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# Factors Affecting Adherence to Antiretroviral Drugs among Adolescents [10-18] At Ahero County Hospital, Kisumu County, Kenya

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## Abstract:

**Background:** Appropriate use of ARVs has improved the lives of many HIV positive individuals. The effectiveness of HIV treatment depends on sustenance of high level of adherence to ARVs. However, ARV regimens are often complicated and can be affected by varying dosing schedule, failing to have proper dietary requirements and patients developing adverse effects. **Objective:** To determine the patients' demographic, social and economic factors influencing adherence to antiretroviral drugs among HIV/AIDS adolescents. **Design:** A cross sectional quantitative study **Setting:** The study will be conducted at Ahero Sub county Hospital. **Subjects/Participants:** The study population comprised of ALHIV receiving ART in Ahero sub County Hospital and aged between 10-18 years. **Results:** A population consisting of adolescents aged 10-18years living with HIV/AIDS and who have been enrolled into care for more than one year. Qualitative methods of data collection will be used and these include key informants, focused group discussions and direct observation. The sample population will be 20 ALWHIV. Data will be analyzed and be presented in charts tables and graphs.

**Conclusion:** Continuously evaluate the level of maturity of young HIV-positive patients and discuss at the appropriate moment where and how to disclose their status to them.

## 1. INTRODUCTION

HIV/AIDs have continued to be a major global public health issue. An estimated 36.9 million people are living with HIV virus among which 1.8 million are adolescents (WHO 2017). The vast majority of HIV positive people live in sub Saharan countries which estimates to be 66%. New HIV infection among children has declined from 270,000 in 2010 to 180,000 in 2017 (WHO). Adherence to ARVs is crucial for treatment success among HIV patients. High levels of adherence is a prerequisite for maintained viral suppression and lowers risk of drug resistance and

consequently reduce disease progression and thus improves quality of health, and besides will in turn prevent morbidity and mortality cases. Low adherence is the second strongest determinant for disease, health deterioration and death after CD4 count. Non-adherence to ARVs is a substantial challenge in resource-poor settings where increasing drug resistance is hard to combat using the limited treatments alternatives available. Factors associated with adherence can be grouped under three main categories: Patient-related factors like stigma, treatment factors like pill burden and

provider-related factors like long waiting time. Maximum sustainable suppression of HIV viral suppression to below the level of detection is necessary to achieve these biological and clinical goals. For success to be achieved a near-perfect adherence to combination ARV regimens is very necessary. Consistency and nearly perfect adherence is considered an essential element for HIV positive adolescents on ARVs to fully realize its life extending benefits. Any level below 95% of adherence has been associated with poor suppression of HIV viral load and lowering of CD4 count leading to disease progression and development of drug resistance.

## 2. MATERIALS AND METHODS

**Study site:** The study was carried out in Ahero Sub county Hospital patient support centre. The facility has 250 active ALHIV. The facility was selected because it covers a wider catchment area and provides slightly advance services to both the HIV positive and HIV negative adolescents in nyando sub-County.

**Study design:** A cross-sectional research that utilizes a quantitative research method of data collection was used at Ahero County Hospital among the adolescents living with HIV/AIDS that were active on care for more than one year. The sample size of 30 clients were selected randomly, data was collected using focus group discussion (FGDs), in depth interviews and case narrative.

**Study population:** The study population comprised of ALHIV receiving ART in Ahero Sub county Hospital and aged between 10-18 years.

**Sample population and sampling procedure:** The sample population consisted of 30 ALWHA in this study. ALWHA registered at the facility was used to draw 30 respondents. Random sampling was done to ensure that the 30 respondents were available. Contents were then established directly with the sampled ALWHA through the assistance of peer educators, peer leads and clinical officers working in HIV Patient Support Centre (PSC). Establishing contacts with the selected ALWHA

was gradual as the researcher would wait for them to come as per the scheduled clinical visits.

**Data collection methods:** This was the main method of primary data collection in this study. The interviews were held with ALWHA registered for ART in the facility. Based on their experience with HIV, ART treatment and associated challenges. All the respondents were approached at the health facility during their scheduled appointment dates, they were then briefed about the study and were requested to participate in the study and follow those who accepted them to their homes. **Data processing and analysis:** Audio taped data from in depth interviews and case narratives was transcribed, translated and coded. Data transcription and translation was then taken concurrently with data collection.

### Ethical Approval:

A letter of permission to conduct the study was obtained from Uzima University. Relevant consent forms were issued to pupils' guardian to obtain permission to allow the children to participate in the study. Participant identity was protected and data collected was kept confidential by assigning unique identification numbers to participants. Lockable drawers were used to store the collected data and the soft copy of analyzed data was password- protected and stored in the computer.

**Table 1: Demographics of the respondents**

Gender	10 years	11 years	12 years	13 years	14 years	15 years	16 years	17 years	18 years	Total
Male	2	3	3	1	3	2	1	2	0	17(56.7%)
Female	3	2	2	2	0	2	0	1	1	13(43.3%)
Total	5(16.7%)	5(16.7%)	5(16.7%)	3(10%)	3(10%)	4(13.3%)	1(3.3%)	3(10%)	1(3.3%)	30(100%)

## 3. RESULTS

This section briefly explains factors like stigmatization, individual factors, regimen factors, socio-cultural factors, cost of treatment of opportunistic infections, cost of transport to health facility, cost of nutrition and the likes.

More male participants took part in the study than did female participants. In percentage terms, 56.7% of participants were male and 43.3% were female. Adolescents of all relevant years were represented in the study. The mean age of participants was 15.8 years. The mean age for male participants was 12.2 years, whereas that for female participants was 12.8.

#### **Stigma:**

This is a prejudice from the members of the society or non-supportive family members. This forced these adolescents to hide while taking ARVs so that people could not know that they were HIV positive. The self-stigma affected their disclosure of status hence they could not take their right dosages at the right time. The research outlined that almost all the adolescents that were interviewed faced this challenge.

#### **Cost of treatment of opportunistic infections:**

Opportunistic infections like TB, herpes zoster and the likes were expensive to treat they were spending more time on these diseases at the expense of HIV. The research indicated that some adolescents had died as a result of these diseases. These adolescents were not employed because this was an age group that was still in school so they could not afford this medication. Research showed that 12 adolescents faced this challenge.

#### **Cost of transport to health facilities:**

This was a major hindrance to who lived far away from health facilities. The research showed that they could not afford to go for refill and this affected their adherence to ARVs. 3 out of 20 adolescents interviewed faced the challenges of transport. Majority had no problem because they could easily access the facility.

#### **Cultural and religious beliefs:**

Only 2 adolescents were affected by some religious beliefs that they should only pray and never to take the medication. This affected their health negatively. Others were told to look for traditional healers as this could be witch craft and sorcery.<sup>13</sup>

#### **Cost of nutrition:**

Research showed that nutrition was a major hindrance in ARV uptake because these drugs required balanced diet which some adolescents could not meet. Out of the 20 people interviewed only 9 could manage the balanced diet. Poor nutrition affects adherence to ARV negatively.

**Table 2**

<b>Factors affecting adherence</b>	<b>Number of adolescents affected</b>
Stigma	20
Cost of treatment of opportunistic infections	12
Cost of transport to health facilities	3
Cultural and religious beliefs	2
Cost of nutrition	11

## **5. DISCUSSION**

The current study was conducted in order to identify the main factors affecting HAART adherence among adolescents at Ahero county hospital so that recommendations could be proposed for improving adherence to ART

## **6. CONCLUSION AND RECOMMENDATION**

Continuously evaluate the level of maturity of young HIV-positive patients and discuss at the appropriate time where and how to disclose their status to them. Continuously insist on the importance of disclosing the HIV-positive status of patients to them with the main objective of assisting adolescents in choosing should be their treatment buddy. Encourage HIV-positive adolescents during each of their clinic visits to take their ARVs, and reinforce their knowledge about HIV and ARV. Discuss with the adolescent's parents the importance and the choice of a treatment buddy and assist caretakers to teach young children the names of their medicines and how they should be taken.

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