workers must be aware of, agree with, decide to adopt (that is, decide it is appropriate and feasible to use in their own practice), and follow the recommendations (i.e. actually follow them for appropriate patients at the appropriate time).

## CONCLUSIONS AND RECOMMENDATIONS

### Conclusions

Based on the findings of this study, the study revealed that the health workers are aware that their services on HIV and Aids management are guided by guidelines. However, based on the finding that a minimal percentage was not adhering to the guidelines. The study concluded that hospitals should emphasize on enough training to ensure compliance of all health workers to the guidelines.

### **Recommendations**

Based on the findings of the study, the researcher recommended; since the study found institutional hurdles to adherence to national HIV/AIDS guidelines, there is a need for organizational processes, structures, and resources to facilitate uptake of the guidelines.



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