ADDIS ABABA UNIVERSITY
SCHOOL OF GRADUATE STUDIES

DETERMINANTS OF HIGHLY ACTIVE ANTIRETROVIRAL THERAPY (HAART) ADHERENCE AND IMPROVED QUALITY OF LIFE FOR PEOPLE LIVING WITH HIV/AIDS (PLWHA) IN AFAR REGION, ETHIOPIA

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ZINET YIMER MOHAMMED (B PHARM)

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A THESIS SUBMITTED TO THE SCHOOL OF GRADUATE STUDIES OF ADDIS ABABA UNIVERSITY IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTER OF SCIENCE IN PHARMACOEPIDEMIOLOGY AND SOCIAL PHARMACY

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I would like to thanks and dedicate this work to my husband Khedir Kassahun and my Child Mohammed Khedir, for all encouragement during the years it is your inspiration, love and support made this all possible.

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OIs	Opportunistic Infections
PF	Physical Functioning
PHS	Physical Health Summary
PI	Protease Inhibitors
PLWHA	People Living with HIV/AIDS
QOL	Quality Of Life
RE	Role Emotional
RP	Role physical
SF	Social Functioning
SF-36	Short Form-36 Questions
SIDA	Swedish International Development Agency
SNNPR	Southern Nation and Nationalities People Region
UNAIDS	Joint United Nations program on HIV/AIDS
USAIDS	U.S. Agency for International Development
VT	Vitality
WHO	World Health Organization

SUMMARY

Background: Highly Active Antiretroviral Therapy (HAART) regimens greatly reduce the morbidity and mortality associated with HIV infection, high adherence for an optimal response to HAART is requirement. Unfortunately, adherence to HAART is difficult and poor adherence is common. Low adherence and the closely related phenomenon of drug resistance are thought to be the most important reasons for failed ARVs treatment. Better QOL score may relate with better adherence to HAART regimens, better PHS and MHS score.

Objective: To determine the current adherence rate and its determinants as well as to assess quality of life of patients among PLWHA currently on HAART in Afar Region, Ethiopia.

Method: A cross-sectional Survey on assessment of factors affecting adherence to HAART was conducted between August 2007 and October 2007 in selected health institution of Afar Region, and both qualitative and quantitative data collection methods were employed in the study.

Results: A total of 422 PLWHA and currently on HAART were participated in the study. Study participants were 222(52.6%) females and 200(47.4%) males, most of participants were in the age group of 25-44. According to 15-days recall self-report, 402(95.3%) of participants were adherent to doses of HAART. Adherence rate obtained from unannounced pill-count was also 53%. Traveling so could not keep the routine, too busy, lack of food and difficult to take many pills were the most common reasons reported for missed doses. In multiple logistic regression among the socio-demographic variables, employment was associated with better adherence score (OR, .001; CI, .001-.344, P=.026). Pill burden (OR= .001, CI .001-.089, P=0.001) and long time with virus (OR=.044, CI, .003-.714), P=0.028) were associated with better self-reported adherence. Age (OR= 11.822, CI 1.274-109.65, P=0.030), gender (OR= 16.19, CI 1.111- 232.18, P=.046), level of education (OR= 12.899, CI 1.007-165.242, P=0.049) also long time with HAART (OR= 33.391, CI, 1.066-1046.279, P=0.046) among factors weakly associates with adherence. Shortage of medicines for OIs, quality of care, lack of income, and lack of food were reported among the factors more affect adherence among most of FGDs participants. Stigma, regimen factors like pill burden, side effect and structural issues were reported as factors less

affects adherence to HAART. Adherence was associated with better PHS and MHS score, which is to mean better QOL.

Conclusion: self report HAART adherence rate in this population is better than studies in high income countries as well as in Africa and in other Regions of Ethiopia, in spite of the fact that patients in Ethiopia face a large number of economical problems. However, non-adherence remains an unsettling barrier for treatment success and is ever-present among patients receiving ARVs therapy. To improve adherence establishing reliable drug supply, training of extra number of staffs, simplifying dosage regimens and confidentiality should be maintained. Also study with intervention with some adherence support program may help to address factors on non adherence.

Key words: Highly Active Antiretroviral Therapy (HAART), Adherence, HIV/AIDS, Quality Of Life (QOL), SF-36, Afar Region, Ethiopia.

1 INTRODUCTION

Highly Active Antiretroviral Therapy (HAART) regimens greatly reduce the morbidity and mortality associated with HIV infection but high adherence is required for an optimal response to HAART (Marc *et. al.*, 2007). Unfortunately, adherence to HAART is difficult and poor adherence is common. Suboptimal adherence and the closely related phenomenon of drug resistance are thought to be the most important reasons for failed treatment (Perno *et. al.*, 2002). Access to ART is limited for the majority of individuals living with HIV/ AIDS in sub-Saharan Africa. The World Health Organization's initiative to have 3 million individuals receiving ART by 2006 ("3 by 5") has yet to meet its planned provision of care timelines, leaving more than two thirds of the global number of individuals needing care worldwide without access to ART. Although sub-Saharan Africa represents only 10% of the world's population, it represents 77% of women with HIV, 79% of AIDS deaths, and 92% of the world's AIDS orphans (UNAIDS, 2006).

Ethiopia's population reached an estimated 73 million in mid-2005, and is expected to grow by over 2.0% annually through 2025. Ethiopia's population is young with 43% under the age of 15 years. Eighty-four percent of the population lives in rural. Ethiopia has a federal system with nine regions and two Administrative Councils (Addis Ababa and Dire Dawa). The estimated total number of persons requiring ART in 2005 was 277,800 (including 43,100 children) (MOH, 2005).

HIV was first detected in Ethiopia in stored sera collected in 1984 and the first two AIDS cases were reported in 1986. It was estimated that a total of 1,320,000 people were living with HIV/AIDS. Of the total, 634,000 were living in rural areas and 686,000 in urban areas. It was estimated that in 2005, a total of 137,500 new AIDS cases, 128, 900 new HIV infections (353 a day) including 300 HIV positive births, and 134,500 (368 a day) AIDS deaths (including 20,900 in children [<15 years]) occurred. AIDS accounted for an estimated 34% of all young adult (15-49 years) deaths in Ethiopia and 66.3% of all young adult (15-49) deaths in urban Ethiopia (MOH, 2005). According to single point HIV prevalence estimate in 2007 also urban and rural

from a health care provider" (WHO, 2003). Both patients and health care providers face significant challenges with respect to adherence to ART. Once initiated, HAART is a life-long treatment that consists of multiple medications to be taken two to three times a day with varying dietary instructions. These medications also have side effects which may be more permanent requiring a change of treatment. Inadequate adherence to treatment is associated with detectable viral loads, declining CD4 counts, disease progression, episodes of opportunistic infections and poorer health outcomes (MOH/Mombasa, 2004).

In an ideal situation, a 100% level of adherence is required for ARV treatment success. Though adherence is a problem in poor countries as well as developed one, due to multifaceted factors, studies show that there is no significant difference in adherence between resource-limited and resource-rich countries, suggesting that patients have trouble in taking 100% of their pills. It is therefore recommended worldwide that for any ARV programs there should be a concurrent plan for adherence assessment and support a 'near perfect adherence' should be where there is 95% and above adherence to the treatment (Weiser *et al.*, 2003).

In this study it was hypothesized that better medication adherence would be associated with improvements in CD4 count and QOL of patients' using HAART. In addition, the association of independent variables like age, sex, religion and etc...and risk behaviors like drinking alcohol, chewing chat and others were evaluated.

2 LITRATURE REVIEW

The AIDS pandemic is growing rapidly, especially in the African and Asian continents. In 2006, a total of 39.5 million [34.1–47.1 million] people were living with HIV. This figure includes the estimated 4.3 million [3.6–6.6 million] adults and children who were newly infected. Sub-Saharan Africa continues to bear the brunt of the global epidemic. Overall sub-Saharan Africa is home to an estimated 24.7 million [21.8–27.7 million] adults and children infected with HIV. Two thirds (63%) of all adults and children with HIV globally live in Sub-Saharan Africa. Almost three quarters (72%) of all adult and child deaths in Sub-Saharan Africa were due to AIDS (UNAIDS, 2006).

The first cases of AIDS cases reported in 1981, infection with HIV has grown to pandemic proportions, resulting in an estimated 65 million infections and 25 million deaths. During 2005 alone, an estimated 2.8 million persons died from AIDS, 4.1 million were new infection with HIV, and 38.6 million were living with HIV. HIV continues to affect disproportionately certain geographic regions (e.g., sub-Saharan Africa and the Caribbean) and subpopulations (e.g., women in sub-Saharan Africa, men who have sex with men [MSM], injection-drug users [IDUs], and sex workers. Effective prevention and treatment of HIV infection with HAART are now available, even in countries with limited resources. Nonetheless, comprehensive programmes are needed to reach all persons who require treatment and to prevent transmission (UNAIDS, 2006).

HIV dropped average life expectancy of sub-Saharan Africa from 62 years without AIDS to 47 years. Aside demographic impact HIV is also having dramatic impact on health sectors, the education sector and work place. The loss of productive workers and increase in health care and social service spending requires difficult decisions about resource allocations across all Government sectors, in some studies indicated that the epidemic's impact on the health systems is devastating, as it has created increased burden of disease, shifted the demand for services, caused a substantial increase in health expenditure, and eroded the capacity of the health systems to respond adequately, particularly as it affects the health workforce (Cornia, 2002 ; UNAIDS/WHO, 2005).

Over the last 5 years, there has been a rapid change in treatment strategies for HIV infection. With the advent of newer antiretroviral, treatment has moved from mono-therapy and bi-therapy to triple drug therapy or Highly Active Antiretroviral Therapy (HAART). Treatment with a cocktail of three or more antiretroviral medications is now standard treatment protocol. One of the foremost concerns of ARV programs is the ability of people living with HIV/AIDS (PLHA) to maintain near perfect adherence over the long term. In order to achieve the goal of antiretroviral therapy (ART), undetectable levels of the virus in the blood, patients are required to maintain more than 90–95% adherence (UNAIDS/WHO, 2005).

Adherence is also defined as a patient's ability to follow a treatment plan, take medications at prescribed times and frequencies, and follow restrictions regarding food and other medications. Both patients and health care providers face significant challenges with respect to adherence to ART. Once initiated, HAART is a life-long treatment that consists of multiple medications to be taken two to three times a day with varying dietary instructions. These medications also have side effects, some of which may be temporary while others may be more permanent requiring a change of treatment. Inadequate adherence to treatment is associated with detectable viral loads, declining CD4 counts, disease progression, episodes of opportunistic infections and poorer health outcomes (MOH, 2004).

The virus has a very high replication and mutation rate. If doses are intermittently missed, the virus begins to replicate even in few weeks; future treatment options may be severely limit because of resistance and leads to death. The individual may lose the benefit of particular classes of drugs, which can contribute to clinical and immunological decline and in a position to transmit the drug resistance HIV to his /her sex partner, and this poses a series problem for both the individual and the community at large (Lauraw, 2005).

The goal of HAART is to suppress viral load in the blood to undetectable levels (levels that are no longer detectable in routine viral load assays). Adherence to treatment is critical to obtain full benefits of HAART: maximal and durable suppression of viral replication reduced destruction of CD_4 cells, prevention of viral resistance, promotion of immune reconstitution and slowed disease

progression. A typical HAART combination commonly consists of three agents or drugs (Stavudine, Lamivudine and Nevirapine or Effavirenz) and usually plus other medication for prophylaxis of opportunistic infections and sometimes cough remedies. This regimen complexity significantly affects a patient's ability to adhere (Ickovics and Meisler, 1997).

A study conducted in Botswana indicated that 54% of patients were adherent by self-report while 56% were adherent by provider assessment. The study showed that patients had to overcome great odds to adhere for treatment: they lacked adequate funds, often had to travel great distances to the clinics providing ARVs. If cost were eliminated as a barrier, then adherence rate is predicted to improve to 74 % (Weiser *et al.*, 2003).

In another study, non-adherence for ARV users ranged from 10% - 92% with an average of 50%. Adherence levels of > 95% are required in people with HIV infections and prescribed a combination of ARVs treatment to maintain virologic suppression. However, actual adherence rates are often far lower; most studies show that 40% to 60% of patients are < 90% adherent. Adherence also tends to decrease over time and in a number of studies patients offer a range of reasons for non- adherence (John, 2002).

Measuring ART adherence is one important aspects of measuring treatment effectiveness. In measuring adherence, it is important to examine the role of the patient, health care provider and the health care system. There is no" Gold standard" for adherence assessment; therefore, multiple approaches are used to assess adherence (Liu, 2001). Quality adherence to ARVs therapy is an ongoing process in when the patient needs to be directly involved, it is not something an individual naturally possess or lack. Interventions to increase adherence must address cultural differences with race, gender, sexual orientation and even religion. It must be tailored to meet culturally relevant barriers, including difference in language (Robert, 1999).

Antiretrovirals can increase the length and quality of life and productivity of patients. Strict detailed adherence to physician-prescribed HAART regimens has been shown to be clinically

beneficial. In a study of PI ARVs adherence in 84 subjects, who used an electronic pill-monitoring device, 81% of subjects with > 95% adherence had complete viral suppression compared to only 64% with 90-95% adherence, 50% with 80-90% adherence, 25% with 70-80% adherence and 6% with < 70% adherence (Bangsberg *et al.*, 1999).

2.1 Determinants of Adherence

Nearly half of the patients receiving ARV treatment fail to take it in accordance with dosage, time and dietary instructions (Heckman *et al*, 2004). Adherence is a concept with several emotional, cognitive, social and behavioral aspects that influence people's medication taking behavior (Ickovics and Meade, 2002). Patient compliance and factors affecting ARV treatment adherence may, however, vary among the people with HIV/AIDS (Fong *et al*, 2003).

In several studies reported that the most common reasons for missing medication are that it is simple to forget, being away from home, side effect, stigma and being busy (Haubrich *et al*, 1999). A study conducted in Africa also reported financial constraints, social stigma, travel and side effects as principal barriers for ARV treatment adherence for patients receiving ARV therapy (Weiser, *et al* 2003). Also a meta-analysis study conducted in sub Saharan Africa, United State and Canada showed that most important and prevalent factors that have been reported to negatively affect adherence in sub-Saharan Africa are cost, not disclosing HIV status to a loved one or fear of being stigmatized, alcohol abuse, and difficulty in following complex drug regimens (Edward *et al*, 2006).

Ickovics and Meade have estimated factors influencing adherence to fall into four main groups (Figure I): patient factors, treatment regimen, the patient-health care provider relationship, and clinical setting.

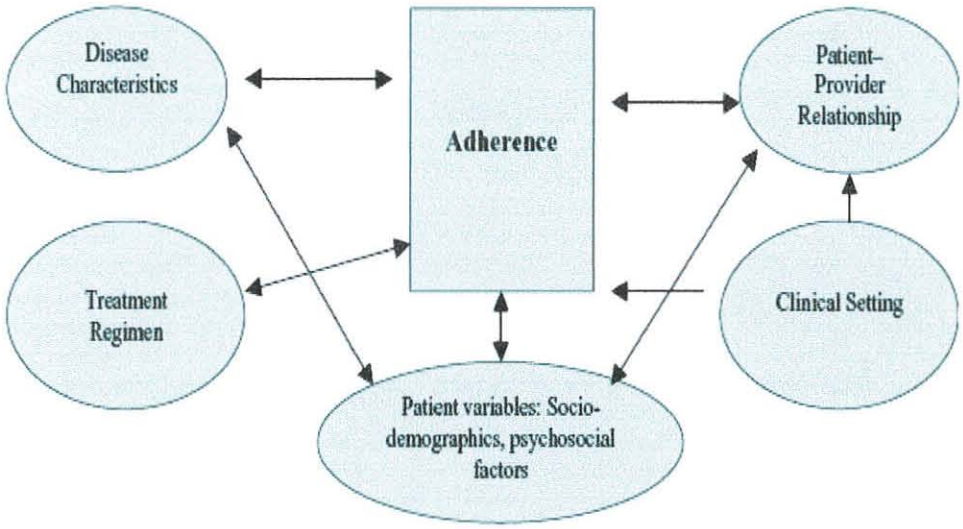

Figure I. Determinants of adherence (Ickovics and Meads, 2002)

Disease Characteristics

These include: life time adherence, the stage and duration of HIV, associated opportunistic infections and HIV-related symptoms. The severity of the illness could also impact negatively or positively adherence to ART (Ickovics and Meads, 2002).

Treatment Regimen

One of the main problems of ARVs is it includes many pills a day, the complexity of the regimen (dosing frequency and food instruction), the specific type of ARV and medication side-effects caused by it are clearly associated with sub-optimal adherence (Paterson *et al.*, 2000).

Seriousness of the disease and adverse drug reactions can influence the patient's willingness to take specific medication. Ickovics and Meade showed that patients who experienced an adverse effect were 16 times less likely to be 95-100% adherent to medications.

The Patient–Provider Relationship

The patient-provider relationship has been found to play an important role in improving adherence to prescribed medications in chronic disease, and it is also considered to be a motivating factor for adherence to ARV therapy (Heckman, 2004). This includes the patient's overall satisfaction and trust in the provider and clinic staff; the patient's opinion of the provider's competency; the provider's willingness to include the patient in the decision-making process; the affective tone of the relationship (e.g. warmth, openness, cooperation); the compatibility of race/ethnicity between patient and provider; and the adequacy of referral. Trust and confidence in providers has been found to influence adherence positively.

Patient Related Factors

Multiple patient factors are associated with adherence. In most studies adherence to ARV medication has been found to be associated with socio-demographic characteristics such as age, gender, ethnicity, employment, income, education and literacy; and psychosocial factors, such as active drug or alcohol use, degree of social support, social stability, depression and other psychiatric illnesses(Bernard and Krupat, 1994; Fong *et al.*, 2003). Some studies have found that older age, higher income and higher education correlate with better adherence (Paterson *et al.*, 2000; Pinheiro, 2002). However, some studies reported socio-demographic factors as poor predictors of treatment adherence (Ferguson, 2002; Fong *et al.*, 2003).

Poor social relations and activities have been linked with lower treatment adherence in most findings. Living alone, lack of involvement by family and friends, and social isolation were found to be risk factors for non-adherence (Paterson *et al.*, 2000). A study also found that patients with good social support had compliance nearly twice that of depressed patients or those without social support (Gordillo, 1999). Family and social support are most often associated with the disclosure of HIV status.

It is believed that in order to cope with HIV/AIDS and related problems, the AIDS patient needs a confident family or significant other who will be caring and supportive during the course of his

or her illness (Bernard and Krupat, 1994). The patient may be more motivated to comply with the treatment regimen and to have a better adherence if other or family member considers that the type of treatment is beneficial and important to the patient. Culture and religious belief may affect the health behavior of HIV-infected (Gordillo, 1999; Bernard and Krupat, 1994)

A patient's level of knowledge about the HIV infection, and belief that the treatment is successful and prolongs life, may influence the patient compliance to treatment (Bernard and Krupat, 1994). According to different studies, more than 90% of patients receiving antiretroviral therapy are well informed about the transmission and prevention of HIV/AIDS. A patients understanding about the consequence of poor medication adherence to ARV regimens and treatment failure also predicates better adherence (Weiser *et al*, 2003; Gordillo *et al*, 1999).

Clinical Setting

Although existing data is limited, aspects of the clinical setting may be associated with improved adherence. A friendly, supportive and non-judgmental attitude of health care providers, convenient appointment scheduling and confidentiality contribute to better adherence. The availability of reliable primary health care is related to enhanced adherence to ARV Therapy while unhappiness with previous experiences of the health-care system has been shown to lead to non adherence (Chesney, 2003).

2.2 Measuring Adherence

There is no gold standard by which to measure adherence to medication and may take a number of forms. Many studies employ a number of methods; either alone or in combination to measure adherence.

Direct methods include directly observed therapy, measurement of the drug or its metabolite in bl ood, or measurement of a biological marker in the urine. Direct approaches, although more accurate at assessing compliance, are expensive, burdensome to the provider and may be susceptible to distortion by the patient. Indirect methods of assessing adherence include

the use of patient questionnaires and patient self-reports, pill counts, rates of prescription refills, assessment of patient clinical response, the use of electronic medication monitors, measurement of physiologic marker and patient diaries. Indirect methods include the use of patient questionnaire and self reports, pill counts, rates of prescription refills, assessments of patient's clinical response, the use of electronic medication monitors, measurements of physiologic markers and patient diaries (Watson *et al.*, 1998).

However, no single measure is appropriate for all settings or outcomes. It has been found that the use of more than one measure of adherence allows the strength of one method to compensate for the weakness of the other and to more accurately capture the information needed to determine adherence levels. The most common approaches of HAART adherence assessment include: electronic drug monitoring (EDM) devices, pill counts, biochemical markers, pharmacy refill records and various self-reporting tools such as questionnaires and visual analogue. According to Gill *et al.*, (2005), the hierarchy of adherence measures ranks physician and self-assessment report the least accurate, pill count intermediate and EDM the most accurate adherence marker (Vitolins *et al.*, 2000).

2.3 Quality of Life

WHO (2003) defines health as 'a state of complete physical, mental and social well-being and not only the absence of disease and infirmity'. The psychological and social effects of Human Immunodeficiency Virus (HIV) and Acquired Immune Deficiency Syndrome (AIDS) on patients' quality of life (QOL) have been constantly fluctuating. Quality of life is a broad concept about which everyone has an intuitive understanding, but which is still difficult to define (Osterberg and Balschke, 2005).

To the extent that they are available for medically eligible patients, highly active antiretroviral therapies (HAART) have substantially prolonged the life expectancy and improved the quality of life of people living with HIV/AIDS [Liu *et al.*, 2006, Carrieri *et al.*, 2003]. In this study HRQOL were assessed using a generic measure, SF-36 health survey questions.

Quality of life can be affected by many factors including income, housing situation, social interactions, and health. HIV is a costly, chronic disease that exerts a significant task on patients, car-givers, and the health care system. Without effective treatment, the functioning and well being of patients with HIV invariably decrease over time. Quality of life measures are increasingly being recognized as important when comparing the efficacy of AIDS therapies and assessing the impact of HIV/AIDS on peoples' lives (Maryalice, 2002).

Health-related quality of life (HRQOL) measures the impact of an individual's health on his or her ability to perform and enjoy the activities of daily life. Declining HRQOL can have a significant impact on patients' level of adherence to medications. In general, quality of life is measured by asking a series of questions about specific aspects of functioning and well-being. Asking a series of questions about a particular aspect, such as mental health, allows for a better approximation of the person's emotional state (Maryalice, 2002).

SF-36 is a multi-purpose, short-form health survey with only 36 questions. It yields an 8-scale profile of functional health and well-being scores as well as psychometrically-based physical and mental health summary measures and a preference-based health utility index. It is a generic measure, as opposed to one that targets a specific age, disease, or treatment group. Accordingly, the SF-36 has proven useful in surveys of general and specific populations, comparing the relative burden of diseases, and in differentiating the health benefits produced by a wide range of different treatments. This instrument has been translated in more than 50 countries as part of the International Quality of Life Assessment (IQOLA) Project; and studies of reliability and validity (Turner *et al.*, 2002).

The construction of the SF-36 scales and summary measures has three levels: (1) items; (2) eight scales that aggregate 2-10 items each; and, (3) two summary measures that aggregate scales. All but one of the 36 items (self-reported health transition-the first Question) is used to score the eight SF-36 scales. Each item is used in scoring only one scale (Annex-SF-36Measurement Model). SF-36 is a health survey taps eight health concepts: physical functioning, body pain, role limitations due to physical health problems, and role limitations due to personal or emotional

problems, emotional wellbeing, social functioning, general health perception and vitality (SF-36 manual).

Three scales (PF, RP, and BP) correlate most highly with the physical component and contribute most to the scoring of the Physical Component Summary (PCS) measure (Ware *et al.*, 1994). The mental component correlates most highly with the MH, RE, and SF scales, which also contribute most to the scoring of the Mental Component Summary (MCS) measure. Three of the scales (VT, GH, and SF) have noteworthy correlations with both components. Specifically, scales that load highest on the physical component are most responsive to treatments that change physical morbidity, whereas scales loading highest on the mental component respond most to drugs and therapies that target mental health (SF-36 manual).

Validity

Studies of validity generally support the intended meaning of high and low SF-36 scores as documented in the original user's manuals. Because of the widespread use of the SF-36 across a variety of applications, evidence from many types of validity research is relevant to these interpretations. Studies to date have yielded content, concurrent, criterion, construct, and predictive evidence of validity (Ware *et al.*, 1993; Ware *et al.*, 1994).The Validity of SF-36 health questions also have been tested as an appropriate measure for assessments of health related quality of life (HRQOL) for various population groups in Ethiopia, study conducted in butajira (Kebede D, 2004).

Reliability /Chronbach Alpha (α)

The reliability of the eight scales and two summary measures has been estimated using both internal consistency and test-retest methods. With rare exceptions, published reliability statistics have exceeded the minimum standard of 0.70 recommended for measures used in group comparisons in more than 25 studies and most have exceeded 0.80 (McHorney *et al.*, 1994; Ware *et al.*, 1993). A review of the first15 published studies revealed that the median reliability

coefficients for each of the eight scales was equal or greater than 0.80 except for SF, which had a median reliability across studies of 0.76 (Ware *et al.*, 1993).

Cronbach's alpha (Reliability Coefficients) will generally increase when the correlations between the items increase. For this reason the coefficient is also called the internal consistency or the internal consistency reliability of the test. Cronbach alpha is not a statistical test - it is a coefficient of reliability (or consistency). By Increasing the number of items, increase Cronbach's alpha. Additionally, if the average inter-item correlation is low, alpha will be low. As the average inter-item correlation increases, Cronbach's alpha increases as well. (Note that a reliability coefficient of 0.70 or higher is considered "acceptable" in most Social Science research situations) (Cronbach, 1951).

2.4 Significance of the Study

The management of HIV has changed dramatically since the introduction of HAART, consists of a drug regimen that targets the virus at various points in its life cycle and is thus more effective than monotherapy. The drugs that comprise this regimen usually belong to different classes of ARVs.

HAART regimens can be complex and difficult to tolerate. They usually consist of multiple pills that have to be taken two or three times a day and may also need to be taken with food, on an empty stomach or with plenty of fluids (depending on the particular drug). In addition, they have multiple side effects that may limit the patient's willingness to take them and these all make adherence to HAART is questionable.

The increased accessibility to HAART needs to be supported by initiatives to maximize adherence to treatment. Maintenance of viral suppression require maximum patient adherence to ART (Parades, 2000) and irrational use may result in the spread of virus resistant to medicines, decreased quality of life, progression to AIDS, death, and will require regimen change and may increase treatment costs (Bangsberg *et al.*,2000; Hogg *et al.*, 2000).

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ARVs needs nearly perfect adherence (95%-10( )%). Adherence to ARVs is critical if patients to achieve and maintain undetectable viral loac l and avoid preventable opportunistic infecti and resistance. Initial clinical trials of HAART (demonstrated that 80-90% of patients receiv protease inhibitor (PI) therapy could achieve ' viral loads less than four hundred copies/1 however currently in real world clinical practice o nly 50% of patients achieve this goal (Laura 2005).

Adherence is a dynamic process that the levels chang e over time; Influenced by multiple factor: no factor stands alone, requires a combination of pro notion strategies and requires an integrate multidisciplinary team effort. Poor adherence can leac l to serious consequences including failur to prevent viral replication (Adriana and Maria, 2002).

Even though few studied conducted about HAART adhe rence in Ethiopia, these are not enough to address people with different ethnicity, geography, cult ure, language and life style that is basic for future design of nationwide intervention programmes t improve HAART adherence.

This study was conducted in Afar Region that is one of n ne administrative Regions in Ethiopia and found on the main high way of Addis Ababa to Djibo uti road. According to single point HIV prevalence estimate in 2007 there is total of 16,445; 6,754 males and 9,685 females HIV positive population and AIDS prevalence in the Region among all age group is 1.9% while 1.5 and 2.3 for male and female respectively and annual HIV/AIDS death is 1,309. Urban AIDS total prevalence is 10.7% while 8.6 and 12.8 for male and female respectiv ely but Rural AIDS total prevalence is 0.9% while 0.7 and 1.1 for male and female respectively . Since there are 4,339 people ART needs in the Region (MOH, 2007). There is no study condu icted about HAART adherence in the Region before.

With the Objective of filling the gap in previous studies as v vell as with the aim to improving HAART adherence for those in hard to reach populatior i: quantitative and qualitative data collected in this study will give an idea on HAART adherenc e to health planners such as Ministry

of Health and Regional Health Bureau in efforts to develop a scheme for rational use of ARVs. It will also contribute to the Sociological /Anthropological understanding of adherence problems in developing nationwide interventions that will take into consideration the problems faced by people taking HAART in Afar Region as well as in Ethiopia.

It is expected that findings generated from this study contribute generally to come up with better-designed better-directed and more culturally sensitive interventions programmers to improve HAART adherence, to deal with socio-economic and cultural problems associated with non-adherence.

3 OBJECTIVES

3.1 General Objective

To determine the current adherence rate and its determinants and to assess quality of life of PLWHAs who are currently on HAART in Afar Region, Ethiopia.

3.2 Specific Objective

- To determine the current HAART adherence rate
- To identify factors that determine adherence to HAART
- To assess quality of life of PLWHA who are currently on HAART

4 METHODOLOGY

4.1 Study Design

A cross-sectional survey on assessment of factors affecting adherence to HAART was conducted between August 2007 and October 2007 in selected health institution of Afar Region, Ethiopia. Both qualitative and quantitative methods of data collections were employed to gather the data.

Qualitative methods included observations, key informant interview and focus group discussions: Quantitative methods include cross-sectional survey and unannounced pill counts. The two approaches were tending to complement each other to gather information in this study.

4.2 Description of the Study Area

Afar Region is one of the nine administrative councils of Ethiopia. The capital city for the Region is Semera. It has an estimated area of 96,707 square kilometers. Based on figures from the Central Statistical Agency of Ethiopia (CSA) published in 2005, afar has an estimated total population of 1,389,004, consisting of 772,002 men and 617,002 women and has an estimated population density of 14.36 people per square kilometer. Over 90% of the population lives in rural areas leading a nomadic and semi-nomadic lifestyle. During the study time the region had one Zonal hospital, one district hospital, 29 health centers, 29 health stations, 104 Health posts,67 private clinics and 92 drug retail outlets and the health service coverage of the region is 42% (MOH, 2006).

The topography of the Region varies from hilly escarpments of 1,000 – 1,500 m to low land plains that fall in the altitude range of 0 – 100 m above sea level and location of the region lies (8^{o} 40'13'' to 14^{o} 27' 29''N latitude and 39^{0} 51' 13'' to 42^{o} 23' 03'' E longitude in the Rift Valley) (WHO and ANRS, 1988). The capital city Semera and the other towns where study health facilities are found (Awash, Gewane, Logia, mille) on the main high way from Addis Ababa to Djibouti, which results in high exposure for HIV.

This study was conducted with PLWHA in Asaita Health Center, Dubti Zonal Hospital and Awash Health Center.

4.3 Source Population

PLWHA and health care provider working in ART clinics in selected health institution from Afar Region were the source population for the study.

4.4 Study Population

PLWHA on HAART from the identified hospital and health centers in the region as well as healthcare providers working in these units. The following inclusion and exclusion criteria were applied to select the study participants.

4.4.1 Inclusion Criteria

Patients

- Adult (18 years and above)
- PLWHA and on HAART at list for 3 months

Health workers

- Health care providers working in ART clinic (3 month and Above)
- Able to speak the local Language

4.4.2 Exclusion Criteria

Patients

- Below the age of 18 years
- On HAART treatment for less than 3 months

Heath workers

- Working at the care and treatment unit for less than 3 months
- Not able to speak the local Language

4.5 Sampling

4.5.1 Cross-Sectional Survey

Sampling for cross sectional survey was done depending on inclusion and exclusion criteria and patients willing to participate in the study were included.

Sample size calculation:

$$N = \frac{(Za/2)^2 \times P(1-P)}{d^2}$$

When N = sample size

p = adherence rate among PLWHA on HAART, which is assumed to be 50%.

d = marginal error

Z (a/2) =standard normal distribution

Using 95 % confidence interval and marginal error as 5%

$$N = \frac{(1.96)^2 \times 0.5(1-0.5)}{(0.5)^2}$$

$$N = \frac{3.84 \times 0.25}{0.0025} = 384$$

Taking 10% for none response;

$$N = 384 + (10\% \times 384)$$

$$= 384 + (38.4)$$

$$= 422.4$$

$$N = 422$$

qualitative as well as quantitative data collection under supervision of the principal investigator (PI).

The data collectors carried out the cross-sectional survey and unannounced pill-count under the supervision of PI whereas FGDs, key informant interviews and observation of consultation and pharmacy were conducted by both PI and data collectors. In addition, the PI checked the completeness of the collected data on a daily basis in order to maintain consistency and to take action early on problems. Data collection was done between August and October 2007.

Quantitative Data Collection

Cross-Sectional Survey

The survey was conducted using structured questionnaires used in another study (Weiser *et al.*, 2003, Getahun, 2006) but adopted for the local situation. After the participant gave their consent to participate in the study, a self report adherence interview with 15 day and 4 days recall period was administered by data collectors. The interview also solicited demographic, socio-economic, cultural information, general assessment of adherence, report of adherence in the previous two weeks, reason for (none) adherence or abandonment of treatment, motivation aspect of treatment, opinion on the quality of care provided, how to improve adherence and patients quality of life (Using SF-36).

Unannounced Pill-count

In this study unannounced pill count supported with interview was done in 50 km radius from the three health facility. This was done in three conditions, which are with 10km; 20km and 50km radius from the study health facilities and totally 90 HAART users 30 from each site were participated in the study. Health workers/data collectors visited patients' home without informing the patients about their visit (announced visit) and physically count the pills, since patients were asked for their consent when they come for refill to health institution during cross-sectional

survey before two weeks and selection of participant was purposively based on their willing and distance from study sites.

Participants of pill count were interviewed about their trust and relation with health professionals in three health facilities during pill count. The Pharmacy records were used to calculate adherence after factoring it to left to be untaken by the patient. Adherence was computed as the actual number of doses taken divided by the number of doses prescribed over a 4-week period and expressed as a percentage.

Qualitative Data Collection

Focus Group Discussions

This was also done after participants well informed and gave their group consent. The purpose of FGDs was to identify difficulties that are being encountered by people taking ARV treatment, to explore knowledge, beliefs, attitude and behavior on the use of ARVs, and to obtain suggestions/opinions on improving adherence to ARVs. Experienced personnel in the FGD data collection methods were used as a moderator and note taker to facilitate the discussion. (FGD guide annexed).

Observation

Observation was done with a focus on issues such as structural outlay, privacy, conducive environment (confidentiality, structure, cleanliness, and workers' attitudes, availability of Standard Treatment Guidelines (STG) and Standard Operating Procedures (SOP); availability of medicines, and availability of adherence support strategies during consultation and refill at the pharmacy to collect information on the nature of services provided to the patients on ARVs. It was aimed to catch up gaps that may have been left out during cross-sectional survey, FGDs and key informants. This was done using unstructured checklists (Observation Checklist is annexed).

Key Informants

The principal investigator conducted the key informant (KI) interview with the aim to help ART patients adhere to treatment; strategies in place to help them adhere and some of the factor that may lead to sub-optimal adherence.

4.7 Data Quality Assurance

For quality of data, selection of data collectors was done considering their previous experience in conducting qualitative surveys. Data collection tools were translated from English to Amharic language. Selection of study participants was also done based on inclusion criteria. Training of data collectors about approaches and handling of participants was followed by pre-test of the data collection instruments and appropriate modifications were done considering the local setup and culture.

4.8 Data Entry and Analysis

Self report adherence data collected from each study site were coded. Quantitative data entry was done by experienced data entry clerk using EPI-INFO 2007 Version 13.0 and data checking and cleaning was done by principal investigator on daily bases during collection. The data was analyzed using SPSS Version 14.0 computer statistical software. Question for quality of life was entered in SF-36 Excel software (2003) to calculate the Average of eight health concepts and Cronbach Alpha for reliability test. Qualitative data's were presented with themes and tables.

4.8.1 Quantitative Data Analysis

Cross-Sectional Survey

From self report data frequency analyses and simple distributions were obtained. Binary logistic regression was used to evaluate the association between adherence and possible barriers of adherence. Multiple logistic regression analyses were used to control for possible confounders and to examine the predictive value of possible barriers of adherence on reported adherence

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scores. Adherence rate from self report was calculated as: subtracting the number of doses remains from the number of doses issued and the result gives the amount dose of HAART used. The amount used is then divided by the expected amount of doses and multiplied by 100 to determine the percentage of adherence.

$$\% \text{ Adherence} = \frac{\text{\# of doses patient should have taken} - \text{\# of doses missed}}{\text{\# of doses patient should have taken}} \times 100\%$$

Adherence was defined as > 95% of the prescribed doses taken. Variables were considered for evaluation in the multivariate logistic regression model if they achieved a P-value < 0.05 in the analysis, to find the best predictive variables for the antiretroviral adherence score. For all tests of statistical significance, the alpha level 0.05 was used. Questions about perception for 90 participants was analyzed and presented using graphs.

Quality of life was analyzed for average of eight health concepts using short form 36 questions (SF-36) to calculate the average of eight health concepts and Cronbach Alpha for reliability test. Since the aim of the study was to identify factors that limit or facilitates HAART adherence. The results obtained about quality of life were compared again in SPSS software to check whether the eight health concepts associated or not with HAART adherence factors or not by comparing with dependent (outcome) Variables; Adherence and QOL and with different possible confounder.

Unannounced Pill-Count

Percent of adherence were calculated by subtracting the number of pills returned from the number of pills issued. This provided the amount of medication used by the patient in that month. The amount used is then divided by the expected amount and multiplied by 100 to determine the percentage adherence per participant. And the result changed to graphs using computer Excel 2007.

$$\% \text{ Adherence} = \frac{\text{\# of pills patient should have taken} - \text{\# of pills missed}}{\text{\# of pills patient should have taken}} \times 100\%$$

4.8.2 Qualitative Data Analysis

Qualitative methods, using narrative and observation rather than numerical data, are increasingly being used in health care settings where they are seen to 'reach the parts other methods cannot reach' Qualitative research is particularly good at answering the 'why', 'what' or 'how' questions and problems that couldn't be addressed in quantitative techniques' (Pope and Mays 1996).Since qualitative research can explore the complexity, for example meaning of social phenomena, experiences of illness and the meanings of apparently data for irrational behavior such as unsafe sex. The mass of words generated by FGDs, interviews and observations were described and summarized into matrices, figures and tables (Bailey J, 2000, Lacey A, 2001).).

Data analysis was carried out using typological or thematic coding (Hatch, 2002). The themes were generated when similar issues and ideas expressed by participants within qualitative methods used in this study and brought together into a single category or cluster. This was done to identify the relationships between various themes that have been identified or to relate behavior or ideas with HAART adherence and socioeconomic and demographic characteristics of respondents such as Income, age, gender etc.

4.9 Variables

Dependent Variables

The dependent or the outcome variables are adherence and Quality of Life (QOL). Adherence was measured using patients self report, FGD, Observation, key informants, unannounced pill count. QOL was measured using SF-36 (short form 36 Questions) health survey questionnaires.

Independent Variables

- Demographic characteristics: age, sex, religion, ethnicity, marital status.
- Regimen factor: pill load, side effects
- Service factor: confidentiality, patient-health care provider relation ship
- Socio-economic factors: level of education, employment status, income

- social support, knowledge about treatment, time with virus, CD_4 count, disclosure, time with virus, time with HAART,

4.10 Ethical Consideration

Permission was obtained from the Afar Region Health Bureau and head of the health facilities. Ethical clearance was obtained from school of pharmacy, Addis Ababa University Ethics committee as well as National Ethics Review Committee from Science and Technology Agency and verbal as well as written and signed informed consent was obtained from the interviewees'. Unauthorized persons will not have access to the data collected and any information regarding the research. Identification number assigned for each subject of study participant, and these subject identifiers were not being released outside the investigator. Codes were used and no identification be made for the respondents and PI only access the data. (Ethical clearance form also attached).

4.11 Operational / Working definitions

Adherence: the extent to which a person's behavior-taking medication, following a diet, and/or executing lifestyle changes, corresponds with agreed recommendations from a health care provider (2003).

Quality of life: it reflects the difference, the gap, between the hopes and expectations of a person and their present HIV/AIDS experience and measured using a generic short form (SF-36) an 8-scale profile of functional health and well-being to measure impact of HIV/AIDS on individual patient standards of quality of life.

CD4- count: cells that recognize and help destroy viruses in the body and the count determines the stage of HIV/AIDS in the blood.

Optimal Adherence: 95% or greater consumption of ARVs in the last 3 months (with minimum of 1 skip dose in a week)

5 RESULTS

This chapter details the findings of quantitative data collection which was carried out as cross sectional survey (self report) and unannounced pill count. The chapter also presents the results of the qualitative data collection using FGDs, observation and key informants for HAART adherence in three study sites.

5.1 Results of quantitative Survey

Socio-economic and Demographic Information of Participants

Total of 422 participants from three study sites participated in this study. A little more than half of the participants, 222 (52.6%) were females and 200 (47.4%) were males with a mean age of 35.8 years. Most of participants, 276 (65.4%) were from Dubti area followed by 85(20.1%) from Asaita and 60 (14.2%) from Awash study sites. The majority of the participants were in the age group 25-44.

Most of the respondents were from Amhara Ethnic group 351 (83.2%), while 24 (5.7%) from Afar and the rest were from Oromo, Argoba and Somali. Also 226 (53.6%) of respondents were Muslims while, 184(43.6%) were Orthodox christians and the rest were Protestants. Ninety two (21.8%) of participants had completed primary education and over 151(35%) had completed secondary education and 179 (42.5%) of the patients had never been to school. Socio-Demographic data are summarized in Table 5.1.

Regarding marital status, 56 (13.3%) widowed due to HIV/AIDS, 166 (33.3%) live alone, 137 (32.5%) live with their spouse while the rest live with their family, relatives, friends and their children. The largest proportion of the respondents, 258 (61.1%) were employed while 164 (38.9%) were unemployed. The most prominent occupation was business owner accounting for 114 (27%). About 57 (13.5%) of participants were lose their job because of too sick to carry on working due to HIV/AIDS.

Table 5.1. **Demographic characteristics of the study participants, Afar Region, 2007**

Characteristics	No (%) N=422
Gender	
Male	222 (52.6)
Female	200(47.4)
Age (years)	
< 25	74(17.5)
25-34	146(34.6)
35-44	124(29.4)
45-54	52(12.3)
> 54	25(5.9)
Level of education	
None or incomplete primary	271(64.3)
Secondary	132(31.3)
Tertiary or Vocational	19(4.5)
Marital Status	
Married	180(42.7)
Never married	72(17.1)
Divorced /separated	109(25.8)
Widowed	56(13.3)
Employment status	
Employed	258(61.1)
Unemployed	164(38.9)
Total	**422**

Social Support and Disclosure

Majority of the participants, 351 (83%) knew their HIV serostatus before six months. About 365 (86.5%) of the respondents had disclosed their HIV serostatus and of these, 201 (55.1%) disclosed their status for their partner, 258 (70.7%) for friends and 205 (56.2%) for neighbors and community. Only 57 (13.5%) did not disclosed their serostatus to anyone.

From the total of 422 participants, 143 (33.9%) had family support and 133 (95.0%) of them were happy about the support and supports were like physical, moral and psychological. One hundred thirty nine (32.9%) of respondents had also other supports from, 97 (23.0%) friends, 19 (14%) from NGOs, 48 (11.4%) religious organizations, 57 (13.5%) working areas and colleague and 11 (2.6%) from other sources.

Types of supports outside family members were, 127 (30.1%) moral and psychological, 119 (28.2%) financial, 38 (9.0%) physical support, 34 (8.1%) income generating job and 22 (5.2%) food support. Only 127 (30.1%) were happy about the support they get outside their family.

Alcohol, khat, shisha (meda'a) and cigarette addiction

From total of 422 respondents, 18 (4.3%) took alcohol and this was assessed using 15 days (2 weeks) recall period and only one participant has taken four bottles of alcohol once during those two weeks. Two respondents experienced taking Hashish before six months and only one respondent taking shisha (meda'a) once or two times a week. From the total, 32 (7.0%) of respondents were chewing khat, which was 22 (5.2%) in last six months and four respondents with a frequency of daily and six of them reported as they chew khat once a month.

Knowledge on HIV/AIDS and HAAART

Participants were asked about how long were they taking HIV medications (in month) and the result is presented in fig.4.1. Most of the participants, 371(88%) had been on treatment for less than 24 months and this show that the Program was started in the Region recently.

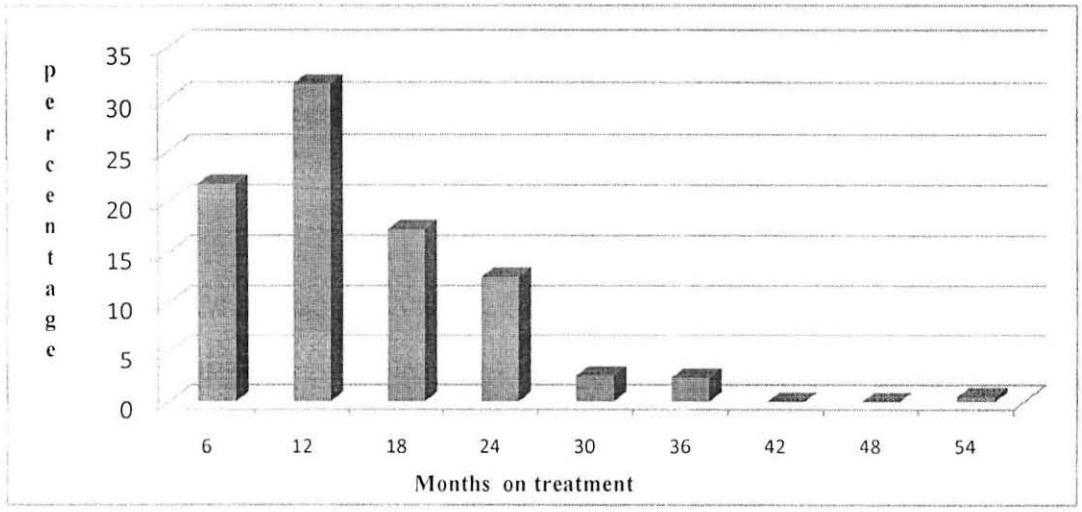

Figure II. Distribution in month on HAART for study population, Afar Region, 2007

Regarding users knowledge of the regimen from the total of 422 participants only 177 (41.9%) of respondents could identify their regimens; of these18 (4.3%) were tried to identify their regimen by name while the rest by color and packages of medicine.

The adherence rate obtained from self report for two weeks recall period was, 402 (95.3%) and 20 (4.7%) of the respondents have missed their medication at least three times and above. Of those respondents adhere to HAART, 44 (10.4%) followed exactly special instruction during taking medication (like with much water), only three respondents were not following the instruction.

About experience on missing their medication to take on time, 24 (4.7%) have missed their medication in last two weeks. Twenty five (5.9%) discontinued their medicine for more than a week one to four times due to different reasons, (like so busy, due to travel without medication, forgetting and regimen factor like side effects).

From the total 422, 402 (95.3%) participants were taking their medication following the instruction given from the health care provider and their reasons were, 182 (43.1%) due to improvement of their health, 103 (24.4%) trust in medication, 62 (14.7%) due to effective counseling and 8 (1.9%) due to family support. Reasons for missed medication summarized in Table 5.2 below.

Table 5.2. Reasons for missing of ARVs in Afar Region, 2007.

Reasons	No. of respondent cited as reason	% reported
lack of food needed for the drug	7	18
ARVs had too many side effects / toxicities	2	5
Too busy doing other things	6	15
Traveling so could not keep the routine	10	26
Felt better and feel the need to continue medication	3	8
Found it very difficult to take so many pills	5	13
Health worker / physician told me to stop	6	15
Total	39	100

*one respondent may choose one or more reason

Knowledge About Illness

Only 126 (30.0%) of participants responded their CD4 cont was checked only once throughout the treatment and rest had twice or more. 92 (21.9%) have started ART without CD4 count. According to respondents, their first CD4 count ranged from 19-426 and the recent CD4 count were ranges from 122-719. One hundred ninety three (45.7%) and 161 (38.2%) of participant couldn't remember their recent as well as first CD4 counts respectively.

Out of the total, 190 (45.0%) perceive that CD4 is sign of improvement on Health while 129 (30.6%) don't know what is to mean. From all (422) study participants, 67 (15.9%) had experience of admission to hospital due to HIV/AIDS in last one year and that is 45 (10.7%) of them one time, 11 (2.6%) two times, 2 (0.5%) three times, 3 (0.7%) four times and only one person had admitted ten times.

Beliefs and Perception Regarding ART

Near half of participant, 210 (49.8%) strongly agree that ARV can prolong their lives. Users were also asked whether taking of ARV as prescribed can improve health or not and has positive effect on their life, 416 (98.6%) of respondents agreed and only 4 (0.9%) strongly disagree. Most of respondents, 409 (96.9%) agreed about effectiveness of ARV in controlling the effects of HIV. Four hundred twelve (97.6%) of the total participants agreed that ARVs if not taken properly, will not work as well and cannot control the virus and 25 (6.0%) disagreed that HIV/AIDS becomes less serious due to ARVs.

Majority of, 395 (93.6%), respondent agreed that with ARVs HIV/AIDS can be managed now like any other disease and 315 (98.4%) also agreed that ARVs can make the virus undetectable or decreases in the blood, while 38 (9.0%) miss-understood that as ARVs can cure HIV/AIDS, 198 (46.9%) strongly disagreed on this idea.

5.1.1 SF-36 Quality of Life Survey

A total of 422 participants were interviewed using SF-36 health survey instrument for participants view about their health and to keep track of how users feel and how well they were able to do well their usual activities. Results from SF-36 health survey are presented in tables.

Table 5.3. Eight health components, number of items and reliability coefficient alpha (α) score of HAART users in Afar Region, 2007.

Scale	No of items	Alpha(α)
PF	10	.923
RP	4	.925
BP	2	.6
GH	5	.623
VT	4	.567
SF	2	.6
RE	3	.931
MH	5	.730

Table (5.3) reports of Alpha (α) which specifically indicates reliability of the test for PF, RP, RE and MH which is .923, .925, .931 and .730 respectively and other components were below 0.7. Since there is no cut off point for Alpha, but 0.7 and above was considered as a good measure for reliability.

Table 5.4. Descriptive statistics and average score of eight health scale for both Male and female HAART users in Afar Region, 2007.

Eight Health Scale	Minimum	Maximum	X (s.d)
PF	-50.00	100.00	89.61 (20.60)
RP	.00	100.00	77.72 (20.60)
BP	12.00	100.00	89.53 (16.06)
GH	12.00	100.00	86.84 (16.25)
VT	15.00	90.00	68.89 (16.95)
SF	25.00	100.00	90.99 (16.47)
RE	.00	100.00	79.15 (38.14)
MH	8.00	88.00	74.19 (13.97)
PHS	22.00	98.00	82.39 (16.28)
MHS	23.00	96.00	80.05(15.316)

Averages for eight health scale SF-36 Score for 422 participants ranged from 69 (VT) to 89.24(PF). This was acceptable since it was above 50.

Table 5.5. Mean and standard deviation of health summary score of Male and female HAART users in Afar Region, 2007.

Summary score	Male/X (s.d)	Female/X (s.d)
PF	90.94(19.77)	88.12 (21.44)
RP	78.94(36.98)	76.38 (38.19)
BP	89.72(16.51)	89.32 (15.59)
GH	87.08(16.96)	86.57 (15.46)
VT	70.83(17.96)	66.72 (15.50)
SF	90.62(17.47)	91.41 (15.32)
RE	80.33(37.91)	77.83 (38.45)
MH	74.94(14.40)	73.38 (13.48)
PHS	83.38(17.00)	81.28 (15.42)
MHS	80.80(16.38)	79.22(14.03)

Table.5.6, shows participants in secondary school level were in high PHS and MHS i.e. 88.56 (21.01) and 85.09 (15.01) while 30.50 (82.65) and 79.15 (17.43) for those couldn't read and write also employed had better summary score than unemployed. Participants with optimal adherence level had better physical and mental summery score.

Table 5.6. Mean and Standard deviation of 2-health summary scores in Afar Region, 2007.

Characteristics	PHS- X (s.d)	MHS -X (s.d)
Can't read and right	30.50(82.65)	79.15(17.43)
Secondary School (6-12 grade)	88.56(21.01)	85.09(15.01)
Unemployed	78.36(25.97)	74.67(17.95)
Employed	90.73(18.47)	87.29(12.95)
Had support from family	84.91(22.74)	81.43(17.02)
Whose had support outside	87.32(20.88)	83.79(15.53)
Disclosed their status	86.96(21.96)	83.59(15.92)
Not Disclosed their status	79.31(24.51)	74.72(16.65)
Drink alcohol	81.60(23.83)	79.28(19.46)
Not Drink alcohol	86.12(22.48)	82.53(16.14)
CD4 count $\leq$ 200	91.95(18.19)	88.57(12.38)
CD4 count >200	82.31(20.49)	78.50(17.27)
Adhere to HAART	86.20(22.40)	82.67(16.23)
Not Adhere to HAART	80.39(23.68)	76.70(16.67)

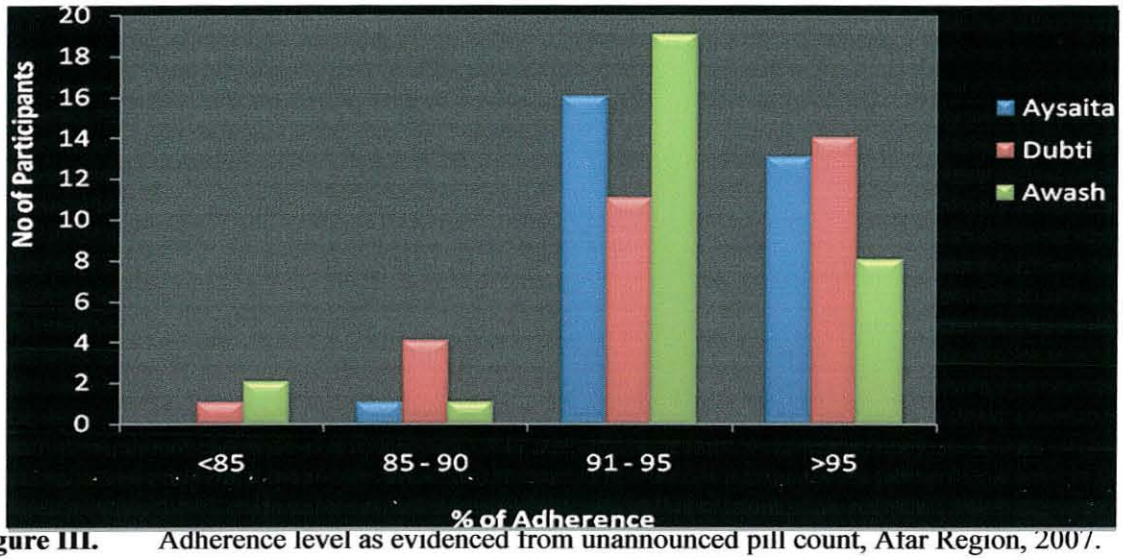

Figure III. Adherence level as evidenced from unannounced pill count, Afar Region, 2007.

5.2 Qualitative Results

5.2.1 Focus Group Discussions

These data were based on HAART user's opinion to identify factors affecting adherence about available treatment, experience of effective adherence counseling, the quality of care, available supports, reasons for non-adherence and good adherence and sources of motivation for adherence. In the discussion on factors affecting adherence, the study identified seven interrelated themes. These are presented below, without any order of priority.

Total of six FGDs with 47 participants, 25(53%) of them were female. All FGD participants were disclosed their serostatus to their family and community. 28(59.6%) Participants were in age group of 25-34. Thirty two percent of FGDs participants were not attending school while the rest in the elementary and secondary school level.

Information on Availability of Treatments for HIV/AIDS

Majority of FGD participants in the three health facilities seemed to be well-informed about HAART. Almost all participants had knowledge that if they stopped taking the ARVs the virus may increase and their body resistance would decline. HAART users from different situation

may increase in number and their body resistance would decline. HAART users from different situations used to state that ARVs had the potential to improve their situation in various aspects like helping them strive for their survival and hoping their future.

Participants forwarded their opinion on available treatments (like ARVs; herbs; traditional medicines; spiritual healing; prayers; and perceived benefit (s) of treatment). Users indicated that HAART were the only choice to control the HIV virus in their body even if some use these available treatments without denying HAART and taking on given time. Perceptions about ARVs seemed uniform among the users. All participants were agreeing that traditional treatments and perceived benefit(s) are more likely to aggravate their HIV status than treating the problem without HAART.

Among the FGD participants in Asaita Health Center, one male participant expressed the impact of using the traditional treatments by saying:

> *I started the traditional medicine with my two colleagues. Fortunate enough I am alive and my colleagues have died.*

A female FGD participant from Asaita was also positive about the impact of ARVs:

> *ARV has a difference and I don't believe that religious practices will treat HIV/AIDS. I also used traditional treatments repeatedly but my health is improved only after I started taking ARVs.*

Similarly, from the same area a female ARV user said:

> *I and my family passed through many challenges and problems. We attempted traditional treatment to cure the problem until we lost our money without any improvement in our health. After we knew our HIV status, we started taking ARVs, we brought change and our weight increased. Therefore, we believe on the ARVs, that they treat HIV/AIDS.*

Meanwhile, female HAART user strengths other participant's beliefs on medication by saying:

> *Even if I face series side effects due to medication I haven't any intention to discontinue because I got big change in my health.*

Regarding health care workers' treatments (handling), a female ARVs user in the FGD session form Awash Health Center stated:

> *Without my will, they offered me two months medicine once and I felt bad for the main reason that I don't have place in my house to put it, I understand they are too busy.*

Female ARVs user from the same area in the FGD session explained:

> *When I started using ARVs, I enjoyed health care workers' treatment it was very good. But recently, they have shortage of professionals.*

A male ARVs participant from Asaita health Center used to say:

> *Health care workers' treatments (handling) is not too bad except that we are suffering the shortage of medicines for OIs.*

A female participant from Asaita Health Center also said:

> *When we take ambulance to the health center, there is no professionals' cooperation. And the other question we have is about supply of medicines for OIs.*

From the same area, a female participant of FGD in Asaita indicted her fear as:

> *If the situation remains like this, we do not have any option without waiting for the time to die because the situation or no medication for other disease and health workers are tiered during our visit. ARVs alone may not improve our health and we are poor to buy these medicines.*

Patients' thoughts were varied regarding the health care workers treatments (handlings) in looking in to their situation and quality of care provided by health care workers. A group of ARVs clients appreciated the way they were treated before. Critics were raised from a group as health care workers were exhausted to treat them and OIs medicines were not adequate especially in the health centers.

Effective Adherence Counseling

Effective adherence counseling is aimed at promoting adherence to ARVs and preventing further transmission of HIV. Users from the three health settings acknowledged that valuable counseling services were provided during voluntary test, start-up, and taking the ARVs.

FGD participants from the three health settings pointed out that there were continuing adherence counseling in HIV/AIDS treatment clinics about the medication and interactions between ARVs and other medicines (including problems with traditional medicines), alcohol and diets to take and not to take.

One of the male FGD participants from Awash indicated:

> *We enjoy professionals' counseling at all about the medicine and they used to tell us not to take 'khat' alcohol and cigarette.*

Some of the participants emphasized the need for continuous counseling. One female ARV user from Dubti said:

> *We are given a lot of information at the beginning; counseling done at once is not adequate to convince as to take the medicines, to follow up and encourage adherence.*

As participants in the FGD from the three health facilities expressed the interrelationship of disclosure to positive HIV status and life-long adherence to ARVs was highly recommended. They also cleared out disclosure of HIV status is the key to promote HAART adherence. As majority of the ARVs users indicated in the FGD session, they disclosed their HIV status to their respective family, workplace and community. Disclosure of HIV status is the necessary behavioral change resulted from continuous counseling, which is required for good health outcomes. Concealed positive HIV status was perceived by many respondents as a major barrier to adherence and aggravates transmission.

As indicated in Dubti Hospital FGD session, there were cases concealing their status and cause some to transmit HIV virus in the community. Participants were suggesting a need of government involvement in pushing HAART users to disclose their status, that is vital for better adherence and to control further transmission.

According to some FGD participants from the three study sites, there are some cases who faces difficulties to disclosing their status to some others and as the result they hide their medicines from friends, relatives, servants and when forced they skip taking medication to ensure that friends and family do not discover their status. FGD participants totally agree that self disclosure affects adherence and aggravates further virus transmission.

One male FGD participant from Dubti said that:

> *Over all, the system and the policy should encourage those who disclosed their status and we all fill that it needs to reconsidered, otherwise the transmission will continue.*

Social Supports and Stigma in the Community, Family and Workplaces

Disclosure was one of the themes that encourages adherence and paves the way to obtain support from the respective available supports. Respondents stated that telling someone (e.g. a friend in the workplace and community or family member) could give confidence in support of adherence and enhance concerns. Many participants discussed issues relating to lack of self-motivation, lack of community support, fear of stigma and leaving positive HIV status private concerns acted as major barriers to or results in low adherence.

However, interviews with key informants and FGD participants revealed that stigma is still prevalent in society. As some participant said they are affected by stigma both at home and in workplace, they also indicate this could affect both disclosure and adherence.

According to one Afar female FGD participant in Asaita:

We need to have job that will help us to generate our income and this may encourage us to improve adherence. Otherwise how we can to take ARVs without food? Because taking ARVs need to have variety of good food.

The regimen complexity also raised by one male participant in Dubti:

I always hope the medicines to be changed to the one drug and to be taken once daily or to be like a vaccine once in six month or a year.

On the other hand with all these problems about the ARVs, one female participant from Awash area explained her fear like:

I have a fear that ARVs shortage like other medication will happen in the future due to increase awareness and there is increase in number of ARVs users through time.

Also users from three study sites suggested that improvement of ARVs dosage form as a factor to promote adherence to ARVs; like substituting ARVs tablets by injection or reducing the number of pills taken per day, incorporate opportunistic infection treatment with ARVs and a medicine that could be taken without much diet variety.

All-sided support from the government, NGOs, stakeholders in HIV/AIDS prevention and control, respective families, local communities, workplace settings, etc were thought as to help ARVs users adhere more easily to their treatment. As majority of the FGD participants emphasized in their expression, self-help development programs design and implementations are mandatory in order to help them build self-motivation, moral and develop or change diet scheme by increasing their income.

Integration of the ART clinics with other services was discussed among the users, HIV clinics found semi-integrated with other services in all health care facilities of three study sites. Some respondents perceived the partial integration of ART with other health services as exposing them to the likelihood of being stigmatized, some also suggest this may facilitate the service and decrease their waiting time in the health care service. To the opposite some have the idea that the

service should be totally integrated with other services, as one ARV user from Awash health center explained:

> *Some may use this opportunity as advantage to hide their status in the society and this is one problem to control the transmission. If HIV services are integrated with other services, users may not fear to disclose their status to the community, this may improve adherence and decrease HIV/AIDS transmission.*

5.2.2 Observation of Health Facilities

ART program started in the Region on may 2005 in Dubti hospital and the program expanded in Asaita and Awash health centers later.

Table 5.9. **ART Service details of each study site, Afar Region, 2007.**

Study sites	Date HAART started	Total no. on treatment at facility by Oct. 2007	Average no. of patients consulted per day including ARV users	Average no. of patients for ARV medication refilling per day
Dubti Hospital	May 2005	530	45	17
Awash Health Center	Aug. 2006	107	25	4
Asaita Health Center	Oct 2005	134	19	5
Total		**771**	**89**	**26**

In all study sites ART clinics, adherence counseling, waiting areas for refill and laboratory were found separated from other service. This was except for pharmacy services in Asaita Health center that is together with other services. Dubti Hospital and Awash health center has adequate space for laboratory services with adequate shade, and seats provided for the patients in the waiting area. However in Dubti hospital and Asaita Health center there is problem of confidentiality and good counseling because of two to three counselors sharing one room. In Asaita there was no enough space and seats in the waiting areas. In contrast, in Awash Health center there is enough space for confidentiality, good adherence counseling, laboratory services with adequate shade, and seats provided for the patients in the waiting area.

In Dubti Hospital and Awash Health center ART clinics were found clean. At each health facilities posters were strategically placed within ART clinics, mainly explaining the importance of counseling, early testing, adherence to ARVs and the fact that these medicines suppress the virus but are not a cure for the disease. Some of the posters were in English and others in Local language (Afar) and Amharic.

About support from other organizations, the International Training, Education and Care on HIV/AIDS (ITECH) project had assigned social workers, data clerk, different office supplies and computers for each study site. In all study sites, especially in Asaita Health Center the services of the ART laboratory, counseling room and testing center were inadequate.

Table 5.10. Summary of ART staff in three study sites, Afar Region, 2007.

Study sites	Physicians/ HO	Nurses	Social Workers	Lab. Personnel	Pharmacy Personnel	Data Entry Clerks
Dubti Hospital	4	4	1	4	2	1
Asaita Health Center	1	3	-	2	1	1
Awash Health Center	3	2	-	3	2	1
Total	8	8	1	9	2	1

*HO- health officer

In Dubti Hospital there are brochures in front of each counselor that is open to take for Users. All Health facilities operated Monday to Friday. Dubti Hospital ART clinic works half a day on Saturday in addition to the week days that is to decrease burden due to shortage of Health professions in working days.

There was difference in adherence support mechanisms between three study sites. In Dubti Hospital there is one social worker that is to identifying patients' who have adherence problems and drop- outs (who's discontinued taking medication on their appointments) at the same time to identify the reasons for non-adherence. In both health center method of counseling used and in the follow-up of patients who were not achieving optimal adherence or who had stopped taking the ARVs done during patient coming for refill or in any case when they come to the health

Disclosing the HIV status to family and other significant persons has a strong association with adherence. This may due to the fact that patients whose disclose their status may take their medication anywhere without fear or stigma. However there is a great variability in different cultures; close family and friends are often influential in improving adherence in some settings (Bernared *et al.*, 1994).

According to (Gatahun, 2006), only 22% of the participants were not disclosed their HIV status to their family, while in our findings 13% made their disease secret from their spouses ,community, family and friends while 87% had disclosed their HIV status. This difference could be attributed to the difference in the study population, study time, knowledge about HIV/AIDS and culture. In comparison with other studies on self-report adherence, those gaining greatest support and disclosure from their family have a better adherence score. Social support is often cited as having a great influence on a patient's treatment adherence (Bernared *et al.*, 1994), but not in this study.

There is also strong association between adherence, time with virus and time with HAART; patient's long time with virus and HAART have better understanding of adherence than that short time with virus and HAART. This was due to trust in medication, improvement of health through time and long experience to remember and to take on time.

Pill burden was negatively associated with HAART adherence, taking too many pills were less likely to be adherent than other groups whose taking small number of pills in this study, which indicate adherence level decrease with increase number of tablets. This was true also in other studies, complexity of the treatment regimen and the pill burden are negatively associated with ARV treatment adherence (Paterson *et al.*, 200, Chesney, 2000, Remien, 2003).

The reasons for most of, 402 (95.3%) participants to take their medication following the instruction given from the health care provider were due to improvement of their health, trust in medication, due to effective counseling and family support. 4.7% of participants in self report

AIDS management and should be done seriously; but the nurses at Asaita as well as in Awash Health Center have a dual role as counselors and nurses. From observations of health care facilities there was no adequate confidentiality for patients and enough consultation rooms. This can decrease the quality of care provided for patients and may result in poor adherence. This double burden on the nurses may come with problem to give quality counseling and care to their patients. According to FGDs also, health care workers treatment in health center provisions and counseling services were decline time to time. This was due to many patients attending HIV/AIDS clinics without expansion of health care services and increase number of health professionals.

As sited in FGDs stigma is still a barrier for some people and they are not ready for HIV test and let remain in their homes concealing their disease and suffering from other ailments such as tuberculosis and malaria. Stigma is also the biggest problem reported by most patients receiving ARV therapy in low-income countries. Due to stigma, 69% and 94% of the patients kept their HIV status secret from their families and community members respectively in the study conducted in Botswana (Weiser et. al., 2003).

There were different ideas in all FGDs about integration of ART clinics with other health service and some were reported as may expose them to being stigmatized, whereas some suggest partial or total integration may facilitate the service to decrease their waiting time in pharmacy and improves disclosure and adherence. Shortage of medicines for OIs was a major issue raised by FGD participants in Asaita, this may also aggravate the patient's pain and may impair adherence.

Better improvement of ARVs dosages form as a factor to promote adherence to ARVs: substituting ARVs tablets by injection or reducing the frequency of dosing, incorporating OIs treatment and introducing medicine that could be taken without much diet variety were mentioned by participants in three study sites as factors that should be considered to improve adherence. In self report adherence assessment pill burden was also negatively associated with adherence.

7 LIMITATIONS AND STRENGTHS OF THE STUDY

Social desirability as well as interviewer bias might have influenced the results of this study, because all data collectors were health care providers from study health facilities. However, a number of steps were taken to reduce the impact of biases:

- Training of data collectors for all objectives of the study and to improve their knowledge in introducing well to research participants.
- Participants were asked for their written and signed consent for confidentiality.

All FGDs and Unannounced pill-count participant were patients who disclose their status so, those who did not disclose their status may have different and better idea on HAART adherence improvement.

All of these methods have both strengths and weaknesses. Pill count is in some ways the most 'objective', it measures the number of pills left over from the previous refill, and can act as a very good proxy indicator for actual pill intake. It is, however, subject to manipulation by patients who may fear a bad response from health workers.

Despite these limitations, this study provides useful information about the HAART adherence behaviors and factors associated with adherence in Afar Region. Furthermore both quantitative and qualitative methods were used to explicit of group interaction and to produce data and insight that would be less accessible without the interaction found in a group. In addition the presence of an interviewer from health care professionals can increase cooperation rates and make it possible for respondents to get immediate clarification.

- Since pill burden is a substantial issue simplifying dosage regimens (both dosage frequency and numbers of tablets) is important in improving adherence.
- Train extra numbers of staffs in adherence counseling and continuously update their knowledge about HIV/AIDS is important to improve adherence to HAART.
- Establishing reliable drug supply, ARV as well as other medication for opportunistic infections. There was some concern that the medicine supply chain is not yet reliable.
- Since this is a cross-sectional study, study with intervention with some adherence support program may address better result for factors on non adherence.
- The organization of the health care delivery system should be designed to be comfortable for patient's confidentiality.
- The effect of quality of life on adherence should be examined in different setting, culture and socioeconomic status, because they may be very important in determining how self-adherence is defined and how decisions are made on an individual level.

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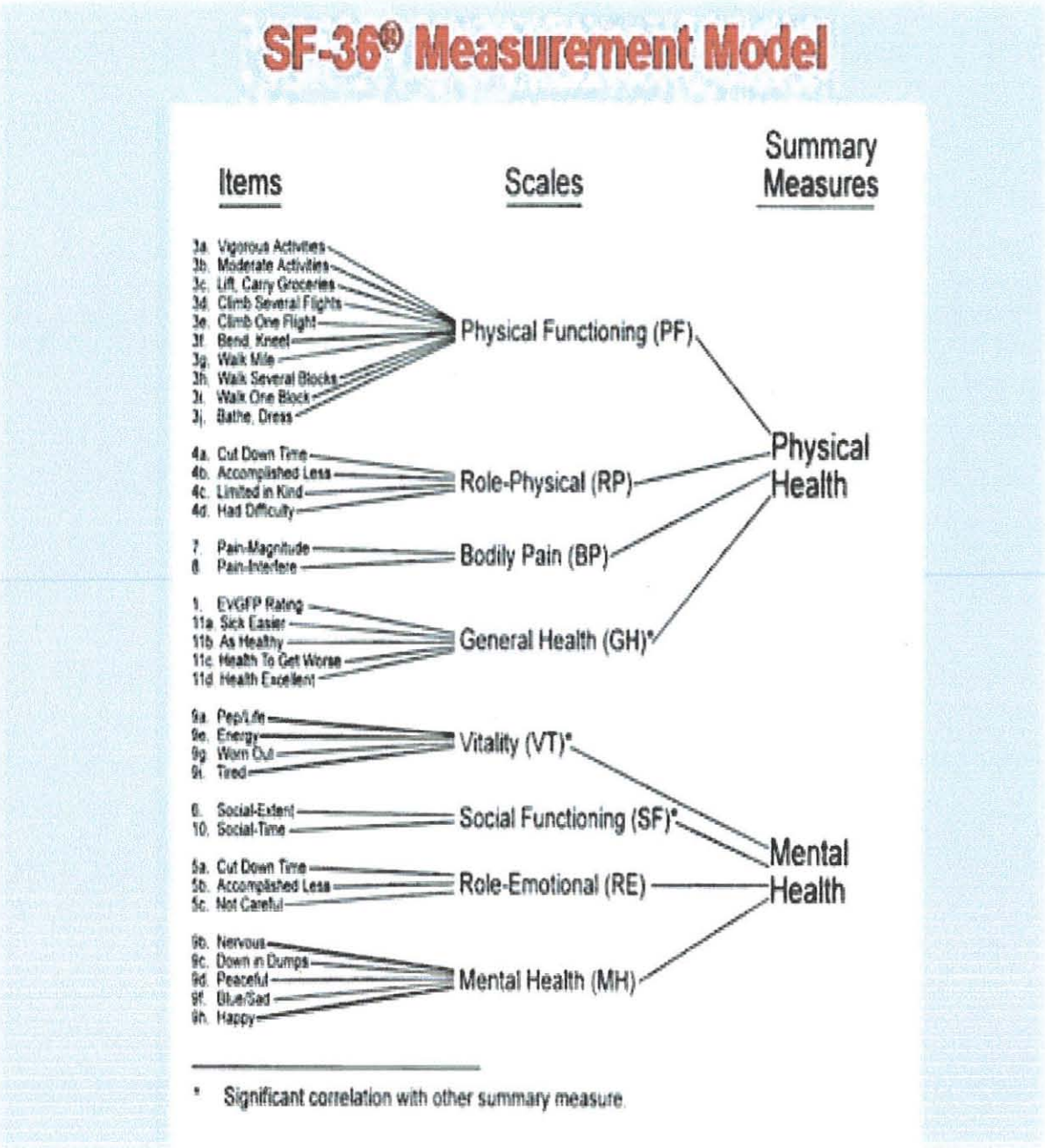
ANNEX 1 : Map of Ethiopia

Dubti Awash Aysaita

Adapted from:

http://go.hrw.com/atlas/norm_htm/ethiopia.htm

ANNEX 3 : SF-36 Measurement Model



ANNEX 4 : SF-36 QOL Scoring System

Items	Scales	Dimensions	
3. vigorous activities	Scale-1 Physical functioning (PF)	Dimension-A: Physical Health Summary (PHS)	
4. moderate activities			
5. lift, carry groceries			
6. climb several flights			
7. climb one flight			
8. bend, kneel			
9. walk a mile			
10. walk several blocks			
11. walk one block			
12. bathe, dress			
13. cut down time	Scale-2 Role-physical (RP)		
14. accomplished less			
15. limited in time			
16. had difficulty			
21. pain magnitude	Scale-3 Bodily pain (BP)		
22. pain interference			
1. general health rating	Scale-4 General health (GH)		Dimension-B: Mental Health Summary (MHS)
36. excellent			
34. as healthy as anyone			
33. sick easier			
35. health worse			
23. full of life	Scale-5 Vitality (VT)		
27. energy			
29. worn out			
31. tired			
32. social extent	Scale-6 Social functioning (SF)		
20. social time			
17. cut down time	Scale-7 Role emotional (RE)		
18. accomplished less			
19. not careful			
24. nervous	Scale-8 Mental health (MH)		
25. down in dumps			
26. peaceful			
28. blue/sad			
30. happy			
2. change in reported health			

The structure of SF-36 scoring system adapted from Zadeh et al., (2001).

ANNEX 6 : Informed Consent

In treating HIV/AIDS it is important to follow the prescribed dosage otherwise there is a risk that the medicines will be less effective. Earlier studies show that it is difficult to achieve good adherence. The purpose of this study is to understand how patients are adhering to the antiretroviral use and what barriers they have for their non-adherence, and also to know how adherence affects patients' quality of life. The results obtained from this study are useful in order to develop better strategies and solve the problems for the future.

You are asked to sign an informed consent specifically agreeing to participate in the study. Your participation in the study is voluntary and that you can chose not to be in the study or withdraw at any time. Your refusal to participate will in no way affect your service at the hospital. Reports of the data collected will be presented in the aggregate and that all personal identifiers will be removed and also no personal identifying information will be forwarded to study.

You may not personally derive any benefits from participating in the study. Study findings will be used to better meet the adherence support needs of PLWHA across the country.

Your personal information will be maintained through the use of unique identifiers, and through restricting access to the data set to the principal investigator and those working directly with him. The data collected from each site will be entered into a computer where it will be maintained in password control. Hard copies of completed instruments will be kept in a locked file and will be available only for research study staff. The information that you provide to the interviewer will not be shared with ART care providers at the clinic. The information you provide will be kept completely separate from your medical and other visits records.

If you have any questions please contact one of those responsible for the study:

Zinet yimer Mohammed

Mob: +251911622 343

E-mail: khamzinet@yahoo.com

You are now being asked if you are interested and if you are willing to participate in the study.

We would greatly appreciate your truthful and keen participation in responding to this questionnaire.

Yes I agree _____ Identification Number _____

No, I don't agree _____ Date of Interview _____

Participants Signature _____ Interviewer Name _____

If the answer is ***yes*** the study will continue Supervisor _____

ANNEX 7 : Questionnaire

SECTION I: SOCIO-DEMOGRAPHIC INFORMATION				
QID	**Question**	**Response options/codes**	**Coded Response**	**Skip Pattern**
101	Sex of respondent	Male 01 Female 02	[__|__]	
102	Age	____ _____ Years	[__|__]	
103	Ethnic group	Afar 01 Amhara 02 Tigray 03 Argoba 04 Oromo 05 Other, specify_____ 88	[__|__]	
104	Religion	Muslim **01** Orthodox **02** Protestant **03** Catholic **04** Other, specify _____ **88**	[__|__]	
105	What is your highest educational level?	Can't read and write **01** Adult literacy **02** 1-6 classes of school **03** 6-12 classes of school **04** Diploma and above **05** Vocational **06**	[__|__]	
106	What is your current marital status?	Currently married **01** Cohabiting (Not married but Living with partner) **02** Single (Never married) **03** Divorced/Separated **04** Widowed **05** Other _____ **88**	[__|__]	**If u're answer is 4/5 skip to 108**
107	If divorced or separated or widowed, was the divorce /separation / death of your partner due to HIV?	Yes **01** No **02** Don't Know **99** N/A **98**	[__|__]	
108	Whom do you currently live with at home?	By your self **01** Partner/spouse **02** Parents **03** Relatives **04** Children **05** Friends **06** Other (specify)_____ **88**	[__|__] [__|__] [__|__] [__|__] [__|__] [__|__]	
109	Are you employed?	Yes **01** No **02**	[__|__]	**If no skip to 113**
110	Do you work on full time or part time basis?	Full time work **01** Part time work **02** Temporary work **03**	[__|__]	
111	Where do you work?	Government office **01** Private sector **02** Self employed **03**	[__|__]	

	What kind of support do you get from outside your home?	Not Mentioned **02** N/A **98** a) Psychological support ..... b) Financial support ..... c) Physical care and support ..... d) Income generating activities ..... e) Nutritional support ..... f) Other (specify)	[__|__] [__|__] [__|__] [__|__] [__|__] [__|__]	
210	In general, how satisfied are you with the overall support you get from outside your home?	Not satisfied **01** Moderately satisfied **02** Very satisfied **03** **N/A 98**	[__|__]	

SECTION III: ALCOHOL AND DRUG ABUSE

301	Do you drink alcohol?	No 01 Yes 02 N/A 98		If u're answer is no skip to 305
302	For how many day's have you had an alcoholic drink in the last 15 days (two weeks)?	_____ I don't remember **98**	[__|__]	If u're answer is I don't remember skip to 305
303	On the days you drank any alcoholic drinks in the past 15 days, how much alcohol did you usually have altogether on an average per day?	_____ I don't remember **98**	[__|__]	
304	On the day you drank alcohol how much amount of alcohol did you take?	I don't remember **98**		

305	DRUG ABUSE			
	A) Have you ever used (name of drug)?		B) Have you used it in the last 6 months?	C) How often have you used it in the last 6 months?
		01Yes 02 No If no skip to next drug	01 Yes 02 No N/A 98 If no skip to next drug	01 Once a month 02 2-3 times a month 03 Once or twice a week 04 3-4 times a week 05 Nearly every day 06 Daily 98 N/A
	Hashish	[__|__]	[__|__]	[__|__]
	Shisha	[__|__]	[__|__]	[__|__]
	Khat	[__|__]	[__|__]	[__|__]
	Cigarette	[__|__]	[__|__]	[__|__]

SECTION IV: CURRENT USE OF ARVs				
QID	**Questions**	**Coding Categories**	**Coded responses**	**Skip pattern**
401	Since how long are you taking ARV/HIV medications?	Years.....months..... I don't remember 98	[__|__]__]	

604	When ARV medications are not taken properly the medications do not work as well and the virus is not controlled	Yes **01** No **02**	[__|__]
605	HIV/AIDS has become less serious because of ARV medications	Yes **01** No **02**	[__|__]
606	With ARV medications HIV/AIDS can be managed now like any other disease	Yes **01** No **02**	[__|__]
607	ARV medications can make the virus undetectable in the blood	Yes **01** No **02**	[__|__]
608	If taken within short time after being infected, ARV medications can cure HIV	Yes **01** No **02**	[__|__]

Section VII: Quality of Life (SF-36) Health survey

SF-36 Health Survey. Instructions: This set of questions asks for your views about your health. This information will help keep track of how you feel and how well you are able to do your usual activities.

No	Questions	Coding categories	Code
701	In general, would you say your health is:	Excellent **01** Very Good **02** Good **03** Fair **04** Poor **05**	[__|__]
702	Compared to one year ago, how would you rate your health in general now?	Much better than one year ago **01** Somewhat better now than one year ago **02** About the same as one year ago **03** Somewhat worse now than one year ago **04** Much worse now than one year ago **05**	[__|__]
703	The following questions are about activities you might do during a typical day. Does your health now limit you in these activities? If so, how much? (Please circle one number on each line)		
	Activities…		
703i	Vigorous activities, such as running, lifting heavy objects, participating in strenuous sports	Yes, Limited A Lot **01** Yes, Limited A Little **02** Not Limited At All **03**	[__|__]
703ii	Moderate activities, such as moving a table, moving a chair, cleaning home….	Yes, Limited A Lot **01** Yes, Limited A Little **02** Not Limited At All **03**	[__|__]
703iii	Lifting or carrying groceries	Yes, Limited A Lot **01** Yes, Limited A Little**02** Not Limited At All **03**	[__|__]
703iv	Climbing several flights of stairs/hills	Yes, Limited A Lot **01** Yes, Limited A Little**02** Not Limited At All **03**	[__|__]
703v	Climbing one flight of stairs/hills	Yes, Limited A Lot **01** Yes, Limited A Little**02** Not Limited At All **03**	[__|__]
703vi	Bending, kneeling, or stooping	Yes, Limited A Lot **01** Yes, Limited A Little**02**	[__|__]

		Not Limited At All **03**	
703vii	Walking more than a mile	Yes, Limited A Lot **01** Yes, Limited A Little**02** Not Limited At All **03**	[__|__]
703viii	Walking several blocks	Yes, Limited A Lot **01** Yes, Limited A Little**02** Not Limited At All **03**	[__|__]
703ix	Walking one block	Yes, Limited A Lot **01** Yes, Limited A Little**02** Not Limited At All **03**	[__|__]
703x	Bathing or dressing yourself	Yes, Limited A Lot **01** Yes, Limited A Little**02** Not Limited At All **03**	[__|__]
804	During the <u>past 4 weeks</u>, have you had any of the following problems with your work or other regular daily activities <u>as a result of your physical health</u>?		
704i	Cut down on the amount of time you spent on work or other activities	Yes **01** No **02**	[__|__]
704ii	Accomplished less than you would like	Yes **01** No **02**	[__|__]
704iii	Were limited in the kind of work or other activities	Yes **01** No **02**	[__|__]
704iv	Had difficulty performing the work or other activities (for example, it took extra effort)	Yes **01** No **02**	[__|__]
705	During the <u>past 4 weeks</u>, have you had any of the following problems with your work or other regular daily activities <u>as a result of any emotional problems</u> (such as feeling depressed or anxious)? (Please circle one number on each line.)		
705i	Cut down on the amount of time you spent on work or other activities	Yes **01** No **02**	[__|__]
705ii	Accomplished less than you would like	Yes **01** No **02**	[__|__]
705iii	Didn't do work or other activities as carefully as usual	Yes **01** No **02**	[__|__]
706	During the <u>past 4 weeks</u>, to what extent has your physical health or emotional problems interfered with your normal social activities with family, friends, neighbors, or groups?	Not at all **01** Slightly **02** Moderately **03** Quite a bit **04** Extremely **05**	[__|__]
707	How much <u>physical</u> pain have you had during the <u>past 4 weeks</u>?	None **01** Very mild **02** Mild **03** Moderate **04** Severe **05** Very Severe **06**	[__|__]
708	During the <u>past 4 weeks</u>, how much did <u>pain</u> interfere with your normal work (including both work outside the home and housework)?	Not at all **01** A little bit **02** Moderately **03** Quite a bit **04** Extremely **05**	[__|__]

709	These questions are about how you feel and how things have been with you during the past 4 weeks. Please give the one answer that is closest to the way you have been feeling for each item.		
709i	Did you feel full of life?	All of the Time 01 Most of the Time 02 A Good Bit of the Time 03 Some of the Time 04 A Little of the Time 05 None of the Time 06	[__|__]
709ii	Have you been a very nervous person?	All of the Time 01 Most of the Time 02 A Good Bit of the Time 03 Some of the Time 04 A Little of the Time 05 None of the Time 06	[__|__]
709iii	Have you felt so down in the dumps that nothing could cheer you up?	All of the Time 01 Most of the Time 02 A Good Bit of the Time 03 Some of the Time 04 A Little of the Time 05 None of the Time 06	[__|__]
709iv	Have you felt calm and peaceful?	All of the Time 01 Most of the Time 02 A Good Bit of the Time 03 Some of the Time 04 A Little of the Time 05 None of the Time 06	[__|__]
709v	Did you have a lot of energy?	All of the Time 01 Most of the Time 02 A Good Bit of the Time 03 Some of the Time 04 A Little of the Time 05 None of the Time 06	[__|__]
709vi	Have you felt downhearted and blue?	All of the Time 01 Most of the Time 02 A Good Bit of the Time 03 Some of the Time 04 A Little of the Time 05 None of the Time 06	[__|__]
709vii	Did you feel worn out?	All of the Time 01 Most of the Time 02 A Good Bit of the Time 03 Some of the Time 04 A Little of the Time 05 None of the Time 06	[__|__]
709viii	Have you been a happy person?	All of the Time 01 Most of the Time 02 A Good Bit of the Time 03 Some of the Time 04 A Little of the Time 05 None of the Time 06	[__|__]

709ix	Did you feel tired?	All of the Time 01 Most of the Time 02 A Good Bit of the Time 03 Some of the Time 04 A Little of the Time 05 None of the Time 06	[__|__]
710	During the past 4 weeks, how much of the time has your physical health or emotional problems interfered with your social activities (like visiting with friends, relatives etc.)	All of the time 01 Most of the time 02 Some of the time 03 A little of the time 04 None of the time 05	[__|__]
711	How TRUE or FALSE is each of the following statements for you?		
711i	I seem to get sick a little easier than other people	Definitely True 01 Mostly True 02 Don't Know 03 Mostly False 04 Definitely False 05	[__|__]
711ii	I am as healthy as anybody I know	Definitely True 01 Mostly True 02 Don't Know 03 Mostly False 04 Definitely False 05	[__|__]
711iii	I expect my health to get worse	Definitely True 01 Mostly True 02 Don't Know 03 Mostly False 04 Definitely False 05	[__|__]
711iv	My health is excellent	Definitely True 01 Mostly True 02 Don't Know 03 Mostly False 04 Definitely False 05	[__|__]

SECTION VIII: TRUST IN THE PROVIDER

These statements are designed to learn about your relationship with your doctor. Please feel free to tell us what you think. How strongly do you agree or disagree with the following statements?

No	Questions	Response categories	Code
801	If my health care provider (HCP) tells me something is so, then it must be true	Totally disagree 01 Disagree 02 Agree 03 Totally agree 04	[__|__]
802	I sometimes worry that my HCP may not keep the information we discuss totally private	Totally disagree 01 Disagree 02 Agree 03 Totally agree 04	[__|__]
803	I trust my HCP so much I always try to follow his/her advice	Totally disagree 01 Disagree 02 Agree 03 Totally agree 04	[__|__]
804	My HCP is well qualified to manage (diagnose, treat or make an	Totally disagree 01 Disagree 02	[__|__]

	appropriate referral) medical problems like mine	Agree **03** Totally agree **04**	
805	I am satisfied in the scheduling, appointments and confidentiality of the treatment unit	Totally disagree **01** Disagree **02** Agree **03** Totally agree **04**	[__|__]

ANNEX 8 : Guide for observation of health facilities

Name of observer: _____ Date of observation: _____

Name of health facility: _____ Time of observation: _____

The purpose is to give a descriptive of the setting under which care takes place.

- Describe hospital setting in general
- Describe the location and setting of the ARV clinic and support services (pharmacy, laboratory, counseling, etc)
- Describe the sanitary condition of the environment, how clean or dirty is it, check out the toilets.
- Where are patients received? Is there privacy? Describe what you see
- What is the general attitude of health workers, are they receptive and willing to assist clients or are they impatient? Describe what you see what notices or information are displayed for clients to read.
- Specifically look through where patients get ARVs, see if there is any piece of information emphasizing the need for good adherence or telling people how to improve adherence.

ANNEX 9 : Guide for focus group discussion (FGD) for HAART users

- Participants per FGD (6-8)
- Adults (= or >18 years, men and women)
- One moderator, one note-taker (*and* use of tape recorder)
- Neutral venue outside the facility
- Two FGD per facility (one with men and one with women)

Short introductory remarks

- Introduction of researchers and participants
- Thank participants for agreeing to participate, all share a common feature–they are on ARV treatment, are here to share their thoughts about ARVs and difficulties in taking ARVs: we want to learn from participants

- Explain purpose of the study, purpose of the discussion, reassurance about confidentiality, agree on rules.

Topics for discussion

What treatments do you know to be available for treating HIV? What is your opinion about these? (E.g. ARVs; herbs; traditional medicines; spiritual healing; prayers; and perceived benefit (s) of treatment).

- What is your experience of ART? (Probe about adherence, adverse effects, pill burden, lack of food, lifestyle issues).
- How do you think you are being treated (handled) by the health care workers (probe: privacy, confidentiality, respect, being listened to, time spent with patient, waiting time, integration with other services). What is the quality of care provided by health care workers?
- What do you think about the counselling that you receive? (Probe especially on importance of adherence effectiveness of counselling). What support are you given by the health workers to help you adhere better to your medications? Have you disclosed?
- What support is available for you in the community, in the family, in the workplace? (Probe about discrimination, stigma). Is there any negative social support? Any stress exacerbation?
- What do you think could be done to help people adhere more easily to their treatment?
- What do you think are the key reasons for non-adherence and good adherence? What are the sources of motivation for adherence?
- Duration of discussion (1½ hours); provide refreshments

Conclusion, thank participants!

ANNEX 10 : Semi-structured interview with hospital manager

Name of interviewer: _____ Date of interview: _____

Place of interview: _____ Officer interviewed: _____

Interviewer appropriately greets person to be interviewed, explains purpose of the interview.

The main purpose of these interviews shall be to ascertain to what extent adherence to medication was considered important prior to programme commencement.

- What strategies were put in place to encourage good adherence.
- What strategies were put in place to monitor adherence.

- What strategies are being put in place to improve adherence.

The interviewer shall probe where relevant - the questions below are merely a guide.

We shall start with these questions:

- When did the facility start providing ART?
- Number of workers & type of staff involved in ART?
- Number of staff trained & type of training?
- Total number of patients on treatment at the facility?
- Total number of patients seen per day?
- Availability of reference materials, formularies, etc.?
- Criteria for eligibility to ART?
- What in your opinion do you reckon to have been the greatest challenge you faced with the ART program?
- How did you overcome the challenge?
- What number of patients would you be looking at in the next one year by your projections?
- What mechanisms do you have to ensure availability and sustenance of ARV supply?
- What do think the adherence levels of your patients' in terms of taking ARVs is?
- What strategies have you in place to ensure patients receiving ARVs adhere well enough to their treatment?
- Do you have any reporting and monitoring system for this?
- Given your experience with your ARV programme is there anything you would like to see done differently?
- Do you think there are opportunities for improvement in your programme, if yes probe?

ANNEX 11 : Semi-structured interview with health care providers

Guidelines for semi-structured interviews with health care providers

Name of facility: _____ Date: _____

Name of interviewer: _____

(Introduction of the interviewer (s), introduction of the study)

Background information on informant (health care provider)

a) Sex	Male/Female
b) Age	Years
c) Profession	

e) Role in ARV programme	
f) Involved in programme since ...	

Tasks and training

- What specific training have you received for this job in relation to ARV programme? Tell me about the training (Details)
- Do you think this training has been sufficient? (Details)

Drugs, treatment and procedures

- Which treatment guidelines for HIV/AIDS management do you use at this facility? (Give details if necessary, e.g. national guidelines etc)
- Are the drugs you prescribe always available? (If not, give details- how often, reason, what do you do about it)
- Are the drugs in the guidelines you use to dispense always available? (Give details – how often, reason, what do you do about it)
- Have you had periods where your patients have not been able to get their medications because they were not available in stock?
- How reliable are your lab and diagnostic support services? Do results come in on time?
- What is your procedure when a patient is put on ARV drugs for the first time?
- What is your procedure when a patient switches regimens?
- In what ways are ARV-users informed about and prepared for ARV treatment?
- What kind of information do they receive? Please describe it to us:
  - The disease process (i.e. HIV and AIDS)
  - How the disease affects the body
  - How ARVs work
  - How to use them
  - The need to continue treatment
  - What to do if a pill is forgotten
  - Possible interactions with other drugs (including traditional medicines)
  - Which side effects can occur & what to do if they occur
  - When and where to get re-supply

Adherence issues

- Generally speaking, do your patients keep their appointments?
- How do you think your patients do, generally speaking, in terms of adherence to ART?
- Could you estimate the percentage of your patients who you think are "sufficiently adherent" to ART? (Respondent gives their definition of 'sufficiently adherent' what level is that?)

- What do you use to determine adherence (probe: appointments, refills?)
- We would like to get your views on the following (probe): From your experience
  - How would you compare adherence between women and men?
  - How would you compare adherence between older patients and younger patients?
  - How does a patient's educational level affect adherence?
- How do you think the distance to the health facility affects adherence?
- From your experience how do you think the following affect adherence?
  - Having or not having a treatment-support partner?
  - Duration of treatment?
  - Side effects?
  - Lack of food?
  - Knowledge about ART?
- What strategies are in place to monitor adherence?
- What strategies are in place to support adherence? (probe: family/community involvement).
- What are the main challenges you face in supporting your patients to adhere to ARV drugs (especially for longer term users)?

Thank you very much for your participation in this interview.

ANNEX 12 : Unannounced pill count

Name of Health Facility _____ Card No. _____

Ser No.	Name of the regimen Code of regimen 01 = ZDV+ 3TC 450mg (Combivir) 02 = Zidovudine 300mg 03 = Stavudine 30mg 04 = Stavudine 40mg 05 = Abacavir 300mg 06 = Lamivudine 150mg 07 = Neverapine 200mg 08 = Efavirnez 600mg 09 = Didanosine 100mg 10 = Didanosine 25mg 11 = Didanosine 50mg 12 = Lopinavir/ritonavir 166.6mg (kalitera) 13 = Nelfinavir 250mg 14 = Tenofovir 300mg	Previous date issued	Qty taken home (total)	Qty left to be untaken	Date counting is done	Day since last issue	Regimen	Qty taken extra in previous visits	Qty supposed to be taken	Qty supposed to be left	Pills missed	Percent adherence
1												
2												
3												
4												
5												

ANNEX 13 ፡ ጥናቱ ውስጥ ለመሳተፍ የፍቃደኝነት መግለጫ ቅጽ

በአዲስ አበባ ዩኒቨርሲቲ ፋርማሲ ትምህርት ቤት

የፋርማኮኢፒዲሚዮሎጂይ እና ሶሻል ፋርማሲ ድህረ ምረቃ ፕሮግራም

በ አፋር ብሔራዊ ክልላዊ መንግስት በሚገኙ የተመረጡ ሆስፒታሎች በኤች.አይ. ቪ/ኤድስ ህመማን የዕድሜ ማራዘሚያ መድሃኒቶች አጠቃቀም ላይ ጥናት ለሚድረግ የቀረበ መጠይቅ

ኤች. አይ. ቪ/ ኤድስ በማከም ሂደት ውስጥ በባለሙያ የታዘዘውን መድሃኒት በተገቢ መጠንና መመሪያ መሰረት መውሰድ አስፈላጊ ነው። ይህን ያለማድረግ ከሚያስከትላቸው ችግሮች አንዱ ቫይረሱ ከመድሃኒቶቹ ጋር ተላምዶ ውጤታማነታቸውን ይቀንሰዋል። ከዚህ በፊት የተሰሩ ጥናቶች አንዳንድ ህመማን የታዘዘላቸውን መድሃኒቶች በተገቢው ሁኔታ እንደማይወስዱ አመልክተዋል። የዚህ ጥናት አለማም የዕድሜ ማራዘሚያ መድሃኒቶችን በተገቢው ላለመውሰድ ምክንያቶች ናቸው የሚባሉ ነገሮችን ለመረዳትና ለመለየት ሲሆን በተጨማሪም መድሃኒቶቹን በትክክል አለመውሰድ በህመማን የቀን ተቀን ውሎ ላይ ያለውን ጫና ለመረዳት ነው። የዚህ ጥናት ውጤትም ለወደፊቱ በዚህ ዙሪያ ያሉትን ችግሮች ለመቅረፍ ከፍተኛ አስተዋጽኦ ይኖረዋል።

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የእርስዎ በጥናቱ መሳተፍ በበጎ ፈቃደኝነት ላይ የተመሰረተ ሲሆን በጥናቱም አለመሳተፍ፣ ጥናቱ ከተጀመረ በኋላም የማቋረጥ መብቶዎ የተጠበቀ ነው። ለዚህም እርስዎ ጥናቱ ውስጥ ለመሳተፍ ፈቃደኛ ከሆኑ የጥናቱን አላማ ከተረዱ በኋላ ፈቃደኝነትዎን በፊርማ ያረጋግጣሉ። የእርስዎ በጥናቱ ለመሳተፍ ፈቃደኛ አለመሆን ከዚህ በፊት ከጤና ድርጅቱ ያገኙ የነበሩትን ማንኛውም አገልግሎት ጋር ምንም አይነት ግንኙነት አይኖረውም። በጥናቱ ውስጥ መሳተፍዎ እንደ ግለሰብ የሚያስገኝልዎት ጥቅም ላይኖር ይችላል ሆኖም ግን የዚህ ጥናት ውጤት በአጠቃላይ ለኤች.አይ.ቪ/ኤድስ ህመማን መድሃኒቱን በተሻለ ሁኔታ ለመስጠት ከፍተኛ አስተዋፅኦ ይኖረዋል። ማንኛውም የሰጡት መረጃ በመለያ ቁጥር (ኮድ) የሚቀመጥ ሲሆን ማንነትዎ በምንም ሁኔታ አይገለፅም። ለሰጡት መረጃ ከጥናቱ ባለቤት ውጭ ሌሎች ሰዎች መረጃ አይኖራቸውም ለዚህም ሲባል የተሰባሰቡት መረጃዎች በሚስጥር በተቆለፈ የኮምፒውተር ፋይሎች ውስጥ ይቀመጣሉ። በወረቀት የተሰበሰቡ መረጃዎች በጥናቱ ባለቤት በሚስጥር ተቆልፈው ይቀመጣሉ። በተጨማሪም የሰጡት የግል መረጃዎ በጤና ድርጅት ውስጥ ለሚገኙ ሌሎች አገልግሎት ሰጪ ባለሙያዎች ግልፅ የማይደረግ ሲሆን ከሌሎች ተቀማጭ የእርስዎ ዶክመንቶች ጋር ምንም አይነት ግንኙነት አይኖረውም።

ተጨማሪ ጥያቄ ወይም ማብራሪያ ካስፈለገዎ ከጥናቱ ባለቤት ጋር በዚህ አድራሻ መገናኘት ይችላሉ።

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ፊርማ ..... የጠያቂው ስም .....

መለያ ቁጥር ..... የተቆጣጣሪ ስም .....

ቀን ..... ፊርማ .....

ANNEX 14: መጠይቅ

ክፍል 1፡ አጠቃላይ የግለሰቡ መረጃ ለማወቅ የቀረበ መጠይቅ				
መለ/ቁ	ጥያቄ	መልስ	ኮድ	ይታለፍ
101	ዕታ	ወንድ 01 ሴት 02	[__|__]	
102	ዕድሜ	---------- ዓመት		
103	ብሔር	አፋር01 አማራ 02 አርጎባ03 ኦሮሞ 04 ትግሬ 05 ----------ሌላ ካለ ጥቀስ 88	[__|__]	
104	ሀይማኖትዎ ምንድን ነው?	መስሊም 01 ኦርቶዶክስ 02 ፕሮቴስታንት 03 ካቶሊክ04 ----------ሌላ ካለ ጥቀስ 88	[__|__]	
105	የትምህርት ደረጃዎ ቢነግሩኝ?	ማንበብና መፃፍ የማይችሉ 01 ማንበብና መፃፍ የሚችሉ 02 1-6 ክፍል 03 6-12 ክፍል 04 ዲፕሎማና ከዚያ በላይ 05 የሞያ ትምህርት 06	[__|__]	
106	አሁን ያለዎት የትዳር ሁኔታ?	ያገባ 01 ህጋዊ ያልሆነ ጋብቻ 02 ያላገባ 03 የተፋቱ /የተለያዩ/ 04 በሞት የተለዩ 05 ----------ሌላ ካለ ጥቀስ 88	[__|__]	መልሱ 04 ወይም 05 ካልሆነ ወደ ጥያቄ 109 ይታለፍ
107	የተፋቱ፣የተለያዩ ወይም የሞቱብዎት ከሆነ ምክንያቱ በኤች.አይ.ቪ/ኤድስ የተነሳ ነውን?	አዎ 01 አይደለም 02 እርግጠኛ አይደለሁም 03 አላውቅም 99 መልስ የለም 98	[__|__]	
108	በአሁኑ ሰዐት ከማን ጋር ነው የሚኖሩት?	ብቻዬን 01 ከባለቤቴ ጋር 02 ከእናት እና ከአባቴ ጋር 03 ከዘመዶቼ ጋር 04 ከልጆቼ ጋር 05 ከጓደኞቼ ጋር 06 ----------ሌላ ካለ ጥቀስ 88	[__|__]	
109	ስራ አለዎት?	አዎ 01 የለኝም 02	[__|__]	መልሱ የለኝም ከሆነ ወደ ጥያቄ 113 ይታለፍ
110	የስራዎን ሁኔታ ቢነግሩኝ?	ቋሚ ስራ 01	[__|__]	

		የትርፍ ሰዓት ስራ 02 ጊዜያዊ ስራ 03		
111	የት ነው የሚሠሩት?	መንግስት መ/ቤት 01 በግል መ/ቤት 02 የግል ስራ 03 መንግስታዊ ያልሆነ ድርጅት 04 መልስ የለም 98 --------ሌላ ካለ ጥቀስ 88	[__|__]	
112	ስራ የማይሰሩ ከሆነ ከመቼ ጀምሮ ነው ያቆሙት?	---------ዓመት --------ወር አላስታውስም 99 ሰርቼ አላውቅም 998	[__|__]	
113	ላለመስራትዎ ምክንያቱ ምንድን ነው?	መስራት አልፈልግም 01 በኤች. አይ. ቪ/ኤድስ የተነሳ ስራዬን ስላጣሁ 02 በበሽታው ምክንያት አቅም ስላጣሁ 03 ሰርቼ አላውቅም 04 ----------ሌላ ካለ ጥቀስ 88	[__|__]	

ክፍል 2፡ የማህበረሰቡ ድጋፍና ለሌሎች በቫይረሱ እንደተያዙ ማሳወቅን በተመለከተ የቀረበ መጠይቅ

መለ/ቁ	ጥያቄ	መልስ	ኮድ	ይታለፍ
201	በቫይረሱ መያዝዎን ካወቁ ምን ያህል ጊዜ ሆነዎት?	---------ዓመት---------- ወር አላስታውስም 99	[__|__]	
202	ከቫይረሱ ጋር እንደሚኖሩ ለሌላ ሠው አሳውቀዋል? (ለጤና ባለሞያ ሳይጨምር)	አዎ 01 አላሳወኩም 02	[__|__]	መልሱ አላሳወኩም ከሆነ ወደ ጥያቄ 204 ይታለፍ
203	መልሶ አዎ ከሆነ፣ ከቫይረሱ ጋር እንደሚኖሩ ለማን ለማን አሳውቀዋል?	አሳውቅያለሁ 01 አላሳወኩም 02 መልስ የለም 98	[__|__]	
		ሀ) ለትዳር ጓደኛዬ.....	[__|__]	
		ለ) ለቤተሰብ	[__|__]	
		ሐ) ለዘመዶቼ	[__|__]	
		መ) ለጓደኞቼ	[__|__]	
		ሠ) ለጐረቤቶች/ለአካባቢው ናዋሪዎች	[__|__]	
		ረ) ሌላ ካለ ጥቀስ.....88	[__|__]	
204	ከቤተሰቦችዎ ድጋፍ ያገኛሉ?	አዎ 01 አላገኝም 02	[__|__]	መልሱ አላገኝም ከሆነ ወደ ጥያቄ 207 ይታለፍ
205	ከቤተሰቦችዎ ምን አይነት ድጋፍ ያገኛሉ?	አገኛለሁ 01 አላገኝም 02 መልስ የለም 98	[__|__]	
		ሀ) ስነ ልቦናዊ/የሞራል	[__|__]	
		ለ) የገንዘብ	[__|__]	
		ሐ) ተግባራዊ(ከቦታ ቦታ ማንቀሳቀስ)	[__|__]	

		መ) ሌላ ካለ ጥቀስ.....88		
206	በአጠቃላይ ከቤተሰብዎ በሚያገኙት ድጋፍ ምን ያህል ደስተኛ ነዎት?	ደስተኛ አይደለሁም 01 በመጠኑ ደስተኛ ነኝ 02 በጣም ደስተኛ ነኝ 03 መልስ የለም 98 (ይነበብ)	[__|__]	
207	ከቤተሰብዎ ውጭ ድጋፍ ያገኛሉ?	አዎ 01 አላገኝም 02	[__|__]	መልሱ አላገኝም ከሆነ ወደ ጥያቄ 301 ይታለፍ
208	ከየት ድጋፍ ያገኛሉ?	አገኛለሁ 01 አላገኝም 02 መልስ የለም 98 ሀ) ከጓደኞቼ ..... ለ) ከዕርዳታ ድርጅቶች..... ሐ) ከሃይማኖታዊ ድርጅቶች..... ረ) ከመስሪያ ቤት ..... ሰ) ሌላ ካለ ጥቀስ.....88	[__|__] [__|__] [__|__] [__|__] [__|__] [__|__]	
209	ከቤተሰብዎ ውጭ ምን ዓይነት ድጋፍ ያገኛሉ?	አገኛለሁ 01 አላገኝም 02 መልስ የለም 98 ሀ) የሞራል ..... ለ) የገንዘብ ..... ሐ) የተግባር (ከቦታ ቦታ ማንቀሳቀስ). መ) ገቢ የሚያስገኙ ስራዎች..... ሠ) የምግብ ድጋፍ..... ረ) ሌላ ካለ ጥቀስ.....88	[__|__] [__|__] [__|__] [__|__] [__|__] [__|__] [__|__]	
210	በአጠቃላይ ከቤተሰብዎ ውጭ በሚያገኙት ድጋፍ ደስተኛ ነዎት?	ደስተኛ አይደለሁም 01 በመጠኑ ደስተኛ ነኝ 02 በጣም ደስተኛ ነኝ 03 መልስ የለም 98 (ይነበብ)	[__|__]	

ክፍል 3፡ አልኮል አወሳሰድ እና የጎጂ ዕፅ አጠቃቀም በተመለከተ የቀረበ መጠይቅ

መለ/ቁ	ጥያቄ	መልስ	ኮድ	ይታለፍ
301	አልኮል ይጠጣሉ?	አልጠጣም 01 እጠጣለሁ 02 መልስ የለም 98	[__|__]	መልሱ አልጠጣም ከሆነ ወደ ጥያቄ 305 ይታለፍ
302	ባለፉት 15 ቀናት ውስጥ አልኮል ጠጥተው ያውቃሉ?	አዎ 01 አላውቅም 02 አላስታውስም 99	[__|__]	መልሱ አላውቅም ከሆነ ወደ ጥያቄ 305 ይታለፍ
303	መልሶ አዎ ከሆነ ለምን ያህል ቀናት ጠጥተዋል?	----------ቀናት አላስታውስም 99	[__|__]	
304	በጠጡበት ቀን ምን ያህል የአልኮል መጠን ወስደዋል?	---------- አላስታውስም 99	[__|__]	
305	የዕጽ አጠቃቀም			

	ሀ) የሚከተሉትን ዕያቸ ተጠቅመው ያውቃሉ?		ለ) በአለፈው 6 ወር ጊዜ ውስጥ ተጠቅመዋል?	ሐ) በአለፈው 6 ወር ጊዜ ውስጥ ምን ያህል ጊዜ ተጠቅመዋል?
		አዎ 01 አልተጠቀምኩም 02 ካልተጠቀመ ወደ ሚቀጥለው ዕጽ ይታለፍ	አዎ 01 አልተጠቀምኩም 02 መልስ የለም 98 ካልተጠቀመ ወደ ሚቀጥለው ዕጽ ይታለፍ	በወር 1 ጊዜ 01 ከ 2-3 ጊዜ በወር 02 ከ 1 - 2 ጊዜ በሳምንት 03 ከ 3 - 4 ጊዜ በሳምንት 04 በየቀኑ 05 መልስ የለም 98
	ሀሺሽ	[__|__]	[__|__]	[__|__]
	ሺሻ (ጋያ)	[__|__]	[__|__]	[__|__]
	ጫት	[__|__]	[__|__]	[__|__]
	ሲጋራ	[__|__]	[__|__]	[__|__]

ክፍል 4፡ በአሁኑ ሠዐት ስለሚወስዱት የዕድሜ ማራዘሚያ መድሃኒት አጠቃቀም በተመለከተ የቀረበ መጠይቅ

መለ/ቁ	ጥያቄ	መልስ	ኮድ	ይታለፍ
401	የዕድሜ ማራዘሚያ መድኃኒቶቹን ለምን ያህል ጊዜ ወስደዋል?	-------አመት ------ ወር አላስታውስም 99	[__|__]	

402 አሁን እየወሰዱ ያሉትን የዕድሜ ማራዘሚያ መድሃኒቶች ስም/መጠንና፣ የአወሳሰድ ሁኔታ ሊነግሩኝ ይችላሉ?
ለጠያቂው፡ በአሁኑ ሠዐት ጥቅም ላይ እየዋሉ ያሉትን የዕድሜ ማራዘሚያ መድሃኒቶችን ሳምፕል ያሣያዋቸው

መድሃኒቱን በተመለከተ

የመድሃኒቱ ስም/መጠን ኮድ 01 = 1a(30) = d4t(30)-3TC-NVP 02 = 1a(40) = d4t (40)-3TC-NVP 03 = 1b(30) = d4t(30)-3TC-EFV 04 = 1b(40) = d4t(40)-3TC-EFV 05 = 1c = AZT-3TC-NVP 06 = 1d = AZT-3TC-EFV 07 = 2a = ABC-ddI-LPV/r 08 = 2b = ABC-ddI-NFV 09 = 2c = TDF-ddI-LPV/r 10 = 2d = TDF-ddI-NFV	በአንድ ጊዜ የሚወሰድ የእንክብል ብዛት 1 እንክብል=1 2 እንክብል=2 3 እንክብል=3	በቀን ምን ያህል ጊዜ ይወስዳሉ በቀን 1 ጊዜ = 1 በቀን 2 ጊዜ = 2 በቀን 3 ጊዜ = 3	በቀን የሚወስዱት የእንክብል ብዛት	ተጠያቂው የመድሃኒቱን ስም ተናግሯል 01 ተጠያቂው መድሃኒቶቹን በማየት ለይቷል 02 ሃኪም በሃፊው ማስታወሻ ከተለዩ 03

403	የዕድሜ ማራዘሚያ እንክብሎችን ጨምሮ በቀን ምን ያህል እንክብሎችን ይወስዳሉ?	ቁጥር ..... አላውቅም 9	[__|__]	
404	ባለፉት 15 ቀናት ውስጥ ምን ያህል የዕድሜ ማራዘሚያ መድሃኒት መጠን ሳይወስዱ ቀርተዋል?	ምንም 01 አንድ 02 ሁለት 03 ሦስት 04 4 ወይም ከዛ በላይ 05	[__|__]	

405	ብዙዎች የዕድሜ ማራዘሚያ መድሃኒቶች በተወሰነ ሠዓት ውስጥ መወሰድ አለባቸው። እርስዎ ምን ያህል በተሠጥዎት ጊዜ ባለፉት 15 ቀናት ውስጥ መመሪያውን በመከተል ለመውሰድ ሞክረዋል?	በጭራሽ አልሞከርኩም 01 አንዳንድ ጊዜ 02 ብዙ ጊዜ 03 ሁል ጊዜ 04 (ምርጫዎች ይነበቡ)	[__|__]	
406	ሀ/ ከተሠጥዎት የዕድሜ ማራዘሚያ መድሃኒቶች ውስጥ በተለየ ትዕዛዝ የሚወሰድ አለ? ለምሳሌ በብዙ ውሃ፣ በባዶ ሆድ፣ ወዘተ ለ/ መልሶ አዎ ከሆነ፣ ምን ያህል ጊዜ በአለፉት 15 ቀናት ወስጥ ትዕዛዙን ተከትለው ወስደዋል?	አዎ 01 የለም 02 በጭራሽ 01 አንዳንዴ 02 ብዙ ጊዜ 03 ሁል ጊዜ 04 መልስ የለም 98 (ምርጫዎቹ ይነበቡ)	[__|__] [__|__]	መልሱ የለም ከሆነ ወደ ጥያቄ 407 ይታለፍ
407	ሀ) በማንኛውም ምክንያት ለመጀመሪያ ጊዜ የዕድሜ ማራዘሚያ መድሃኒት መውሰድ ከጀመሩበት ጊዜ ጀምሮ ለምን ያህል ጊዜ መድሃኒቶቹን ከሳምንት በላይ አቋርጠዋል?	በፍጹም 01 1 ጊዜ 02 ከ 2-3 ጊዜ 03 4 ወይም ከዛ በላይ 04 መልስ የለም 98	[__|__]	መልሱ በፍፁም ከሆነ ወደ ጥያቄ 408 ይታለፍ
	ለ) አቋርጠው ከሆነ ምክንያትዎ(ችዎ) ምን ነበሩ? (ብዙ መልስ መስጠት ይቻላል ተጠያቂውን ብዙ እንድናገሩ ያበረታቱ፣ አራት መልሶችን ብቻ ይውሰዱ)	መድሃኒቶቹን ለማቆም የቀረቡ ምክንያቶች የምግብ አለመሟላት 01 በመድሃኒቶቹ ጎጂ ባህርያት የተነሳ 02 ጤናዬ ስላልተሻሻለ 03 በሌላ ሥራ ተጠምጄ 04 በጉዞ ምክንያት ስላልተመቸኝ 05 ሠዎች እንዳያውቁብኝ 06 ከህመሜ ስላገገምኩኝ 07 የእንክብሎቹ ብዛት ለመወሰድ አስቸጋሪ ስለሆነ 08 ሀኪም እንዳቆም ስለነገረኝ 09 .....ሌላ ካለ ጥቀስ 88 መልስ የለም 98	[__|__] [__|__] [__|__] [__|__]	
408	የተገኘው መረጃ ህመምተኛው የእድሜ ማራዘሚያ መድሃኒቶቹን በትክክል እንደወሰደ የሚያሳይ ከሆነ በትክክል እንዲወስድ ያስቻሉት ምክንያቶች ምን እንደሆኑ ይጠየቅ			

ክፍል 5: ስለህመምዎ ያለዎትን ዕውቀት በተመለከተ የቀረበ መጠይቅ

መለ/ቁ	ጥያቄ	መልስ	ኮድ	ይታለፍ
501	የCD4 ቁጥር ምን ያህል ጊዜ ተሠርቶልዎታል?	---------- ጊዜ አላውቅም/አላስታውስም 99	[__|__|	መልሱ አላውቅም/አላስታውስም ከሆነ ወደ ጥያቄ 504 ይታለፍ
502	ሀ) እባክዎ የዕድሜ ማራዘሚያ መድሃኒቶቹን በሚጀምሩበት ጊዜ የCD4 ቁጥርዎ ስንት እንደ ነበር ይንገሩኝ? ለ) በቅርብ ጊዜ የተሰራልዎት የCD4	---------- አላውቅም/አላስታውስም 99	[__|__| [__|__|	

	ቁጥርስ ስንት ነው?	----------		
503	እባክሥ የ CD4 ቁጥር ምንን ያመለክታል? የ CD4 ቁጥር ከዕድሜ ማራዘሚያ መድሃኒት አጠቃቀም ጋር እንዴት ይለዋወጣል ?			
504	በኤች. አይ. ቪ /ኤድስ/ ህመም የተነሳ ሆስፒታል ተኝተው ያውቃሉ ?	አዎ 01 አልተኛሁም 02 አላውቅም 99	[__|__]	ካልተኙ ወደ ጥያቄ 601 ይታለፍ
505	እባክዎ በአለፈው አንድ አመት ውስጥ በህመሞዎ ምክንያት ምን ያህል ጊዜ ሆስፒታል እንደገቡ ይንገሩኝ	በአጠቃላይ ሆስፒታል የገቡበት ቁጥር -------- አላውቅም/አላስታውስም 99	[__|__]	

ክፍል 6፡ ህመማን የእድሜ ማራዘሚያ መድሃኒቶችን በተመለከተ ያላቸው እውቀት ለማወቅ የቀረበ መጠይቅ (ምርጫዎቹ ይነበቡ)

መለ/ቁ	ጥያቄ	መልስ	ኮድ
601	የኤች.አይ.ቪ/ኤድስ መድሃኒቶች እድሜ ያራዝማሉ	ትክክል ነው 01 ትክክል አይደለም 02	[__|__]
602	ከቫይረሱ ጋር የሚኖር ሰው ሀኪሙ ባዘዛለት መሠረት የእድሜ ማራዘሚያ መድሃኒት ቢወስድ ህይወቱ ወደ ጤናማነት ይለወጣል	ትክክል ነው 01 ትክክል አይደለም 02	[__|__]
603	የእድሜ ማራዘሚያ መድሃኒቶች የኤች. አይ. ቪ/ኤድስን የመከላከል ብቃት አላቸው	ትክክል ነው 01 ትክክል አይደለም 02	[__|__]
604	የእድሜ ማራዘሚያ መድሃኒቶች በትክክል ካልተወሰዱ እንደተፈለገው ካለመሥራታቸውም በላይ ቫይረሱን መቆጣጠር አይችሉም	ትክክል ነው 01 ትክክል አይደለም 02	[__|__]
605	የኤች. አይ. ቪ/ኤድስ አሳሳቢነት በእድሜ ማራዘሚያ መድሃኒቶቹ ምክንያት ቀንሷል	ትክክል ነው 01 ትክክል አይደለም 02	[__|__]
606	የኤች.አይ.ቪ /ኤድስን በእድሜ ማራዘሚያ መድሃኒቶቹ እንደማንኛውም በሽታ መቆጣጠር ይቻላል	ትክክል ነው 01 ትክክል አይደለም 02	[__|__]
607	የኤች.አይ. ቪ /ኤድስ ዕድሜ ማራዘሚያ መድሃኒቶች ቫይረሱን ከደም ውስጥ በከፍተኛ መጠን መቀነስ ይችላሉ፡፡	ትክክል ነው 01 ትክክል አይደለም 02	[__|__]
608	በቫይረሱ በተያዙ በጥቂት ጊዜ ውስጥ የእድሜ ማራዘሚያ መድሃኒቶች ከተወሰዱ ከ ኤች. አይ. ቪ ቫይረስ ሙሉ በሙሉ መዳን ይቻላል፡፡	ትክክል ነው 01 ትክክል አይደለም 02	[__|__]

ክፍል 7፡ እስከአሁን ስለሰጡኝ መረጃ ከፍያለ ምስጋናዬን እያቀረብኩ በመጨረሻም ስለ ህይወትዎ መሻሻል ያለዎትን አመለካከት ለማወቅ የተወሰኑ ጥያቄዎችን አቀርባለሁ፤፤

መለ/ቁ	ጥያቄ	ኮድ	መልስ
701	ጤንነትዎ በአጠቃላይ ሲታይ ምን ይመስላል?	እጅግ በጣም ጥሩ ነው 01 በጣም ጥሩ ነው 02 ጥሩ ነው 03 ደህና ነው 04 መጥፎ ነው 05	[__|__]

702	ካለፈው አመት ጋር ሲነፃፀር በአጠቃላይ ጤንነትዎ ምን ደረጃ ላይ ነው ይላሉ?	ካለፈው አመት በጣም ይሻላል 01 ካለፈው አመት በጥቂቱ ይሻላል 02 ምንም ለውጥ የለውም 03 ካፈው አመት እንደውም አሁን መጥፎ ሁኔታ ላይ ነኝ 04 ካለፈው አመት አሁን በጣም መጥፎ ሁኔታ ላይ ነኝ 05	[__|__]
703	የሚከተሉት ጥያቄዎች በቀን ውሎዎ የሚሠሩዋቸውን ሥራዎች የሚመለከቱ ናቸው:: አሁን ያለበዎት የጤና ችግር እነዚህን ነገሮች ለማከናወን ይከለክልዎታል? አዎን ከሆነ ምን ያህል?		
	ስራዎች.....		
703/1	ጠንካራ እንቅስቃሴዎችን ማድረግ እንደ መሮጥ፣ ከባድ ነገር ማንሳት፣ ጠንካራ ስፖርቶችን መሥራት፣ ወ.ዘ.ተ	አዎ ገድቦኛል 01 በትንሹ ገድቦኛል 02 ከምንም አልገደበኝም 03	[__|__]
703/2	ቀለል ያሉ ሥራዎችን እንደ ጠረጴዛ ማንቀሳቀስ፣ ወንበር ማንቀሳቀስ፣ ቤት ማፅዳት፣ ወ.ዘ.ተ	አዎ ገድቦኛል 01 በትንሹ ገድቦኛል 02 ከምንም አልገደበኝም 03	[__|__]
703/3	ከገቢ.ያ እቃ ገዝቶ መሸከም	አዎ ገድቦኛል 01 በትንሹ ገድቦኛል 02 ከምንም አልገደበኝም 03	[__|__]
703/4	ብዙ የፎቅ ደረጃዎችን (ከበድ ያለ ዳገት) መውጣት	አዎ ገድቦኛል 01 በትንሹ ገድቦኛል 02 ከምንም አልገደበኝም 03	[__|__]
703/5	አንድ የፎቅ ደረጃ (ቀለል ያለ ዳገት) መውጣት	አዎ ገድቦኛል 01 በትንሹ ገድቦኛል 02 ከምንም አልገደበኝም 03	[__|__]
703/6	ጎንበስ ማለት፣ ቁጢጥ ማለት፣ መቆም	አዎ ገድቦኛል 01 በትንሹ ገድቦኛል 02 ከምንም አልገደበኝም 03	[__|__]
703/7	ከአንድ ማይል (1.6 ኪ.ሜ.) በላይ መጓዝ	አዎ ገድቦኛል 01 በትንሹ ገድቦኛል 02 ከምንም አልገደበኝም 03	[__|__]
703/8	ከቤትዎ ራቅ ወዳለ ሌላ ቤት መሄድ	አዎ ገድቦኛል 01 በትንሹ ገድቦኛል 02 ከምንም አልገደበኝም 03	[__|__]
703/9	ከቤትዎ ወደ አጠገብዎ ያለ ሌላ ቤት መሄድ	አዎ ገድቦኛል 01 በትንሹ ገድቦኛል 02 ከምንም አልገደበኝም 03	[__|__]
703/10	ፅራስን ችሎ ሻወር መውሰድና ልብስ መልበስ	አዎ ገድቦኛል 01 በትንሹ ገድቦኛል 02 ከምንም አልገደበኝም 03	[__|__]
704	ባለፉት 4 ሳምንታት ውስጥ በስራዎ ላይ ወይም በቀን ተቀን ውሎዎ ላይ በጤንነትዎ ምክንያት የሚከተሉት ችግሮች ተከስተዋል?		
704/1	በስራና በሌሎች እንቅስቃሴዎች ላይ የሚያሳልፏቸው ጊዜዎች ቀንሰዋል?	አዎ 01 አልቀነሰም 02	[__|__]
704/2	መስራት የምፈልጉትን ያህል አልሠሩም?	አዎ 01 የለም 02	[__|__]
704/3	የተወሰነ ስራ ወይም እንቅስቃሴዎችን ብቻ ነው የሚያከናውኑት?	አዎ 01 አይደለም 02	[__|__]
704/4	ስራም ሆነ ሌሎች እንቅስቃሴዎች ማድረግ አልቻሉም?	አዎ 01 አይደለም 02	[__|__]

705	ባለፉት 4 ሳምንታት ጊዜ ውስጥ በህመሞዎ ምክንያት በተፈጠረው ስሜት ለምሳሌ መጫጫን ወይም በተዘረዘሩት ችግሮች ምክንያት በስራዎ ወይም በቀን ተቀን ውሎዎ ላይ የተፈጠረ ችግር አለ?		
705/1	የስራ ሰዐት ወይም የሌሎች እንቅስቃሴዎችን ለማከናወን የሚያጠፉት ጊዜ ቀንሳል?	አዎ 01 የለም 02	[__|__]
705/2	የፈለጉትን ያህል ሥራ መስራት ያለመቻል	አዎ 01 የለም 02	[__|__]
705/3	ስራዎንና ሌሎች እንቅስቃሴዎችን እንደ ወትሮው በጥንቃቄ መስራት አለመቻል	አዎ 01 የለም 02	[__|__]
706	ባለፉት 4 ሳምንታት ወስጥ አካላዊና አዕምሮአዊ ችግሮችዎ በምን ያህል ደረጃ የተለመደ የዘወትር ማህበራዊ እንቅስቃሴዎ ላይ ችግር ፈጥረዋል (በቤተሰብ፣ በጐረቤት ወይም በሌሎች)?	በፍፁም 01 በትንሹ 02 መካከለኛ 03 ከበድ ያለ 04 በጣም ከባድ 05	[__|__]
707	ባለፉት 4 ሳምንታት ውስጥ ምን ያህል አካላዊ ሕመም ይሰማዎት ነበር?	በፍፁም 01 በጣም በትንሹ 02 በትንሹ 03 መካከለኛ 04 ከበድ ያለ 05 በጣም ከባድ 06	[__|__]
708	ባለፉት 4 ሳምንታት ውስጥ ህመምዎ ለዘወትር እንቅስቃሴዎ (በቤትና ከቤት ውጭ ያሉ ስራ) ምን ያህል ጫና ፈጥሮብዎታል	በፍፁም 01 በትንሹ 02 መካከለኛ 03 ከበደ ያለ 04 በጣም ከባድ 05	[__|__]
709	የሚከተሉት ጥያቄዎች ባለፉት 4 ሳምንታት ውስጥ በእርስዎ [illegible]ሪያ ስላሉ ነገሮች ምን ይሠማዎት እንደበር ለማወቅ የቀረቡ ጥያቄዎች ናቸው፡፡		
709/1	በህይወትዎ ምንም የጐደለ ነገር እንደሌለ ይሠማዎት ነበር?	ሁል ጊዜ 01 አብ[illegible]ውን ጊዜ 02 የ[illegible]ወሰነ ጊዜ 03 አንዳንዴ 04 በጥቂቱ 05 በጭራሽ 06	[__|__]
709/2	ቁጡ ሰው ሆነው ነበር?	ሁል ጊዜ 01 አብዛኛውን ጊዜ 02 የተወሰነ ጊዜ 03 አንዳንዴ 04 በጥቂቱ 05 በጭራሽ 06	[__|__]
709/3	በህይወትዎ ምንም እንደማያስደስትዎት እና ተስፋ የመቁረጥ ስሜት ተሰምቶዎት ነበር?	ሁል ጊዜ 01 አብዛኛውን ጊዜ 02 አንዳንዴ 03 በጥቂቱ 04 በጭራሽ 05	
709/4	መረጋጋትና ሠላም ተሠምቶዎት ነበር?	ሁል ጊዜ 01 አብዛኛውን ጊዜ 02 የተወሰነ ጊዜ 03 አንዳንዴ 04 በጥቂቱ 05 በጭራሽ 06	[__|__]
709/5	ጥንካሬ ይሠማዎት ነበር?	ሁል ጊዜ 01 አብዛኛውን ጊዜ 02	[__|__]

		የተወሰነ ጊዜ 03 አንዳንዴ 04 በጥቂቱ 05 በጭራሽ 06	
709/6	ትካዜ እና ስጋት ተሰምቶዎት ነበር?	ሁል ጊዜ 01 አብዛኛውን ጊዜ 02 የተወሰነ ጊዜ 03 አንዳንዴ 04 በጥቂቱ 05 በጭራሽ 06	[__|__]
709/7	የመኖር ተስፋዎ ያበቃለት መስሎዎት ነበር?	ሁል ጊዜ 01 አብዛኛውን ጊዜ 02 የተወሰነ ጊዜ 03 አንዳንዴ 04 በጥቂቱ 05 በጭራሽ 06	[__|__]
709/8	ደስተኛ ሰው ነበሩ?	ሁል ጊዜ 01 አብዛኛውን ጊዜ 02 የተወሰነ ጊዜ 03 አንዳንዴ 04 በጥቂቱ 05 በጭራሽ 06	[__|__]
709/9	ድካም ይሰማዎት ነበር?	ሁል ጊዜ 01 አብዛኛውን ጊዜ 02 የተወሰነ ጊዜ 03 አንዳንዴ 04 በጥቂቱ 05 በጭራሽ 06	[__|__]
710	ባለፉት 4 ሳምንታት ውስጥ አካላዊ ወይም ስሜታዊ ችግሮችዎ ለምን ያህል ጊዜ ማህበራዊ ጉዳዮችዎ ላይ ችግር ፈጥሮብዎታል (ከጓደኞችዎ፣ ከጎረቤት፣ ከዘመድ ወዘተ...)?	ሁል ጊዜ 01 አብዛኛውን ጊዜ 02 የተወሰነ ጊዜ 03 አንዳንዴ 04 በጥቂቱ 05 በጭራሽ 06	[__|__]
711	የሚከተሉት እያንዳንዳቸው ዐረፍተ ነገሮች ለእርስዎ ምን ያህል እውነት ወይም ውሸት ናቸው?		
711/1	ከሌላ ሰው ይልቅ በቀላሉ ልታመም እችላለሁ	በትክክል እውነት ነው 01 ብዙውን ጊዜ እውነት ነው 02 አላውቅም 03 ብዙውን ጊዜ ውሸት ነው 04 በፍፁም ውሸት ነው 05	[__|__]
711/2	እንደማንኛውም ሰው ጤንነት ይሰማኛል	በትክክል እውነት ነው 01 ብዙውን ጊዜ እውነት ነው 02 አላውቅም 03 ብዙውን ጊዜ ውሸት ነው 04 በፍፁም ውሸት ነው 05	[__|__]
711/3	የጤንነቴ ችግር የሚባባስ ይመስለኛል	በትክክል እውነት ነው 01 ብዙውን ጊዜ እውነት ነው 02 አላውቅም 03 ብዙውን ጊዜ ውሸት ነው 04 በፍፁም ውሸት ነው 05	[__|__]
711/4	ጤንነቴ እጅግ በጣም ተሻሽሏል	በትክክል ክፍል 7፡ነው 01 ብዙውን ጊዜ እውነት ነው 02	[__|__]

		አላውቅም 03 ብዙውን ጊዜ ውሸት ነው 04 በፍፁም ውሸት ነው 05	

ክፍል 8፡ ከጤና ባለሞያ ጋር ስላለ ግንኙነት ለማወቅ የቀረበ መጠይቅ			
መለ/ቁ	ጥያቄ	መቂስ	ኮድ
801	ሐኪሜ የሚነግረኝን ነገር ሁሉ እውነት ነው ብዬ አምናለሁ	በጣም አልስማማም 01 አልስማማም 02 እስማማለሁ 03 በጣም እስማማለሁ 04	[__|__]
802	አንዳንዴ ሐኪሜ የአወያየሁትን ሚስጢር አይጠብቅልኝም ብዬ እሰጋለሁ	በጣም አልስማማም 01 አልስማማም 02 እስማማለሁ 03 በጣም እስማማለሁ 04	[__|__]
803	ሐኪሜን በጣም ስለማምነው የመከረኝን ምክር በሙሉ እቀበላለሁ	በጣም አልስማማም 01 አልስማማም 02 እስማማለሁ 03 በጣም እስማማለሁ 04	[__|__]
804	ሐኪሜ የኔ አይነቱን የጤና ችግር ለመመርመር ለማከም እና አስፈላግውን ሬፈራል ለማድረግ በአግባቡ የሰለጠነ ነው	በጣም አልስማማም 01 አልስማማም 02 እስማማለሁ 03 በጣም እስማማለሁ 04	[__|__]
805	ለሕክምናዬ በወጣልኝ ፕሮግራምና በሚሰጠኝ ቀጠሮ ደስተኛ ነኝ	በጣም አልስማማም 01 አልስማማም 02 እስማማለሁ 03 በጣም እስማማለሁ 04	[__|__]

ANNEX 15፡ የጤና አገልግሎት መስጫ ተቋማት ላይ ለሚደረግ የምልከታ ጥናት መመሪያ

የጠያቂው ስም---------- ጥያቄው የተደረገበት ቀን----------

የሆስፒታሉ ስም---------- ጥያቄው የተደረገበት ሰአት----------

የጥናቱ አላማ የተቋሙን የጤና አሰጣጥ ሁኔታ ለመግለፅ ነው።

- የሆስፒታሉን አጠቃላይ ሁኔታ/አደረጃጀት ግለፅ
- የኤች. አይ. ቪ/ኤድስ ህክምና መስጫ ኪሊንክና እና ሌሎች ድጋፍ ሰጭ አገልግሎት መስጫ (መድሃኒት ቤት፣ ላብራቶሪ፣ ምክር መስጫ፣ ወ.ዘ.ተ) ማእከላትን የቦታ አቀማመጥና አደረጃጀት ግለፅ።
- የአካባቢውን የንፅህና ሁኔታ፣ ንጹህ ወይም ቆሻሻ እንደሆነ፣ ሽንት ቤቶቹን አስተውል።
- ህመሙን የት ነው የሚስተናገዱት፣ ሚስጥራዊነቱ እንዴት ነው፣ ያየሀውን ግለፅ።
- የጤና ሰጪ ባለሞያዎች አጠቃላይ አስተሳሰብ እንዴት ነው፣ ህመሙንን በአግባቡ ለመቀበልና እርዳታ ለመስጠት ፍቃደኞች ናቸው ወይስ ትእግስት አልባዎች ናቸው? ህመሙን እንድያነቡ የተለጠፈ ወይም የተሰጣቸው መረጃ ካለ ያየሀውን ወይም ያስተዋልከውን ግለፅ።

- ህመ·ማን መድሀኒት የሚወስዱበትን ቦታ ትኩረት ሰጥተህ አስተውል፣ በመድሃኒት መስጫው አካባቢ ህመ·ማን መድሃኒቱን በአግባቡ እንዲወስዱ የሚረዳ መረጃ ወይም የመድሃኒት አወሳሰዳቸውን እንድያሻሽሉ የሚረዳ መረጃ መኖር አለመኖሩን አስተውል።

ANNEX 16: ከእድሜ ማራዘሚያ መድሃኒት ተጠቃሚዎች ጋር ለሚደረግ የቡድን ዉይይት መመሪያ

- የአንድ የቡድን ውይይት ተሳታፊዎች ብዛት(6-8)
- አዋቂዎች (= ወይም እድሜያቸው ከ18 በላይ የሆኑ፣ ሴት እና ወንድ)
- አንድ አወያይ፤ አንድ ጸሀፊ (ድምፅ መቅጃ መሳሪያ በጥቅም ላይ ይውላል)
- ከሆስፒታሉ ውጭ ገለልተኛ ቦታ ላይ ይካሄዳል
- በአንድ ሆስፒታል ሁለት የቡድን ውይይት ይካሄዳል(1 ከወንዶች እና 1 ከሴቶች ጋር)

አጭር የመግቢያ ትውውቅ

- የአወያዮችና የተሳታፊዎች ትውውቅ
- ተሳታፊዎችን በውይይቱ ለመሳተፍ ፈቃደኛ መሆናቸውን አመስግን፤ ሁሉንም ተሳታፎች የሚጋሩት ነገር፣ የእድሜ ማራዘሚያ መድሃኒቶች ተጠቃሚዎች መሆናቸው እንደሆነ አብራራ፣ የውይይቱም አላማ መድሃኒቶቹን በአግባቡ ላለመጠቀም መንስዔ የሚሆኑ ነገሮችን ለማወቅ እንደሆነ ግለፅ፣ ተሳታፊዎች አስተሳሰባቸውን እንድያጋሩ ጠይቅ።
- የጥናቱን አላማ ግለፅ፣ የውይይቱን አላማ አስረዳ፣ ሚስጢራዊነቱ የተጠበቀ መሆኑን በድጋሚ አረጋግጥላቸው፣ በውይይቱ አካሄድ ላይ ተስማሙ።

የመወያያ ርእስ

- ኤች. አይ. ቪ/ኤድስን እንዴት ማከም ይቻላል፣ ቀጥሎ ስለተዘረዘሩት የእርሶ አስተያየት ምንድን ነው? (ምሳሌ፤ የእድሜ ማራዘሚያ መድሃኒቶች፣ ባህላዊ የህክምና ዘዴ፣ ፀሎት፣ መንፈሳዊ ህክምና፣ ጥቅምና ጉዳት ምን ይላሉ?)
- ህክምና የሚሰጥዎት የጤና ባለሞያዎች ለእርስዎ ያላቸው አቀባበል እንዴት ነው? (ሚስጢር ይጠብቃሉ፣ ክብር ይሰጥዎቶል፣ በቂ ጊዜ ሰጥተው ያዳምጡዎታል፣ ብዙ ሰዐት ያስጠብቆዎታል)። የጤና አገልግሎቱ ምን ያህል ደረጃውን የጠበቀ ነው?
- የተሰጥዎትን ምክር እንዴት ያዩታል? (በተለይም መድሃኒቱን በአግባቡ እንድወስዱ የተሰጥዎት ምክር) የጤና ባለሞያዎች መድሃኒቱን በአግባቡ እንዲወስዱ ምን አይነት ድጋፍ ያደርጉልዎታል?
- ቤተሰብዎ፣ የሚኖሩበት ማህበረሰብ፣ እና በስራ ቦታ ያሉ ባልንጀራዎችዎ ምን አይነት ድጋፍ ያደረግልዎታል? ሰዎች ያገልዎታል? ጭንቀትዎን የሚያባብስ ነገር ያጋጥምዎታል?
- ምን ቢደረግ ህመ·ማን የመድሃኒት አወሳሰዳቸውን በቀላሉ ማሻሻል ይቻላል ብለው ያስባሉ?
- ህመ·ማን መድሃኒቶቻቸውን በአግባቡ እንድወስዱ የሚያደርጉ እና የማያደርጉ መንስኤዎች ምን ምን ናቸው ብለው ያስባሉ? መድሃኒት በአግባቡ እንዲወሰድ ማበረታቻ ዘዴዎች ምን ምን ናቸው ብለው ያምናሉ?
- ለውይይቱ የተሰጠው ጊዜ(1 ሰአት ከ30 ደቂቃ ነው)። በውይይቱ መሃል ለተወያዮች ሻይ ቡና መቅረብ ይኖርበታል።

በመጨረሻም ተወያዮችን አመሰግን!!

ANNEX 17: ከሆስፒታል አስተዳደር ጋር ለሚደረግ ቃለ ምልልስ መመሪያ

ቃለ ምልልሱን ያካሄደው ሰው ስም _____ ቃለ ምልልሱ የተካሄደበት ሰዐት _____

ቃለ ምልልሱ የተካሄደበት ቦታ _____ ቃለ ምልልስ የተደረገለት ሰው _____

ቃለ ምልልስ ለሚያካሂደው ሰው፡ ለተጠያቂው በአግባቡ ሰላምታ ስጥ፣ ስለ ቃለ ምልልሱ አላማ አስረዳ፣ የቃለ ምልልሱ ዋና አላማ የኤች. አይ. ቪ/ኤድስ ህክምና ፕሮግራም ሲጀመር ምን ያህል ህመ·ማን መድሃኒቱን በአግባቡ እንዲወስዱ ለማስቻል ቅድመ ዝግጅት እንደተደረገ ለማወቅ እንደሆነ አስረዳ።

በቃለ ምልልሱ መሸፈን ያለባቸው ዋና ዋና ጉዳዮች፣

- ህመ·ማን መድሃኒቶችን በአግባቡ እንዲጠቀሙ ለማስቻል ምን እየተሰራ ነው?
- ህመ·ማን መድሃኒቶችን በአግባቡ እየተጠቀሙ እንደሆነ ለመቆጣጠር ምን እየተሰራ ነው?
- የህመ·ማንን መድሃኒት አጠቃቀም ለማሻሻል ምን አይነት ድጋፍ እየተደረገላቸው ነው?

የሚቀጥሉትን ጥያቄዎች መጠየቆዎትን አይርሱ!

- ሆስፒታሉ መቼ ነው የኤች. አይ. ቪ/ኤድስ ህክምና ፕሮግራም የጀመረው?
- ምን ያህል የጤና ባለሞያዎች በፕሮግራሙ ላይ ተሳታፊዎች ናቸው? የሞያ ተዋጾዋቸውን ይግለጹ
- ምን ያህል ባለሞያዎች ስልጠና ወስደዋል፣ የወሰዱትስ ስልጠና ምን አይነት ነው?
- በሆስፒታሉ የሚታከሙ ህመ·ማን ቁጥር ስንት ነው?
- ሆስፒታሉ በቀን ምን ያህል ህመ·ማንን ያስተናግዳል?
- ለፕሮግራሙ አጋዥ የሆኑ መዕሀፎች፣ መሳርያዎች፣ ወ.ዘ.ተ. ምን ያህል ተማልተዋል?
- ህመ·ማን የእድሜ ማራዘሚያ መድሃኒቶችን ምን ያህል በአግባቡ እየተጠቀሙ ነው ብለው ያስባሉ?
- ህመ·ማን የእድሜ ማራዘሚያ መድሃኒቶችን በአግባቡ እንድጠቀሙ ለማስቻል ምን አይነት ስራ እየተሰራ ነው?
- የህመ·ማን የእድሜ ማራዘሚያ መድሃኒቶች አጠቃቀም መቆጣጠርያ ዘደ አላችሁ?
- ስለፕሮግራሙ ያልሆትን ልምድ ያካፍሉን፣ ይህ ቢለወጥ ብለው የሚያስቡት ነገር አለ?
- ፕሮግራሙን ለማሻሻል እድሎች አሉ ብለው ያስባሉ፤ አለ ካሉ ይጥቀሳቸው?

በመጨረሻም ቃለ ምልልስ ሰጭውን አመስግን!!

ANNEX 18: ከጤና አገልግሎት ሰጪ ባለሞያዎች ጋር የሚደረግ ቃለ ምልልስ

ከጤና አገልግሎት ሰጭ ባለሞያዎች ጋር ለሚደረግ ቃለ ምልልስ መመርያ

- የሆስፒታሉ ስም _____
- የቃለ ምልልሱን ያካሄደው ሰው ስም __
- ቃለ ምልልሱ የተካሄደበት ቦታ _____
- ቃለ ምልልሱ የተካሄደበት ሰአት _____
- ቃለ ምልልስ የተደረገለት ባለሞያ _____

ቃለ ምልልሱን ለሚያካሄደው ሰው፣ ራስህንና የጥናቱን አላማ አስተዋውቅ

ስለ ባለሞያው አጠቃላይ መረጃ

ሀ) ጾታ	
ለ) እድሜ	በአመት
ሐ) ሞያ	
መ) በፕሮግራሙ ላይ ያለሆት የስራ ድርሻ	
ሠ) በፕሮግራሙ ላይ ከመቼ ጀምሮ ተሳትፈዋል	

ስልጠናን በተመለከተ

- ከዚህ ፕሮግራም ጋር የተያያዙ ምን አይነት ስልጠናዎችን ወስደዋል? ስለ ስልጠናዎቹ በዝርዝር ይንገሩኝ
- ስልጠናዎቹ በቂ ናቸው ብለው ያስባሉ?

መድሃኒቶችንና ህክምናን በተመለከተ

- የትኞቹን የኤች. አይ. ቪ/ኤድስ ህክምና መመርያ መፅሐፍት ይጠቀማሉ? ዘርዝራቸው
- የሚያዝዋቸው የእድሜ ማራዘሚያ መድሃኒቶች ሁል ጊዜ በበቂ መጠን ይገኛሉ (የማይገኙ ከሆነ፣ ምን ያህል ጊዜ ይጠፋሉ፣ ምክንያቱ ምንድን ነው፣ ከሌሉ ምን ያደርጋሉ)?
- መመሪያ መፅሐፉ ላይ የተቀመጡ ለኤች. አይ. ቪ/ኤድስ ህመማን ጥቅም የሚውሉ መድሃኒቶች በበቂ መጠን ይገኛሉ (የማይገኙ ከሆነ፣ ምን ያህል ጊዜ ይጠፋሉ፣ ምክንያቱ ምንድን ነው፣ ከሌሉ ምን ያደርጋሉ)?
- መድሃኒት በበቂ መጠን ባለመኖሩ የተነሣ ህመማን መድሃኒት ሳያገኙ የቀረበት ጊዜ ነበር?
- ላብራቶሪዎች እና የመመርመርያ መሳርያዎች ምን ያህል አስተማማኝ ናቸው (የምርመራ ውጤት በስአቱ ይደርሳል)?
- አንድ ህመምተኛ የእድሜ ማራዘሚያ መድሃኒቶችን ለመጀመርያ ጊዜ ሲወስድ ምን አይነት አሰራር ትከተላላችሁ?
- አንድ ህመምተኛ የእድሜ ማራዘሚያ መድሃኒቶች አይነት ሲለውጥ ምን አይነት አሰራር ትከተላላችሁ?
- የእድሜ ማራዘሚያ መድሃኒቶች ተጠቃሚ ህመማን ለህክምናው ቅድመ ዝግጅት እንድያደርጉ በምን አይነት መልኩ መረጃ ይሰጣቸዋል?
- ምን አይነት መረጃ ይሰጣቸዋል?
    - ስለ በሽታው(ኤች. አይ. ቪ/ኤድስ)
    - በሽታው እንዴት ሰውነትን እንደሚያጠቃ
    - መድሃኒቶቹ እንዴት እንደሚሰሩ
    - መድሃኒቶቹን እንዴት መጠቀም እንዳለባቸው

- ህክምናን መቀጠል ምን ያህል ጠቃሚ እንደሆነ
- መድሃኒቶችን መውሰድ ቢረሱ ምን ማድረግ እንዳለባቸው
- መድሃኒቶቹ ከሌሎች መድሃኒቶች ጋር ሲወሰዱ የሚያመጡት ችግር (ባህላዊ ህክምናን ጨምሮ)
- መድሃኒቶቹ ያላቸው ጎጅ ባህርያት፣ እና እነዚህ ጎጅ ባህርያት ሲከሰቱ ምን ማድረግ እንደሚገባ
- መድሃኒቶች ሲጨርሱ ከየት ማግኘት እንደሚችሉ

የመድሃኒቶች አጠቃቀም በተመለከተ

- በአጠቃላይ ሲታይ ህመማን ቀጠሮ ያከብራሉ ማለት የቻላል?
- ህመማን በአጠቃላይ መድሃኒቶችን በአግባቡ ለመጠቀም ምን ያደርጋሉ ብለው ያስባሉ?
- በመቶኛ ሲገለፅ ምን ያህሉ ህመማን መድሃኒቶችን በአግባቡ ይጠቀማሉ ብለው ያስባሉ?
- ህመማን መድሃኒቶችን በአግባቡ እየተጠቀሙ እንደሆነ ለማወቅ ምን አይነት ዘዴ ትጠቀማላችሁ (ቀጠሮ ማክበር፣ መድሃኒቶችን ሲያልቁ በጊዜ መውሰድ፣ ወ.ዘ.ተ.)?
- በሚቀጥሉት ሀሳቦች ላይ ያልሆትን ልምድ እንድያካፍሉን እጠይቃለሁ
    - ከወንዶችና ከሴቶች ህመማን የትኞቹ በአግባቡ የተሰጣቸውን መድሃኒቶች ይጠቀማሉ?
    - ከወጣቶች እና ከእድሜ ባለፀጋ ህመማን የትኞቹ በአግባቡ የተሰጣቸውን መድሃኒቶች ይጠቀማሉ?
    - ከተማሩ እና ካልተማሩ ህመማን የትኞቹ በአግባቡ የተሰጣቸውን መድሃኒቶች ይጠቀማሉ?
- ሆስፒታሉ ከህመማን ቤት ያለው ርቀት ህመማን ህክምናቸውን በአግባቡ እንዳይከታተሉ ያለው ተፅእኖ ምን ያህል ነው?
- ከአልጦት ልምድ በመነሳት ከዚህ በታች የተጠቀሱት ችግሮች ህመማን ህክምናቸውን በአግባቡ እንዳይከታተሉ ያላቸው ተጽእኖ እንዴት ነው?
    - መድሃኒቶቹ ያላቸው ጎጅ ባህርያት
    - የምግብ እጥረት
    - ህመማን ስለ ህክምናው ያላቸው እውቀት
- ህመማን መድሃኒቶችን በአግባቡ እየተጠቀሙ እንደሆነ ለመቆጣጠር ምን እየተሰራ ነው?
- የህመማንን መድሃኒት አጠቃቀም ለማሻሻል ምን አይነት ድጋፍ እየተደረገላቸው ነው (ቤተሰብ እና ማህበረሰቡን ለማሳተፍ ምን ያህል ጥረት እየተደረገ ነው)?
- ህመማን መድሃኒቶችን በአግባቡ እንዲጠቀሙ በሚደረግ ጥረት ውስጥ ዋና ዋና ችግሮች ምን ምን ናቸው?

በቃለ ምልልሱ ላይ ስለተሳተፉ ከፍ ያለ ምስጋናዬን አቀርባለሁ!!

DECLARATION

I, the undersigned, declare that this thesis is my original work and has never been presented for a degree in this or any other university.

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Signature: _____

This thesis has been submitted for examination with my approval as a university advisor

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Place and Date of Submission: Addis Ababa, Ethiopia

October, 2009