

Addis Ababa University
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Assessment Of Adherence To Antiretroviral Therapy Among Hiv-Infected Persons
In The Ministry Of National Defense Force Hospitals,
Addis Ababa And Debreziet

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Abstract

A stratified cross-sectional survey supported by qualitative approach was conducted on 422 HIV-infected persons receiving antiretroviral regimens from the Ministry of National Defense Force Hospitals, in Addis Ababa and Debrezit.

The study was focused on the assessment of adherence to ARV therapy among HIV-infected persons from October 2004 to March 2005.

The study group consists of three categories namely Officers, private and non-commissioned officers and civil.

All 422 HIV-infected patients received ARV treatment for a mean duration of 3.7 months, were interviewed using pre-tested questionnaire and in depth interview to six selected cases. Adherence was measured using self report; participants were questioned regarding taking the total number of ARV pills prescribed by physician and the memory aids used to remind the prescribed regimens.

The finding revealed that among the respondents who already started ARV therapy 160 (39.5%) were civil, 158 (37.6%) were private and non-commissioned officers, 96(22.4%) were officers. The median age was 35 years (interquartile range 29-40) and 284(67.3%) were males. The average adherence rate to ARV medication was 82.8% of all prescribed doses. Keeping clinical appointment, using memory aids and educational levels were associated with increased adherence. The incidence of opportunistic infections were higher in the study population before initiation of ART.

The most frequent opportunistic infections were oral candidiasis and pulmonary tuberculosis, both diseases decreased by three-fourth after the initiation of ART when comparing for the same patients.

The frequency of AIDS-related infections declined dramatically by 83.3% after the initiation of ARV treatment and AIDS-related hospitalization is reduced by 44.7%. Of the total respondents 4(0.7%) of the patients developed serious adverse drug reactions requiring a change in treatment.

It was concluded that most patients need aggressive modification to improve their adherence to ARV treatment. The findings suggest that develop patient centered education approach that ensure a good

understanding of treatment by the patient on the help of memory aids and keeping clinical appointment.

Introduction

Globally, HIV/AIDS has created an enormous challenge to the survival of mankind. HIV has spread like wild fire, causing untold suffering and death and creating profound development challenge (1).

The virus has infected close to 65million individuals and over 25million have already died, over 42millions people are living with the virus and of these more than 70% are in sub-Sahara Africa. In Ethiopia over 2.2million people in the country are living with the virus and nearly 110,000 patients are reported to have developed AIDS-defining illness (2).

The introduction of ARVs in 1990s dramatically reduced illness and death among people with HIV (3).

Antiretroviral drugs (ARVs) are standard treatment for HIV in wealthy countries and should be included in a package of care for all HIV-infected people (1). Triple drugs combination of antiretroviral therapy has remarkable effects on the lives of people living with HIV/AIDS, when it is provided on a large scale (4). The clinical benefit of highly active antiretroviral therapy became immediately apparent in those part of the world in which the new drugs were readily accessible. HIV-related disease, opportunistic infections and hospitalization all decreased by 60 to 80 percent (5). Wide spread access to antiretroviral treatment could bring millions of people into health care setting (6). However, since ARV therapy was introduced in 1996, these benefits have been reserved almost exclusively for industrialized countries, which

bears only 5% of the global burden of HIV/AIDS, of the 38million people now living with HIV/AIDS in developing countries between 5 and 6 million in the advanced stage of disease urgently need ARV treatment only about 300,000 currently have access to it. In sub-Sahara Africa more than 4 million people need treatment (7).

WHO believes that health systems in developing countries can provide high quality ARV therapy to many more people than currently receive it by significantly simplifying the choice of treatment regimens and the complexity of clinical monitoring (3)

Antiretroviral regimens are complicated and difficult for patients to follow and they can have serious side effect (8). Even short exposure to sub optimal levels of antiretroviral agents can lead to irreversible viral resistance and loss of clinical benefit (9).

Patient must be committed to and capable of adhering to complicated regimens and with high pills burdens (10). Even in highly committed patients, adherence wanes over time, a phenomenon described as "pills fatigue" or treatment fatigue" can occur (9).

Therefore adherence to antiretroviral therapy is important for HIV-infected persons, because non adherence can lead to progression of disease and development of resistance strains of HIV.

Standardizing treatment is recommended by WHO for resource-limiting countries. Standardizing treatment means that health system with few resources can maintain a globally acceptable quality of care and deal with human resource constraints, promote

adherence to treatment and avoid resistance. Most importantly, the number of people receiving ARV treatment will increase and quality of that treatment will be improved (3).

Ethiopia, as in many other resource poor counties, HIV infected people have not yet benefited from the use of ART. However, a policy on the supply and use of antiretroviral drug is developed and has been approved by the government (2).

The Ministry of National Defense Force Adopted a policy of universal free access to antiretroviral drugs for persons with HIV/AIDS more than 450 patients now receive antiretroviral therapy through Armed Force General Teaching Hospital, Bella Referral Hospital and Air Force Hospital.

Few studies have focused on adherence to newer combination antiretroviral therapy. There is no consensus on how to measure adherence to antiretroviral and little is understood about the determinants of adherence to antiretroviral.

Investigator and clinician continue to be interested in predicting, measuring and improving adherence to a highly active antiretroviral therapy (11). Many definitions of adherence were used without clear agreement, as evidenced by definitions based upon number of dose missed in specified time period, an appointment missed, self report, care giver report, pill count, electronic monitoring devices and pharmacy refill records (11, 13).

LITRATURE REVIEW

The current treatment for HIV-infection requires strict adherence to the medication regimen to be most effective. Patient must take their medication at least 90 to 95percent of the prescribed times to prevent development of viral resistance (12).

An innovative and culturally sound strategy for enhancing adherence to ART is highly recommended because of the life long nature of the therapy (2).

There are several known methods to achieve readiness to initiate antiretroviral therapy and maintain patient adherence. One of the method is to negotiate a plan or regimens that the patient understand and to which the patient is committed, taking time to ensure readiness for the first prescription, use of memory aids such as written schedules, pill boxes and medication organizers (13).

There are predictors of good adherence as well, such as availability of emotional and practical life support, the ability of the patients to fit the medications into their daily routine (13).

In both clinical trails and clinical practice non adherence to medication is wide spread among patients with chronic disease. The shift to combination therapies for treating human immune deficiency virus (HIV) infected individual has increased adherence challenges for both patients and health care providers. Estimate of average rate of non adherence to antiretroviral therapy ranges from 50 percent to 70percent (14).

GLOBAL situation of antiretroviral therapy

The use of antiretroviral in the USA has decreased AIDS related morbidity and mortality by up to 90% and significantly affected the trajectory of the epidemic (15).

A prospective study conducted by American family physician to examine factors affecting adherence to HIV medication regimen the average adherence to the medication regimen was 71percent of all prescribed doses (12).

Operational research conducted in Thailand, where eighty-eight adults and children started triple drug antiretroviral treatment. Most have advanced disease in the first six months of treatment almost all patients saw an improvement in their CD₄ cell count. Seven patients in the study developed serious drug side effects, requiring a change in treatment. However, milder Side effect (E.g. nausea, diarrhea, headache, muscle pain) often improved with in two to four weeks of initiating antiretroviral treatment. Adherence was improved by educating patients about side effect, and developing a plan to help patients cope with side effects (13).

In mid-1990s Brazils Ministry of health adopted a policy of universal free access to antiretroviral drugs for Brazilians with HIV/AIDS more than 110,000 patients now receive antiretroviral therapy through the public health system. The Brazilians antiretroviral program has improved patients quality of life and produced a six-fold reduction in hospitalization rate. The rate of HIV-related infection has fallen by up to 80percent and 358,000 AIDS related hospital admission were avoided from 1997 to 2001 (13).

Numerous studies have demonstrated that antiretroviral therapy is an effective approach to stemming the incidence of opportunistic infections. Although, it should not replace effort to provide antimicrobial prophylaxis (16).

Surveys have shown that one-third of patients missed doses within 3 days of the survey, the reasons for missed doses included forgetting, being depressed, being too busy, being too ill, drug abuse, alcohol abuse, poor clinician patient relationship, active mental illness, in particular depression, lack of patient education and lack of access to primary medical care or medication are among the many predictors of poor adherence.

Resource limited setting affordability in the cases of pocket funding makes patients discontinue or take drugs irregularly (2, 13).

AFRICA Situation of Antiretroviral therapy

Preliminary analysis conducted by MSF in KHAYELITSH town ship in Cape Town for initiation of ARV treatment revealed that, after one year on the treatment the frequency of opportunistic infection was reduced dramatically after the initiation of ARV treatment. The incidence rate of tuberculosis and oral candidiasis declined by two third for both diseases (18).

The AIDS health care foundation working in South Africa and Uganda stress three factors that enhance ARV adherence, on-site support by non-governmental organizations, on going education by peers who are also in ARV therapy and

involvement of family members before and during treatment, (Dickson Opul, executive director, Uganda business coalition for HIV/AIDS May 2003)

Strengthening adherence to ARV therapy may result in community mobilization against AIDS and increase the uptake of intervention to prevent HIV transmission such as HIV testing and counseling and condom use (18).

Ethiopia situation of ARV therapy

The study conducted between Akaki and Wonji factory workers to investigate barriers that may pose a threat to successful implementation of an antiretroviral treatment (ART) program shows that, the proportion of participants having good knowledge on issue concerning adherence was found reasonably good (67.7%) and was intermediate concerning the benefit of ART (37.7%). However, knowledge concerning eligibility was very low (16.8%). These results indicate a tremendous need to educate cohort participants when ART is provided (19).

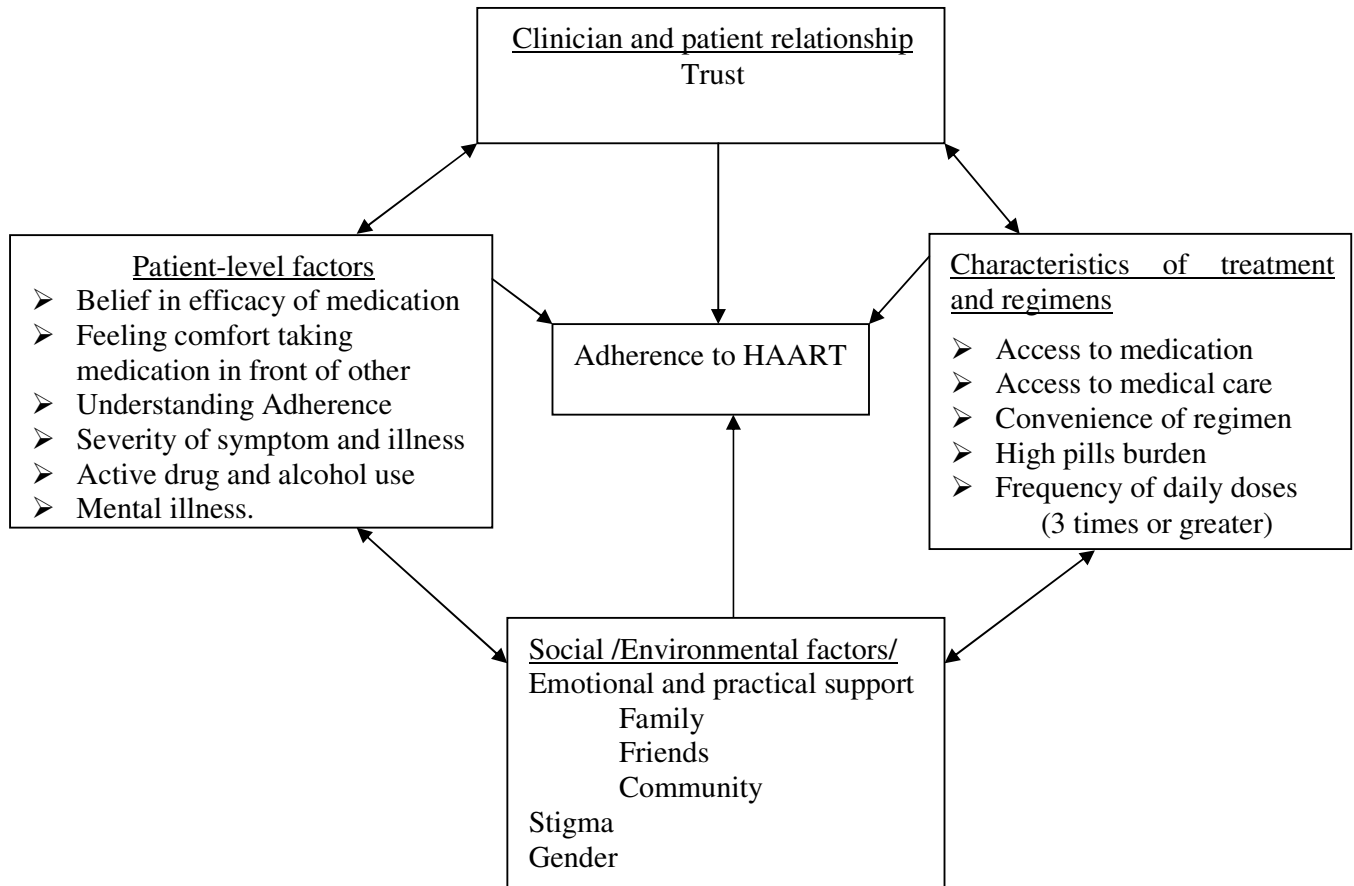
The study conducted for evaluation of antiretroviral treatment in Hayat and Bethezatha Hospitals, on thirty-three patients who were started on triple ARV treatment revealed that, side effects of the drugs were in ten (30.3%) that resulted in change of the regimens in two and drug interruption in one. Response to treatment twenty-two patients (69.7%) were noted to improve, while nine (27.3%) remained the same and death occurs in one (3%) (20).

Rational of the study

Patient adherence to ARV combination therapy is a critical component of successful treatment outcome. While combination therapy is known to be effective in slowing disease progression, the long-term benefit of these therapies can only be sustained if resistance strains of HIV do not emerge among factors that can result in the emergency of resistance, non adherence is perhaps the most amenable to intervention.

Military constitutes the largest organization unit in Ethiopia. Most of the time soldiers are mobile for keeping peace and stability of the country. Various factors expose soldiers at high risk for getting infected with HIV/AIDS than civilian society. High HIV infection rate among the military could have devastating impacts on the socio-economic development of country, threaten national security and could increase the incidence of HIV infection in population, because the rate of partner change among soldiers are high. Hence provision of effective treatment for HIV-infected soldiers with ARV therapy could be one of the strategies to improve quality of life and keeping peace and stability of country. For effectiveness and successful out come of ARV treatment the patient must take 95% of the prescribed pills (13). Antiretroviral regimens are complicated and difficult for patient to follow (11). Prerequisite for progress in adherence research is a focus effort for developing reliable and valid methods for measuring adherence that are feasible for patients living with HIV/AIDS. This study should tried to assess adherence to ARV therapy in Ethiopia setting.

CONCEPTUAL FRAME-WORK ON ASSESSMENT OF ADHERENCE TO ANTIRETROVIRAL THERAPY AMONG HIV INFECTED PERSONS



Objectives of the study

General objective

To assess adherence to antiretroviral therapy among HIV-infected persons in Ministry of National Defense Force Hospitals, Addis Ababa and Debreziet.

Specific objectives

- To assess adherence to combination of antiretroviral therapy
- To assess the relationship between adherence to antiretroviral therapy and benefits of the patient.

Research Methodology

1. Study design

A cross sectional descriptive study supported by qualitative approach was conducted in Ministry of National Defense Force Hospitals, in Addis Ababa and Deberzeit from October 2004 to March 2005. The study was focused on assessment of adherence to antiretroviral therapy among HIV-infected persons.

2. Study Area

The Ministry of National Defense Force hospitals, namely Armed force General teaching hospital, Bella referral hospital and Air Force hospital were selected for this study. The Armed force General teaching hospital and Bella referral hospital are situated in Yeka and Ledeta Kefele Ketema to the south west and northern part of Addis Ababa, the capital city of Ethiopia. The Air Force hospital is situated in central Ethiopia 45km South of Addis Ababa. These hospitals serve as Teaching for Defense University College of health sciences and private health college and provide health care services for out-patients and in-patients. The staffs are highly qualified and the hospitals are well equipped with modern laboratory and VCT center.

The Ministry of National Defense Force hospitals are the only hospitals that adopted a policy of universal free access to antiretroviral drugs for persons living with HIV-AIDS, In Ethiopia, 2004. Due to free access to antiretroviral therapy the Ministry of National Defense Force hospitals were selected for this study.

3. Source population.

All HIV-infected persons using ARV drugs from Ministry of National Defense Force Hospitals were the source population.

Inclusion criteria

The Source population included those who were admitted to Hospital for Antiretroviral drug intervention and all patients taking antiretroviral drug therapy as out-patients who had follow up and aged above 18 years.

Exclusion Criteria

All persons who were unable to hear, unconscious and mentally disabled were excluded from the source population.

4. Sample size assumptions and technique

- The sample size was determined by assuming stabilized adherence prevalence rate 50%, giving any particular out come to be with 5% marginal error and 95% confidence interval of certainty ($\alpha = 0.05$). Based on this assumption, the actual sample size for the study is computed using one-sample population proportion formula as indicated below.

Where:

n = Sample size

$z \frac{\alpha}{2}$ = critical value 1.96

p = assume stabilized adherence prevalence rate 50%

d = precision (marginal error) = 0.05

Thus the sample size is

$$n = \frac{(1.96)^2 \times 0.5(1-0.5)}{0.05^2}$$
$$= 384$$

Non-response rate 10% = 38.4 + 384

Total = 422

Sampling Technique

Stratified random Sampling was used to select the study subjects. The study subjects were grouped into three categories. The grouping system is based on military ranks and civil.

- All Military officers were categorized in group one.
- Private and non-commissioned officer in group two.
- Civilian employees and the families of the military were categorized in group three together.

5. Data collection

The Questionnaires were pre-tested on a Sample population of soldiers and civil using ARV drugs in the Ministry of National Defense Force hospitals, in Addis Ababa and Debrezeit.

Pre-tested questionnaires with key indicators such as socio demographic back ground and four categories of factors

1. Patient factors:- substance abuse, keep clinical appointment, feeling comfortable in taking medication in front of others, severity of symptoms and illness, understanding of adherence, etc...
2. Regimen factors:- convenience of regimen in the patients normal daily activities, high pills burden and frequency of daily doses (3 times or greater).

3. Clinical interaction:- patients and physician relationship
4. Social and environmental factors:- emotional and social support, stigma and gender were used to assess adherence to antiretroviral therapy among HIV-infected persons. Both close ended and open-ended questions were used.

The questionnaire was translated to Amharic language and then back to English to ensure consistency of the questionnaire.

Six registered nurse data collectors who had an experience of data collection and counseling were selected and trained for two days.

The interview was conducted during the day in the afternoon in a place where the interviewee feels free and can express his/her feelings without any hesitation, all interviews were conducted alone with the respondents. Respondent's right not to participate in the study was respected for those who were found to refuse.

Similarly two supervisors were selected and oriented about the study before beginning their duties to ensure the completeness or the quality of information during data collection, the principal investigator and supervisors have made a thorough check ups before receiving the filled questionnaires from each data collectors on daily bases.

In depth interview was undertaken in six selected cases with different background (Educational level, improvement noticed and no improvement experienced) sex, marital status, and military rank were considered. In-depth interview was moderated by principal investigator, notes were taken and it was recorded using tape recorder. Semi-structured questionnaire was used to guide the interview.

6. Operational Definitions

1. Adherence:- the extent to which a patient continues the agreed-up on mode of treatment or intervention as prescribed. The definition based on number of dose missed in specified time period, self report and an appointment missed.
2. Adverse effect- an unwanted effect caused by the administration of drugs. On set may be sudden or developed over time.
3. Antiretroviral drug (ARVs)- substance used to kill or inhibit the replication of retrovirus such as HIV.
4. Combination therapy- two or more drugs or treatment used together to achieve optimum result.
5. Highly active antiretroviral therapy (HAART)- the name given to treatment regimens meant to aggressively suppress viral replication and progress of HIV disease the usual HAART regimen combines three or more different drugs.
6. opportunistic infection- the term applied to infections with bacteria, viruses, fungi or protozoa to which individuals with a normal immune system are not usually susceptible. These organisms take advantage of the opportunity provided by immunodeficiency.
7. resistance- reduction in a pathogen's sensitivity to a particular drug-resistance is thought to result usually from a genetic mutation

7. Data analysis

The raw data collected from the respondents were entered in to EPI info version 6 software package and analyzed. Descriptive statistics were used to generate proportion and p- values were used to decide whether observed difference were statically significant or not.

8. Variables of the study

8.1 response (dependent) variable

The response variable is adherence

8.2 explanatory variables (independent)

- age
- sex
- ethnicity
- educational level
- marital status
- medication adverse effect
- emotional and practical support
- convenience of regimen
- understanding the important of adherence
- belief in efficacy of medication

- socio-economic status
- substance abuse
- alcoholism
- depression
- patient and physician relation ship
- keeping clinical appointment
- feeling comfortable in taking medication in front of others
- severity of symptoms or illness

9. Ethical Consideration

Ethical clearance was obtained from AAU, medical faculty, informed consent was obtained from each study subject prior to the interview after the purpose of the study was explained to respondents. Confidentiality of the information was assured and privacy of the respondent was maintained.

Result

A total of 422 HIV-infected persons on antiretroviral regimen were selected from three Defense Force Hospitals. Of the total 422 HIV infected persons the largest number of the respondents belonged to 28-32 age group who had high school education and were married. The median age was 35 years and 67.3% were males and the remaining 32.7% were females. The patients received ARV treatment for a mean duration of 3.7 months.

Table-1, socio- demographic distribution of the study group in the Ministry of National Defense Force Hospitals, Addis Ababa and Debreziet, March 2005.

Variable Category	number n= 422	percent
Age		
18-22	6	1.4%
23-27	57	13.7%
28-32	115	27.6%
33-37	88	21.1%
38-42	91	21.8%
43-47	35	8.4%
48-52	17	4.1%
53-57	6	1.4%
58+and	2	0.5%
military rank		
Officers	96	22.9%
Private & non-com-officer	158	37.6%
Civil	166	39.5%
Marital status		
Married	196	46.4%
Single	148	35.1%
Divorced	34	8.1%
Widowed	38	9.0%
Separated	5	1.2%

Variable Category	number n= 422	percent
educational level		
Illiterate	35	8.2%
Grade 1-6	111	26.3%
Grade 7-12	217	51.7%
Diploma and above	56	13.3%
sex		
Male	284	67.3%
Female	138	32.7%
Income		
150-249	50	11.8%
250-349	34	8.1%
350-449	33	7.8%
450-549	58	13.7%
550-649	52	12.3%
650-749	35	8.3%
750-849	29	6.9%
850 ⁺ and	46	10.9%

*5 individuals did not specify their age

**2 individuals did not specify their rank

Among the respondents who have already started ARV therapy, 166 (39.5%) were civil, 158 (37.6%) and 96 (22.9%) were Private and non-commissioned officer and officers respectively.

Table-2, percent distribution of respondents by Adherence to ARV therapy in Ministry of National Defense Force Hospitals, Addis Ababa and Debrezeit, March 2005

Adherence to prescribed Pills taken	Category			
	Officer (n=93)	Private and non- commissioned officer(n=154)	Civil (n=159)	Total (n=406)
>95%	82 (88.2%)	124 (80.5%)	130 (82.2%)	336 (82.8%)
90-95%	-	-	-	-
80-90%	3 (3.2%)	5 (3.2%)	5 (3.2%)	13 (3.2%)
70-80%	1 (1%)	8 (5.2%)	4 (2.5%)	13 (3.2%)
<70%	-	4 (2.6%)	2 (1.3%)	6 (1.5%)

❖ 26 individuals did not specify the number of missed pills

As shown in table 2, 82 (88.2%) of HIV infected officers, 130 (82.2%) of HIV infected civil and 124 (80.5%) of HIV infected private and non-commissioned officer were taken all prescribed pills and 62 (15.3%) of HIV infected persons were missed some of the prescribed pills. Of which 13 (3.2%) of the respondents categorized with in adherence rate of 80-90 percent, 13 (3.2%) of the respondents categorized with in adherence rate of 70-80 percent and 6 (1.5%) of the respondents categorized less than 70 percent.

Adherence was measured using self report, the average adherence to ARV medication regimen was 82.8% of all prescribed doses.

Table-3, Respondents using memory aids in Ministry of National Defense Force Hospitals, in Addis Ababa and Debrezeit, March 2005.

Memory aids	Category					
	Officer (n=77)		Private and non-commissioned officer(n=140)		Civil (n=150)	
	Yes	No	Yes	No	Yes	No
Pill box	28	49	15	125	17	133
Written schedules	7	70	7	133	4	146
Watch Bell	19	58	39	101	43	107

As shown in table 3, the majority of the officers used pill box while private and non-commissioned officers and civil used watch bell.

Table-4, Clinical stage III AIDS- Defining diagnose among HIV- infected persons before the initiation of ART in Ministry of National Defense Force Hospitals,

Addis Ababa and Debereziat, March 2005

WHO Clinical stage III	Category					
	Officer (n=94)		Private and non- commissioned officer(n=154)		Civil (n=159)	
	Yes	No	Yes	No	Yes	No
Wt. loss > 10% of body wt.	45	49	76	78	73	86
Un explained prolonged fever > 1 month	64	30	115	39	115	44
Un explained chronic diarrhea > 1 month	20	74	59	95	54	105
Oral candidasis (thrush)	33	61	56	98	68	91
Pulmonary Tuberculosis with in the last year	50	44	76	78	70	89

As shown in table-4, based on patients response 68 (42.8%) of HIV-infected civil, 56 (36.4%) of HIV-infected private and non-commissioned officer and 33 (34.7%) of HIV-infected officers developed oral condidasis. Fifty (52.6%) HIV-infected officers, 76 (49.4%) of HIV-infected private and non-commissioned officers and 70 (44.0%) of HIV-infected civil were developed pulmonary tuberculosis before the initiation of Antiretroviral drugs.

Table-5, Reduction of AIDS-Related opportunistic infections among HIV-infected persons after initiation of ART in Ministry of National Defense Force Hospitals,

Addis Ababa and Debreziet, March 2005.

Reduction in AIDS related opportunistic infection	Category					
	Officer (n=94)		Private and non-commissioned officer(n=154)		Civil (n=159)	
	Yes	No	Yes	No	Yes	No
Reduction in weigh loss	47	47	76	78	69	90
Un explained prolonged fever >1 month	54	40	98	56	100	59
Un explained chronic diarrhea >1 month	16	78	47	107	40	119
Oral candidasis (thrush)	21	73	42	112	58	101
Pulmonary tuberculosis	42	52	57	97	44	115

As shown in table-5, based on patients response 100 (63.3%) of the civil, 98 (63.6%) of private and non commissioned officers and 54 (57.4%) of the officers were relieved from un explained prolonged fever. Forty seven (50.0%) of the officers, 76 (49.4%) of private and non commissioned officers and 69 (43.7%) of the civil were increased in their body weights.

Table-6, Percent distribution of respondents by treatment out come among HIV-infected persons in Ministry of National Defense Force Hospitals,

Addis Ababa and Debrezeit, March 2005.

Treatment out come Based on the patients response	Category			
	Officer (n=94)	Private and non- commissioned officer(n=154)	Civil (n=159)	Total (n=407)
▪ Reduction in AIDS related Hospitalization	40 (42.6%)	62 (40.3%)	80 (50.3%)	182 (44.7%)
▪ Other reduction in- AIDS related infection	80 (85.8%)	124 (84.0%)	131 (82.5%)	340 (83.3%)
▪ Improvement in quality of life	75 (79.8%)	90 (58.4%)	135 (84.9%)	300 (73.3%)

As shown in table 6, 80 (85.8%) of the officers. 124 (84.0%) of the private and non-commissioned officer and 131 (82.5%) of the civil were showed reduction in AIDS-related infections.

One hundred thirty five (84.9%) of the civil, 75 (79.8%) of the officers and 90 (58.4%) of private and non-commissioned officer were showed subjective improvement in quality of life. 80 (50.3%) of the civil, 40 (42.6%) of the officers and 62 (40.3%) of private and non-commissioned officer were showed reduction in AIDS-related hospitalization.

Table-7, Adverse drugs reactions among HIV-infected persons on ART in Ministry of National Defense Force Hospitals.

Addis Ababa and Debereziat, March 2005.

ARV adverse drugs reaction Based on patients response	Category							
	Officer (n=94)		Private and non- commissioned officer(n=154)		Civil (n=159)		Total (n=407)	
	Yes	No	Yes	No	Yes	No	Yes	No
Nausea	29	65	43	111	46	113	118	289
Vomiting	12	82	20	134	13	146	45	362
Headache	28	66	44	110	21	138	93	314
Anemia	15	79	18	136	23	136	56	351
Abdominal cramp	22	72	39	115	33	126	94	313
Depression	4	90	29	125	31	128	64	343
Rash	15	79	15	139	13	146	43	364
Diarrhea	3	91	8	146	4	155	15	392

As shown in table 7, among the total population 221(54.0%) of HIV-infected persons developed milder adverse drug reaction of which 118(28.9%) of the patients developed nausea, 93(22.8%) of the patients developed headache, 64(15.7%) of the patients developed depression, 56(13.7%) of the patients developed anemia and 45(11.0%) of the patients developed vomiting, 43(10.5%) and 15(3.6%) of the patients developed Rash and Diarrhea respectively

Table-8, Relation of selected variable and adherence to ART among HIV-infected persons in the ministry of National Defense Force Hospitals,

Addis Ababa and Debreziet, March 2005.

Variable	Adherence		Crude OR
	Yes	No	
Educational level			
Illiterate	21	14	1.00
Primary school	78	33	1.5(0.66, 3.72)
Sec. school	185	32	3.85(1.66, 8.93)
Tertiary	50	6	5.56(1.69, 19.03)
Memory aids			
Yes	166	13	4.52(2.25, 9.21)
No	130	46	1.00
Emotional and support			
Yes	196	43	0.89(0.50, 1.55)
No	139	27	1.00
Feeling comfortable in taking medication in front of others			
Yes	167	31	1.15(0.64, 2.06)
No	141	30	1.00
Substance and drugs abuse			
Yes	107	26	0.76(0.42, 1.36)
No	212	39	1.00

Variable	Adherence		Crude OR
	Yes	No	
Depression			
Yes	50	14	0.59(0.20, 1.27)
No	286	48	1.00
Keeping clinical appointment			
Yes	309	48	6.17(3.08, 12.39)
No	24	23	1.00
Sex			
M	225	59	0.93 [0.54, 1.59]
F	111	27	1.00
Convenience of therapy			
Fit	272	52	1.65 [0.86, 3.15]
Unfit	57	18	1.00

The odd of adherence among respondents who attended tertiary educational level is 5.56 higher than illiterate.

The odd of adherence among who keep clinical appointment was 6.17 higher than those who missed clinical appointment.

The odd of adherence among respondent who have memory aids was 4.52 higher than those who do not have memory aids.

Table-9, Relation of selected variables and adherence to ART among HIV-infected persons in Ministry of National Defense Force Hospitals,

Addis Ababa and Debreziet, March 2005

variable	Doses missed		Crude OR	Adjusted OR
Memory aids	Yes	No		
Yes	13	166	1.00*	1.00*
No	46	130	0.22(0.11, 0.44)	0.24(0.125, 0.470)
Keeping Clinical Appointment	Yes	No		
Yes	48	309	1.00*	1.00*
No	23	24	0.16(0.00, 0.33)	0.019(0.170, 0.128)
Educational level	Yes	No		
Illiterate	14	21	1.00*	1.00*
Primary school	33	78	0.63(0.27, 1.50)	0.53(0.219, 1.323)
Sec. School	32	185	0.26(0.11, 0.60)	0.29(0.125, 0.696)
Tertiary school	6	50	0.18(0.05, 0.59)	0.20(0.064, 0.685)

The odd of dose missed among illiterate is 0.20 higher than those who attended tertiary educational level.

The odd of dose missed among respondents who do not have memory aids was 0.24 higher than those who have memory aids.

The odd of dose missed among those who do not keep clinical appointment was 0.019 higher than those who keep clinical appointment.

Contextual results

In depth interview was carried out in six selected cases among sub-category group of HIV-infected persons who had been included in the study of assessment of adherence to antiretroviral therapy. A group of patients sub categorized under officer, private and non-commissioned officer and civil. The cases were selected by health care provider. The selection was considered different background (educational level, improvement noticed, no improvement noticed) rank and income. The in-depth interview was basically focused on believe regarding efficacy of medication, adherence, clinical benefit and adverse drug reactions. Each sub-category group consists of two members both of them are males except civil sub-category-one male and one female. The first question was what should be expected from the patients before the initiation of antiretroviral drugs?

Woman with a few years education from the sub-category of the civil group with low monthly income replied, patient must know when, how and for how long they should take the prescribed pills and benefits of ARV drugs before the initiation of ART.

A captain from the sub-category of officers with better income and who didn't specify his educational level explained, first commitment should be expected from patient and then patient should believe with the benefit of ARV drugs.

A soldier from the sub-category of private and non-commissioned officer with slightly better income and a few years education said, before the initiation of ARV drugs patient must know her/his sero-status and should avoid substance abuse like Chatt, alcohol and cigarette smoking.

Regarding the knowledge of different ART concepts the majority of HIV-infected patients have good knowledge concerning the benefit and adherence of ART.

One individual from the sub-category of private and non-commissioned officer has no believe with the efficacy of ARV medicine.

The majority of the participants were initiated antiretroviral therapy on the advanced stage of disease progression. One private and non-commissioned officer developed HIV-associated dementia, oral candidiasis, herpes simplex with mucocutaneous ulcer, fungal skin infection, and fever. One patient from the same category developed chronic diarrhea, skin rash and weight loss.

One officer developed fatigue, HIV-associated loss of body weight, chronic diarrhea and repeated opportunistic infection such as Amoebiasis and Giardiasis.

One male civil developed oral candidiasis and pulmonary tuberculosis before the initiation of ART. Five of the patients were improved from AIDS-defining opportunistic infections. A patient with pulmonary tuberculosis remained in the same condition. Two patients developed milder adverse drug reactions such as (headache, nausea, skin rash) for the first-four week during the initial period of antiretroviral and condition often improved with in five weeks of initiating antiretroviral management with out changing ARV therapy. One officer developed severe Anemia requiring a change in the treatment.

Five patients were taking all prescribed pills by physician categorized with in adherence rate of greater than 95 percent and one private and non-commissioned officer missed 13.3% of the prescribed pills and categorized with in adherence rate between 80-90 percent.

There was a high rate of hospitalization before the management of ARV therapy.

One officer and one private and non-commissioned officer were admitted for 15 days and 4 months respectively. One male civil was admitted twice in a year for a total of 26 days. One private and non-commissioned officer was admitted three times in a year for a total of 6 months. One officer has history of hospitalization but did not specify number of days.

The majority of the patients have memory aids namely, pill box, watch bell and written schedules to remind their medication.

SUMMARY OF QUANTITATIVE AND QUALITATIVE STUDIES

Most of the results were obtained from quantitative and a few was taken from qualitative study. The results were similar in certain findings. In both studies antiretroviral treatment initiated at a very advanced stage of disease progression and the frequency of the opportunistic infection declined dramatically after the initiation of antiretroviral treatment. The majority of HIV-infected persons were improved in the quality of life (morbidity, usual activity, mobility and self care). They used similar memory aids to remind ARV medicine to take in time. The average adherence rate for quantitative study was 82.8% of the total prescribed pills and in the case of qualitative study one private and non-commissioned officer missed taking pills for four days (13.3%).

The reasons for missing pills were living in distance area and being too ill. In both studies patients developed milder adverse drug reactions such as (headache, nausea and skin rash) during the initial period of antiretroviral treatment and condition often improved with in few weeks with out changing ARV therapy.

Anemia was the serious adverse drug reaction requiring a change in the treatment in quantitative and qualitative study.

Discussion

Even though an attempt was made to minimize information bias that could arise on the questions related to antiretroviral treatment by training interviewers and persuading the respondents to tell the truth by assuring them privacy and confidentiality of the information the interview was conducted in a place where the interviewee feels free and can express his/her feelings with out any hesitation and all interviews were conducted alone with the respondent. The Issues addressed in the study would not be expected to be honestly responded by every respondent. It is because of the fact that the subject matter of investigation is a highly sensitive one.

It is with the appreciation of the limitation that the results of this study are interpreted. The result of the present study revealed that the majority of the patients started or initiated antiretroviral treatment at a very advanced stage of disease progression. The median age was 35 years (interquartile range 29-40). The patients were received antiretroviral treatment for a mean duration of 3.7 months.

The average adherence rate to antiretroviral medication was 82.8%, of all prescribed doses, which is greater than the finding of a study conducted by American Academy of Family Physician (12), which is comparable to adherence in other HIV medication studies but considerably lower than the 90 to 95 percent adherence rate required to prevent treatment failure and to prevent viral resistance (12). The average non-adherence rate to antiretroviral was 15.3%, which is less than an estimate of average rate of non-adherence to antiretroviral therapy (14). The reasons for missed doses (non-adherence) included being to ill, hectic work load, lack of transportation during an appointment day, for getting and adverse drugs reaction.

The frequency of opportunistic infection declined dramatically after the initiation of antiretroviral treatment. The incidence rate of tuberculosis and oral candidiasis were higher in the study population before the initiation of antiretroviral therapy. These two of the most frequent opportunistic infection were declined by three fourth for both pulmonary tuberculosis and oral candidiasis when comparing for the same patients the period from before initiation of antiretroviral treatment to the period on antiretroviral. The reduction of oral candidiasis and pulmonary tuberculosis are greater than the finding of a study conducted in KHAYELITSHA program in South Africa (16). of the total study population 47.1% of the respondents were increased in their body weight, 69.1% of HIV-infected persons were relieved from un explained prolonged fever and diarrhea is reduced by 25.3%.

It was shown that of the total respondent 73.3% of HIV-infected patients were showed subjective improvement in their quality of life (morbidity, usual activity, mobility, self care)

The rate of HIV related infection has fallen by up to 83.3% and Hospitalization rate is reduced by 44.7%, other studies were shown that hospitalization rate was reduced by six fold and the rate of HIV-related infection has fallen by up to 80% and the patient showed improvement in the quality of life (10). The present study is greater in the reduction of HIV-related infection rate and lesser in reduction of hospitalization rate compared to the previous study done in Brazil (10).

In this study more reduction was seen in health related hospitalization among civil (50.3%) than officers (42.6%) and private and non-commissioned officer (40.3%). It is because the civil patients had stable emotional life and social support and they are transparent to their family as well as to the community than other target groups.

In the present study 85.8% of the officers and 84% of the private and non-commissioned officer had the highest proportion of reduction in AIDS-related infection compared to civil

82.5%. It is because militaries have more opportunities and access to get free medication for the treatment of AIDS-related infection.

Regarding to Memory aids, only 48.2% of the total respondents were used, of which officers have the highest proportion of memory aids (70%) compared to the other categories in the study.

Memory aid is one of the method used to achieve readiness to initiate therapy and maintain patients adherence (13).

There was also statistically significant difference in using memory aids when comparism was made among do not use memory aid ($p\text{-value} < 0.001$).

This particular result necessitate that education on the importance of memory aids should be started on each visit/clinical appointment and special attention should be given to the private and non-commissioned officer and civil HIV-infected person who don't have memory aids.

It was shown that of the total population 54% were developed milder adverse drug reaction, is greater than the finding of the study conducted in Hayat and Bethezatha Hospital in Addis Ababa (20). Nausea was the highest frequent adverse drugs reaction occurred in one third of the respondents and diarrhea was the least frequent adverse drugs reaction in all categories of the target groups.

Among the total population 357 (87.6%) were kept the clinical appointment. There was statistically significant difference among the patients who kept clinical appointment and who missed the clinical appointment. ($P\text{-value} < 0.001$)

It is because of a good interaction between physician and patients (Physician and patients trust each other.)

Keeping clinical appointment is one of the methods used to achieve readiness to initiate antiretroviral therapy and to maintain patient adherence.

Education is found to be associated with increased adherence, as educational level increase the more likely to be increased adherence. There was statistically significant difference in secondary and tertiary education level when comparism was made among illiterate [OR 3.85(1.66, 8.93) and OR 5.56(1.69, 19.03) respectively].

The most reasons for missing doses were being too ill, hectic work load, adverse drug reaction, lack of transportation, living in distance area and missing clinical appointment.

NO rank difference was found between 93 officers, 154 private and non-commissioned officer and 157 civil. Mean adherence score did not differ by rank (88.2%, 82.2% and 80.5%) respectively. However, the reason for non adherence were different but missing clinical appointment, being too ill found to be determinants of non-adherence.

The most important factors associated with increased adherence includes educational level of the patient, memory aids and keeping clinical appointment.

Factors that were not associated with adherence included patients gender, drugs and substance abuse, emotional and practical support and feeling comfortable in taking medication in front of other, fit of the regimen with the patient's life style, number of ARV medications, frequency of daily dose and whether patient was in a committed relationship.

The present study found that patients who are illiterate, don't have memory aids and missed clinical appointment were less likely to take medication as prescribed (OR 0.20, 0.24 and 0.019 respectively) than tertiary educational level, who have memory aids and did not miss clinical appointment.

STRENGTH AND LIMITAITON OF THE PRESENT STUDY.

Generally this study has the following limitation

- Due to the stigma and impoverished by their disease, most of the patients living with HIV-AIDS do not want to give information. Moreover, in those HIV/AIDS patients on ARV treatment the respondents might have not responded truly because of the misunderstanding that the result of the study might harm them.
- Due to lack of voluntary participants, focus group discussion was not conducted which could have strengthen the quantitative finding.
- Recall bias- are the major limitation.

Strength

- To strength the quantitative study and maximize the data quality in-depth interview was substituted instead of focus group discussion.

Conclusion and Recommendation

Globally HIV/AIDS has created an Enormous challenges to the survival of man kind. It has now become the leading cause of death in many developing countries especially in the sub-Sahara Africa. Ethiopia is one of the seriously affected counties by Epidemic. The highly active antiretroviral therapy is the only means of attaining the fullest possible physical and mental health.

Therefore, treatment and care is crucial for the survival of patient living with HIV/AIDS and must link in the community response. Adherence to antiretroviral regimen is critical, patient must take 95 percent of the prescribed pills to achieve an 80% of the likelihood of HIV-suppression below 50 copies per ml. Regarding to the present study the average adherence rate was 82.8 percent, the reasons for missing pills were living in distance area, being too ill, hectic work load, adverse drug reactions and missing clinical appointment.

The most important factors associated with increased adherence are educational level, memory aids and keeping clinical appointment.

The frequency of opportunistic infections declined dramatically after the initiation of antiretroviral therapy and the rate of hospitalization is reduced by 44.7%. The majority of HIV-infected persons were showed subjective improvement in the quality of life (morbidity, mortality, usual activity and self care). Of the total respondents 54% of the patients were developed milder adverse drug reactions such as (headache, nausea, skin rash, vomiting, abdominal cramp, depression and diarrhea) during the initial period of antiretroviral treatment and conditions often improved with in few weeks with out changing ARV therapy. Of the total respondents 4(0.7%) developed serious adverse

drug reactions, anemia was the serious adverse drug reaction requiring a change in the treatment.

It was concluded that most patients need aggressive modification to improve their adherence to ARV treatment in order to achieve sustainable suppression of viral replication and to prevent treatment failure.

Hence, the following specific recommendation has been made based on the finding of the study so as to give a clue about the possible direction to follow and focus to alleviate the existing problems of adherence.

Recommendation

- ❖ Educational programme should be developed focusing on the people living with HIV-Aids. The education programme should be patient's centered education approaches that ensure a good understanding of the treatment of antiretroviral by the patient on the help of memory aids and keeping clinical appointment.
- ❖ Continuous clinical monitoring and assessment of adherence should be done for provision of safe and effective antiretroviral therapy through out the country.
- ❖ HIV/AIDS patient needs treatment assistant usually some one living in the house hold who can assist with adherence issue.
- ❖ Support group on ARV therapy should be organized for people living with HIV/AIDS to enable discussion of disclosure, psychological issue and barrier to adherence, evidence suggests that people cope better, if they share their HIV-status.
- ❖ Increase the number of medication reminder.
- ❖ Record keeping capability should be improved and required.
- ❖ Comprehensive approach to adherence includes counselors and significant treatment literacy component, explaining the value and use of ARV drugs and prevention methods of HIV transmission.
- ❖ Strengthening of training activities targeting clinical staff at the primary care level are needed to ensure that an HIV/AIDS patient is properly cared and on prevention of HIV transmission.
- ❖ Further study should be carried out to fill the gap.

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Annex

Department of Community Health Faculty of Medicine Addis Ababa University

The aim of this study is to measure if, HIV-infected persons were taking the total number of pills prescribed by physician and to assess adherence to ARV-therapy among HIV-infected persons in Ministry of National Defense Force Hospitals.

- | | |
|---|----------------------------|
| 001- Questionnaire code No. | 4. Bella Referral Hospital |
| 2. Region | 5. Air Force Hospital |
| 3. Armed Force General Teaching
Hospital | 6. Out Patient |
| | 7. In Patient. |

Introduction

My name is _____, I am working in ministry of National Defense Force Hospital by profession Nurse. The ministry of national Defense Force accept universal free access antiretroviral treatment for a patients living with HIV/AIDS in order to prolong their life and to attain the fullest possible physical and mental health, about 450 patients receive antiretroviral treatment in AFGTH, Bella Referral Hospital and Air Force Hospital. Defense University College in collaboration with Addis Ababa University starts study to assess adherence to antiretroviral therapy and clinical benefit of the patients from HAART.

I will ask you personal questions based on ART. Your name should not be written on the questionnaire paper. Your secret should be kept properly. The finding of the study will contribute to maximize the benefit of ARV treatment and long term adherence and may result in patient's quality of life.

Are you willing/ voluntary to participate?

If the answer is yes, thanks! And conduct the interview.

If the answer is No; Thanks!

Don't force or reinforce an individual to participate in the survey

Signature of approved data collector _____

Result

Complete	1
Incomplete	2
Other	3

002. Data collectors code No_Name _____ Signature _____

003. Signature of supervisor _____ Name _____ Date _____

Section one - Background characteristics

101	Age (in complete year)	18 - 22 23 - 27 28 - 32 33 - 37 38 - 42 43 - 47 48 - 52 52 - 57 >58		
102	Educational level	1. Illiterate 2. Grade 1 - 6 3. Grade 7 - 12 4. Diploma and above 90 No response		
103	Sex	1. Male 2. Female		
104	Ethnic group	1. Amhara 2. Tiger 3. Oromo 4. Other (specify) 90. No response		
105	Current military rank	1. Private soldiers 2. Lance corporal 3. Corporal 4. Sergeant 5. Sub lieutenant 6. Lieutenant 7. Captain 8. Major 9. Colonel 11. Jeneral 12. No response		
106	Current marital status	1. Married 2. Single 3. Divorced 4. Widowed 5. Separated 90. No response		

107	Religion	00. No religion 1. Orthodox Christian 2. Protestant 3. Catholic 4. Muslim 5. Other (specify) 90. No response		
108	Monthly wage in Ethiopian Birr	1. 150 - 249 2. 250 - 249 3. 350 - 449 4. 450 - 549 5. 550 - 649 6. 650 - 749 8. > 850 90. No response		

Section two – knowledge and attitude regarding to HIV, HAART-belief, benefit, Adherence.

No	Questions and filters	Responses / answers	yes	No	Coding	Skip to
201	During the last 12 months, which of the following symptom did you have? More than one answer is possible readout the options	1. Candidiasis (Mouth sore) 2. Herpes simplex With mucocutaneous ulcer > 1 month 3. HIV- associated dementia 4. HIV – associated wasting with Involuntary loss of > 10 % body weight 5. Chronic diarrhea > 30 days 6. Fatigue and fever 7. Chronic cough, night sweating, fever 8. Chest pain, and fever Cough, dyspnea (p.carinii pneumonia) 80. Don't know 90. No Response	1 1 1 1 1 1 1 1	2 2 2 2 2 2 2 2		
202	Of the symptoms mentioned which one was very serious during your illness	1) 1. Candidiasis (Mouth sore) 2. Herpes simplex With mucocutaneous ulcer > 1 month 3. HIV- associated dementia 4. HIV – associated wasting with Involuntary loss of > 10 % body weight 5. Chronic diarrhea > 30 days 6. Fatigue and fever 7. Chronic cough,	1 1 1 1 1	2 2 2 2 2		→ 206

		night sweating, fever 8. Chest pain, and fever Cough, dyspnea (p.carinii pneumonia) 80- Don't know 90- No Response	1 1 1	2 2 2		
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No	Questions and filters	Response / answer	Coding	Skip to
203	Did you aware of HIV/AIDS when you have 1 st contact with clinician?	1) Yes 2) No 80) Don't know 90) No response		
204	When did you hear about the introduction of Antiretroviral therapy	1) Before illness 2) During illness 3) After diagnosis 4) Most recently 80) Don't know 90) No response		
205	What were you source of information about Antiretroviral drugs (from where did you get the information about ART.)	1) Health care provider 2) Radio 3) TV 4) News paper 5) Family 6) Peer / friends 7) Anti AIDs clubs 80) Don't know 90) No response		
206	When once you have been heard about ART, did you aware of the benefit of the regimen?	1) Yes 2) No 80) Don't know 90) No response		→202
207	Do you think all HIV – patients are Eligible for Antiretroviral therapy? (What was your level of understanding for 1 st time about Eligibility of ART?	1) Yes 2) No 80) Don't know 90) No response		

No	Questions and filters	Response / answer	Yes	No	Coding	Skip to
208	Did you understand when you have heard about adherence before you have been the candidate for ART?	1) Yes 2) No 80) Don't know 90) No response				

209	When did you start antiretroviral for the 1 st time?	1- Less than one month 2- 1-3 months 3- 4-6 months 4- 7-9 months 5- 10-12months 6- Above one year 80) Don't know 90) No response				
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Section three – characteristics of drug regimens / treatment

301	Do you know the types of medication you are taking?	1) Yes 2) No 90) No response				
302	After you have been started Antiretroviral therapy, what clinical benefit did you get?	1- Improved quality of life 2- Weight gain 3- Reduced fever 4- Reduction of hospitalization 5- Reduced frequency of diarrhea 6- Reduction of morbidity 80- don't know 90- No response 100- to all	1 1 1 1 1 1	2 2 2 2 2 2		
303	Did you have any adverse effect (side effect) when you take medication?	1) Yes 2) No 80) Don't know 90) No response				→204
304	If yes to Question 203, which of the following symptoms did you feel? More than one answer is possible	1) Nausea 2) Vomiting 3) Headache 4) Anemia 5) GI intolerance 6) Depression 7) Rash 8) Diarrhea 9) Others (specify) 80) Do not know 90) No response	1 1 1 1 1 1 1 1	2 2 2 2 2 2 2 2		
305	What measures did you take when you developed side effect?	1- Immediately stopped taking pills 2- With held until the date of appointment 3- Immediately I was reported to clinician 4- Dropped out permanently 80- do not know 90- no response	1 1 1 1	2 2 2 2		

306	Of symptoms mentioned to Question102, to which symptoms you have improvement.	1) Oral thrush (Candidiasis) 2) Herpes simplex 3) HIV – associated dementia 4) Wasting-loss of > 10 % body weight 5) Chronic diarrhea > 30 days 6) Fever and fatigue 7) Cough, chest pain 80) Do not know 90) No response	1 1 1 1 1 1 1	2 2 2 2 2 2 2		
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No.	Questions and filters	Responses /Answers	Coding	Skip to
307	Can you mention the name of the drugs you are taking? Dose, frequency and Total pills daily?	1. Name of drugs 2. Doses 3. Frequency 4. Total pills daily 5. With meal 6. Empty stomach 80. Don't know 90. No response		
308	Do you have history of admission after you have been starting ART during the last one month?	1. Yes. 2. No. 80. Don't know 90. No response		→310
309	How many days you have been admitted to hospital for management and follow up during the last one month?	1. I have been in hospital for _____ day.		
310	Do you have history of admission during the last one year?	1. Yes. 2. No. 80. Don't know 90. No response		→ 311
311	How Frequent you have been admitted to hospital for management and follow up during the last one year?	1. I have been in hospital for _____days. 2. I have been admitted _____ time with in the year?		

Section – 4 Patients – level factors and social / Environmental factors

No	Questions and filters	Response / answer	Yes	No	Coding	Skip to
401	Have you committed or Convinced before you started ART?	1. Yes 2. No 80. Do not know 90. No response	1 1	2 2		
402	Do you feel comfortable when you take ART in front of other?	1. Yes 2. No 80. Do not know 90. No response				
403	What types of schedules do you use for memory aids in order to take medication?	1. Pill boxes 2. Written schedules 3. Don't have any memory aids 4. Watch bell 80. Do not know 90. No response	1 1 1	2 2 2		
404	Do you have any Emotional and practical support?	1. Yes 2. No 80. Don't know 90. No response				→ 305
405	If yes to Question 304, who supports you?	1. Family 2. Friends 3. Peer 4. Community 5. Other (specify) 80. Do not know 90. No response	1 1 1 1	2 2 2 2		
406	What types of supports did you get from your supporter?	1. Financial support 2. Care and Emotion 3. Food and care 4. In remedies of medication 5. Other (specify)--- 80. Do not know 90. No response	1 1 1 1	2 2 2 2		
407	What pattern of Emotional life do you have?	1. Unstable emotional life 2. Stable emotional life 3. Other (specify) 80. Do not know 90. No response				
408	Does the medication scheduled fit your daily routine?	1. yes 2. No 80. Don't know 90. No response				

409	If No to Question 308, can you mention any of inability to fit to medication?	1. ----- 2. ----- 3. ----- 4. -----				
410	Do you have history of Active substance drug and Alcohol abuse?	1. Yes 2. No 80. Don't know 90. No response				
411	If yes to Question 310, can you mention some of Active substance, drugs and Alcohol abuse?	1. Chatt 2. Alcoholism 3. Cigarette 4. Iv drugs 80. Do not know 90. No response	1 1 1 1	2 2 2 2		
412	How do you think can people more adhere to anti retroviral therapy /Treatment?	1. Needs family and other support 2. Belief in efficacy of medication 3. Needs education about the importance of medication 4. Needs schedule aids 5. Under standing importance Adhere 100. To all 00. To none 80. Do not know 90. No response	1 1 1 1 1	2 2 2 2 2		
413	When did you start ART? How many pills did you take with in a month?	1. ____ ____ ____ date month year 2. I took ____ Pills with in a months.				
414	Follow up	1. Monthly 2. Every two weeks 3. Weekly. 4. Daily. 80. I don't know. 90. No response				
415	After you have been starting ART, did you have history of missed days?	1. Yes 2. No 80. I don't know 90. No response				→416
416	How many pills did you miss?	1. I missed ____ pills 2. I did mot missed 80. I don't know 90. No response				
417	How many pills do you have now?	1. I have ____ pills on my hard 80. I don't know 90. No response.				

418	Are you willing for counting the pills?	1. Yes 2. No. 3. I don't have 4. Other(s) _____ 80. I don't know 90. No response				
419	How many pills did you miss with in the last week?	I missed _____ pills with in the week?				
420	How many days did you miss taking prescribed pills during the last month?	1. _____. 2. _____. 3. _____. 80. I don't know 90. No response				
421	Can you explain the reasons?	1. _____. 2. _____. 3. _____. 80. I don't know 90. No response				

Section five - Clinician and Patients Relationship

No.	Questions and filters	Responses /Answers	Yes	No	Codin g	Skip to
501	What types of interaction (relationships) do you have with clinician?	1. Trust each other 2. neglect 3. ignorant 80 Do not know 90. No response				
502	Did you follow clinical appointment regularly?	1. yes 2. No 80. Don't know 90. No response				
503	If No to Question402, can you mention some of the problems?	1. Forgot 2. Too busy 3. Long distance (travel) 4. Asleep 5. Other (specify) 80. Do not know 90. No response	1 1 1 1 1	2 2 2 2 2		

Section 6- Health problems encountered within the last 4 weeks

No	Encountered health Problem with in the last 4 weeks	yes	No
1.	Do you often have head ache?	1	2
2.	Is your appetite poor?	1	2
3.	Do you sleep badly?	1	2
4.	Are you easily frightened?	1	2
5	Do your hands shake?	1	2
6	Do you feel nervous, tens or worried?	1	2
7	Is your digestion poor?	1	2
8	Do you have trouble thinking clearly?	1	2
9	Do you unhappy?	1	2
10	Do you cry more than usual?	1	2
11	Do you find it difficult to enjoy your daily activities?	1	2
12	Do you find difficult in decision making in day-to-day life?	1	2
13	Is your daily work suffering?	1	2
14	Are you unable to play a useful part in life?	1	2
15	Have you lost interest in things?	1	2
16	Do you feel that you are a worthless person?	1	2
17	Has the thought of ending your life been on your mind?	1	2
18	Do you feel tired all the time?	1	2
19	Do you have uncomfortable feelings in your stomach?	1	2
20	Are you easily tired	1	2

በአዲስ አበባ ዩኒቨርሲቲ ህክምና ፋኩሊቲ
የህብረተሰብ ጤና አጠባበቅ ትምህርት ክፍል

በሀገር መከላከያ ሚኒስትር በጦር ሃይለሎች ጠቅላላ ሆስፒታል በተመላላሽነትና ተኝተው የእድሜ ማራዘሚያ መድሃኒት በመውሰድ ላይ ባሉ የኤች.አይ.ቪ/ኤድስ/ ህሙማ ስለመድሃኒቱ አወሳሰድ ሁኔታ ለማጥናት የቀረበ መጠይቅ፡፡

001 የመጠየቂያ መለያ ቁጥር

1 አዲስ አበባ ክልል

2 ጦርሃይሎች ጠቅላይ ሆስፒታል

3 ቤላ ራፈራል ሆስፒታል

4 የአየር ኃይል ሆስፒታል

5 በተመላላሽነት በመታከም ላይ ያሉ

6 ተኝተው በመታከም ላይ ያሉ

ሰላምታ

መግቢያ

ስሜ _____ ይባላል፡፡ በሀገር መከላከያ ሚኒስቴር ውስጥ በነርስነት ሙያ እየሰራሁ እገኛለሁ የሀገር መከላከያ ሚኒስቴር በኤች.አይ.ቪ/ኤድስ/ በሽታ የተያዙትን የሰራዊቱ አባላት ዕድሜ ለማርዘም መልካምና ጤናማ የአኗኗር ሁኔታ እንዲኖራቸው የእድሜ ማራዘሚያ መድሃኒቱን በከፍተኛ ወጪ በመግዛት ለህሙማኑ ህክምና በመስጠት ላይ ይገኛሉ፡፡ የመከላከያ ዩኒቨርሲቲ ኮሌጅ ከአዲስ አበባ ዩኒቨርሲቲ ጋር በመተባበር ስለ እድሜ ማራዘሚያው መድሃኒት አወሳሰድ ጥናት እያደረገ ይገኛል፡፡ የጥናቱ ዓላማ የኤች.አይ.ቪ/ኤድስ/ ህሙማን በሃኪም የታዘዘውን የእድሜ ማራዘሚያ መድሃኒት አወሳሰድ ሁኔታ ለመገምገምና በአንፃሩ መስተካከልና መሻሻል ያለባቸውን ነገሮች ለመጠቀም ነው፡፡ እኔም መረጃ በመስብሰብ ላይ እገኛለሁ፡፡

አንዳንድ ግላዊ የሆኑ ጥያቄዎችን እጠይቃለሁ፡፡ በመጠይቁ ላይ ስምዎ ወይም የርሶን ማንነት የሚገልፅ ማንኛውም ነገር አይጠቅስም ወይም አይያያዝም፡፡ እርሶ የሚሰጡኝን ምላሾች እርሶ እንደሰጡኝ የሚያመለክት ምንም ዓይነት መረጃ አይኖርም የሚሰጡኝን መረጃዎች ሚስጥራዊነት ለመጠበቅ ያመች ዘንድ መጠይቁ እኔ እና እርሶ ባለንበት ቦታ ብቻ ይከናወናል፡፡ በመጠይቁ ወቅት መመለስ የማይፈልጉትን ምንኛውም ዓይነት ጥያቄ መተው ወይም በማንኛውም ሰዓት ማቋረጥ ይቻላል፡፡ ሆኖም እርሶ የሚሰጡት ትክክለኛ መረጃዎች ለዕድሜ ማራዘሚያው መድሃኒት አወሳሰድ መስተካከልና መሻሻል ስላለባቸው ነገሮች ለማወቅ ስለሚረዳኝ ከፍተኛ ድጋፍ ነው፡፡

ለዚህ ጥናት መረጃ ለመስጠት መተባበርዎ የኤች.አይ.ቪ/ኤድስ/ ህሙማን ከእድሜ ማራዘሚያ መድሃኒት ለሚያገኙት ጠቀሜታ ከፍተኛ አስተዋፅኦ እያበረከቱና ለሰራዊቱም ያለዎትን ከፍተኛ እሳቤ እየገለፁ በመሆኑ ምስጋናችን የላቀ ነው፡፡

በመጠይቁ ለመሳተፍ ፍቃደኛ ነዎትን?

መልሱ አዎ ከሆነ አመስግኑ/ሽ/ ወደሚቀጥለው ገፅ እለፍ፡፡

አልፈልግም ከሆነ አመስግኑ/ሽ/ ወደሚቀጥለው ተጠያቂ እለፍ፡፡

ፍቃደኝነቱን ያረጋገጠው መረጃ ሰብሳቢ ፊርማ _____

ውጤት

የተጠናቀቁ _____1

በክፍል የተመለሰ _____2

ሌላ _____3

002 መረጃ ሰብሳቢው ኮድ _____ ስም _____ ፊርማ _____

003 መጠይቁ የተካሄደበት ቀንና ዓመት ምህረት ____/____/____ ዓ.ም

የተቆጣጣሪው ፊርማ _____ ስም _____ ቀን ____/____/____ ዓ.ም

ክፍል አንድ

አጠቃላይ መረጃ

101	ዕድሜ (በሙሉ ዓመት)	1. በሙሉ ዓመት _____ 80 አላውቅም 90 መልስ የለኝም		
102	የትምህርት ደረጃ	1. ማንበብና መጻፍ የማይችል 2. ከ1-6ኛ ክፍል 3. ከ7ኛ-12ኛ ክፍል 4. ዲፕሎማና ከዚያ በላይ 80 አላውቅም 90 መልስ የለኝም		
103	ፆታ	1. ወንድ 2. ሴት		
104	ብሔረሰብ	1. አማራ 2. ትግሬ 3. ኦሮሞ 4. ሌሎች _____ 90 መልስ የለኝም		
105	ተጠያቂው በአሁኑ ወቅት ያላቸው ወታደራዊ ማዕረግ	ተራ ወታደር ም/አሥር አለቃ አሥር አለቃ ሃምሳ አለቃ ም/መ/አለቃ መ/አለቃ ሻምበል ሻለቃ ሌ/ኮሎኔል ኮሎኔል ጀነራል ሲቪል 90 መልስ የለኝም		
106	ተጠያቂው በአሁኑ ወቅት ያላቸው የጋብቻ ሁኔታ	1. ያገባ 2. ያላገባ 3. የተፋታ 4. የሞተበት 5. የተለያዩ (ፊርማቸውን ያልቀደዱ) 90 መልስ የለኝም		

107	ሐይማኖት	00. ሐይማኖት የለኝም 1. ኦርቶዶክስ ክርስቲያን 2. ካቶሊክ 3. ፕሮቴስታንት 4. ሙስሊም 5. ሌሎች _____ 90 መልስ የለኝም		
108	የወር ገቢ ደሞዝ በኢትዮጵያ ብር (ከቀለብ ውጪ)	1. 150 - 249 2. 250 - 349 3. 350 - 449 4. 450 - 549 5. 550 - 649 6. 650 - 749 7. 750 - 849 8. > 850 90 መልስ የለኝም		

ክፍል ሁለት

ስለ ኤች አይቪ/ ኤድስ ግንዛቤ በእድሜ ማራዘሚያ መድኃኒት ላይ ያለው እምነት ፣ ስለ መድኃኒቱ አወሳሰድ፣ የመርዳት ሁኔታዎች

ቁጥር	ጥያቄዎችና ማጣሪያቸው	መልሶች	አዎ	አይ	ኮድ	ዝለል
201	ባለፈው አንድ አመት ጊዜ ውስጥ ከሚከተሉት የህመም ምልክትና ስሜት የነበረዎት የትኞቹ ናቸው? ይነበብላቸው የጠቀሱት ሁሉ ይከበብ	1. የአፍ መቁሰል 2. በጭኖች ወይም በቆዳ ላይ የመቁሰል 3. መዘንጋት 4. አስር ፐርሰንት ወይም ከዚያ በላይ የሰውነት ክብደት በአጭር ጊዜ ውስጥ መቀነስ 5. ከአንድ ወር በላይ ተከታታይ ተቅማጥ 6. ትኩሳት፣ ድካም 7. ትኩሳት፣ ተከታታይ ሣል፣ እንዲሁም ሌሊት ማላብ 8. የደረት ውጋት፣ ትኩሳት፣ ሣል፣ እስትንፋስ ማጠር 80. አላውቅም 90 መልስ የለኝም	1 1 1 1 1 1 1 1	2 2 2 2 2 2 2 2		
202	ከጠቀሷቸው ውስጥ በይበልጥ የባሰቡት የትኛው ምልክት ነው?	1. የአፍ መቁሰል 2. በጭኖች ወይም በቆዳ ላይ የመቁሰል 3. የመዘንጋት 4. አሥር ፐርሰንት ወይም ከዚያ በላይ የሰውነት ክብደት በአጭር ጊዜ ውስጥ መቀነስ 5. ከአንድ ወር በላይ ተከታታይ ተቅማጥ 6. ትኩሳት፣ ድካም 7. ትኩሳት፣ ተከታታይ ሣል፣ እንዲሁም ሌሊት ማላብ 8. የደረት ውጋት፣ ትኩሳት፣ ሣል፣ እስትንፋስ ማጠር 80 አላውቅም 90 መልስ የለኝም	1 1 1 1 1 1 1 1	2 2 2 2 2 2 2 2		306
		80 አላውቅም 90 መልስ የለኝም				

የተጠያቂው መልስ ለ102 ጥያቄ ከ1-8 ባሉት ውስጥ መልስ ከሰጠ ጥያቄ 306 ይመልሱ ከዚያ በኋላ ወደ ጥያቄ 103 በመመለስ መጠይቁ ይቀጥላል፡፡

ቁጥር	ጥያቄዎችና ማጣሪያቸው	መልሶች	ኮድ	ዝላቋ
203	ለመጀመሪያ ጊዜ ሐኪሞችን ስለ በሽታዎ ሊያማክሩ ወይም ለበሽታዎ ፈውስ ለማግኘት ወደ ሐኪም ዘንድ በሄዱ ጊዜ ስለ ኤች አይ ቪ/ኤድስ ግንዛቤ ነበረዎት?	1. አዎ 2. የለኝም 80 አላውቅም 90 መልስ የለኝም		
204	ለኤችአይ ቪ/ኤድስ ህመማችን የእድሜ ማራዘሚያ መድኃኒት መገኘት የሰሙት መቼ ነበር?	1. የህመም ስሜት ከመሰማቱ በፊት 2. የህመም ስሜት እያለሁት ነገር ግን የኤችአይ ቪ/ኤድስ በሽተኛ መሆኖችን ከማወቅዎ በፊት 3. ኤችአይ ቪ በደም ውስጥ መኖሩ ከተረጋገጠ በኋላ፡፡ 4. በቅርብ ጊዜ ከኤች አይ ቪ ጋር ለረዥም ዘመን መኖር ከጀመሩ በኋላ 80 አላውቅም 90 መልስ የለኝም		
205	ስለ ኤችአይ ቪ/ኤድስ ህመማችን የእድሜ ማራዘሚያ መድኃኒት መገኘት ለመጀመሪያ ጊዜ የሰሙት ከየትኛው የዜና ምንጭ ነበር?	1. ከህክምና መያዣዎች 2. ከሬድዮን 3. ከቴሌቪዥን 4. ከጋዜጣ 5. አብሮዎት ከሚኖሩ ቤተሰብ 6. ከቅርብ ጓደኛ 7. ከፀረ-ኤድስ ክበባት 80 አላውቅም 90 መልስ የለኝም		
206	ስለ ኤችአይ ቪ/ኤድስ ህመማችን የእድሜ ማራዘሚያ መድኃኒት መገኘት በሰሙ ጊዜ ስለመድኃኒቱ ጥቅም ተገንዝበው ነበር?	1. አዎ 2. አልተገነዘብኩም 80 አላውቅም 90 መልስ የለኝም		→302

ተጠያቂው ለጥያቄ 106 መልሱ አዎ ከሆነ ጥያቄ 302 ላይ ያለውን ይመልሱ፡፡ ከዚያ በኋላ ከ207 ጀምሮ ያለውን መጠይቅ ይጠይቁ፡፡

207	የኤችአይ ቪ/ኤድስ ህመማችን በሙሉ የእድሜ ማራዘሚያ መድኃኒት ውዲያውኑ ቫይረሱ በደማቸው ውስጥ መኖሩን ከተረጋገጠ በኋላ መውሰድ አለባቸው ብለው ያምናሉ?	1. አዎ 2. ወዲያውኑ መውሰድ የለባቸውም 80 አላውቅም 90 መልስ የለኝም		
208	የኤችአይቪ/ኤድስ ህመማችን የእድሜ ማራዘሚያ መድኃኒትን ሳያቋርጡ በየቀኑ መውሰድ እንዳለባቸው አስቀድመው ተረድተው ነበር?	1. አዎ 2. አልተረዳሁም ነበር 80 አላውቅም 90 መልስ የለኝም		

ፑፑር	ጥያቄዎችና ማጣሪያቸው	መልሶች	ኮድ	ዝላል
209	የእድሜ ማራዘሚያውን መድኃኒት መውሰድ ከጀመሩ ምን ያህል ጊዜ ይሆንዎታል?	1. ከአንድ ወር ያነሰ ጊዜ 2. ከአንድ ወር እስከ ሦስት ወራት ባሉት ጊዜ 3. ከአራት ወር እስከ ስድስት ወራት ባሉት ጊዜ 4. ከሰባት ወር እስከ ዘጠኝ ወራት ባሉት ጊዜ 5. ከአሥር ወር እስከ አሥራ ሁለት ወራት ባሉት ጊዜ 6. ከአንድ አመት በላይ 80 አላውቅም 90 መልስ የለኝም		

ክፍል ሦስት

የእድሜ ማራዘሚያ መድኃኒት ጥቅም፣ ጉዳት፣ ችግር፣ በተመለከተ የተዘጋጀ መጠይቅ

ቁጥር	ጥያቄዎችና ማጣሪያቸው	መልሶች	አዎ	አይ	ኮድ	ዝላል
301	የሚወሰዱትን የእድሜ ማራዘሚያ መድኃኒት ስም ያውቃሉ?	1. አዎ 2. ስሙን አላስታውሰውም 80 አላውቅም 90 መልስ የለኝም	1 1	2 2		→ 307
302	የእድሜ ማራዘሚያ መድኃኒት መውሰድ ከጀመሩበት ጊዜ አንስቶ ያገኙት ለውጥ አለ? ይነበብላቸው የጠቀሱት ሁሉ ይከበብ	1. ጤንነቱ ላይ ለውጥ በማየቴ አንዳንድ ሥራዎችን በመሥራት ላይ እገኛለሁ 2. የሰውነቴ ክብደት ጨምሯል 3. የሰውነት ትኩሳት መቀነስ 4. ቀደም ሲል ሆስፒታል ቶሎ ቶሎ እተኛ ነበር አሁን ግን ሆስፒታል ተኝቼ አላውቅም 5. ተቅምጥ መቀነስ 6. የህመምና የድካም ስሜት መቀነስ 80 አላውቅም 90 መልስ የለኝም 100 ሁሉም መልስ ነው።	1 1 1 1 1 1 1	2 2 2 2 2 2 2		→ 309
303	የእድሜ ማራዘሚያ መድኃኒት በሚወስዱበት ጊዜ ከወትሮው የተለየ ህመም ወይም የህመም ስሜት አለ?	1. አዎ 2. ህመም የለኝም 80 አላውቅም 90 መልስ የለኝም				→ 306

የተጠያቂው መልስ ለጥያቄ 301 አዎ ከሆነ 307 ላይ ያለውን ጥያቄ ይመልሱ፣ ከዚያ በኋላ ወደ ጥያቄ 303 በመመለስ መጠይቁ ይቀጥል ለጥያቄ 302 የተጠያቂው መልስ 4ኛውን ምርጫ የማያጠቃልል ከሆነ 309 ላይ ያለውን ይመልሱ። ከዚያም በኋላ ወደ 303 በመመለስ መጠይቁን ይቀጥሉ። እንዲሁም የጥያቄ 203 መልስ ህመም የለኝም ከሆነ ጥያቄ 306 ላይ ያለውን በመመለስ መጠይቁን ይቀጥሉ

ቁጥር	ጥያቄዎችና ማጣሪያቸው	መልሶች	አዎ	አይ	ኮድ	ዝላል
304	የእድሜ ማራዘሚያውን መድኃኒት በሚወስዱበት ጊዜ የሚሰማዎት ህመም ነበርዎት? ይነበብላቸው የጠቀሱት ሁሉ ይከበብ	1. ማቅለሽለሽ 2. ትውከት 3. ራስ ምታት 4. በሐኪም የተረጋገጠ የደም ማነስ 5. የሆድ ህመም 6. ጭፍግግ (ለስሜት) 7. ሽፍታ 8. ተቅማጥ 9. ሌሎች _____ 80 አላውቅም 90 መልስ የለኝም	1 1 1 1 1 1 1 1	2 2 2 2 2 2 2 2		ክፍል ስድስት

የተጠያቂው መልስ ለ304ኛ ጥያቄ ጭፍግግ ከሆነ ክፍል ስድስት ላይ ከ1-20 ያሉትን መጠይቅ ይመልሱ፤ ከዚያ በኋላ ወደ 305 ጥያቄ በመመለስ መጠይቁ ይቀጥሉ፡፡

ቁጥር	ጥያቄዎችና ማጣሪያቸው	መልሶች	ኮድ	ዝላል
305	የዕድሜ ማራዘሚያ መድኃኒት በሚወስዱበት ጊዜ ከወትሮው የተለየ ህመም ወይም የህመም ስሜት በተሰማዎት ወቅት የወሰዱት እርምጃ የትኛው ነበር?	1. ለጊዜው መድኃኒቱን መውሰድ አቁሜያለሁ 2. የቀጠሮ ቀን እስከሚደርስ ድረስ መድኃኒቱን አልወሰድኩም 3. መድኃኒቱን መውሰድ አቁሜ ወደ ሐኪም ዘንድ ምክር ለማህኘት ሄጃለሁ 4. መድኃኒቱን እስከመጨረሻ አቁሜያለሁ ወደፊትም ላለመውሰድ ወድኛለሁ፡፡ 80 አላውቅም 90 መልስ የለኝም		

ቁጥር	ጥያቄዎችና ማጣሪያቸው	መልሶች	አዎ	አይ	ኮድ	ዝላል
306	የዕድሜ ማራዘሚያውን መድኃኒት በጀመሩበት ጊዜ ከነበርዎት ከፍተኛ ህመም ወይም የህመም ስሜት በየትኛው ላይ ለውጥ አግኝተዋል?	1. የአፍ መቁሰል መዳን 2. በጭን ወይም በቆዳ ላይ መቁሰል መዳን 3. ማስታወስ መቻል 4. የሰውነት ክብደት መጨመር 5. የተቅማጥ መቀነስ 6. ትኩሣት መቀነስና ብርታት ማግኘት 7. ትኩሣት፣ ሣል፣ ማላብ መቀነስ 8. ሣል፣ ውጋት መቀነስ እንዲሁም መተንፈስ መቻል 80 አላውቅም 90 መልስ የለኝም	1 1 1 1 1 1 1 1	2 2 2 2 2 2 2 2		
307	የሚወስዱትን የዕድሜ ማራዘሚያ መድኃኒት ስም፣ መጠን፣ በቀን ስንቴ እንደሚወስዱ ይጥቀሱ?	1. የእድሜ ማራዘሚያው መድኃኒት ስም _____ 2. የእንክብሉ ይዘት መጠን _____ 3. በስንት ሰዓት ልዩነት ይወስዳሉ _____ 4. በቀን የሚወስዱት እንክብል ብዛት _____ 5. የሚወስዱት ከምግብ ጋር ከሆነ ምልክት እዚህ ያድርጉ _____ 6. ምግብ ሳይበሉ እንክብሉን የሚወስዱ ከሆነ ምልክት እዚህ ያድርጉ _____				

		80 አላውቅም 90 መልስ የለኝም		
308	የዕድሜ ማራዘሚያ መድኃኒት መውሰድ ከጀመሩ መጎላ ባለፈው ወር ውስጥ ሆስፒታል ተኝተው ያውቃሉ?	1. አዎ 2. አልተኝሁም 80 አላውቅም 90 መልስ የለኝም		► 310

የተጠያቂው መልስ ለ308 ጥያቄ አዎ ከሆነ በቀጥታ 309 ላይ ያለውን ጥያቄ ይቀጥሉ ሌሎች መልሶች ከሆኑ ወደ 310 ጥያቄ ይዘራሉ።

309	የዕድሜ ማራዘሚያ መድኃኒት መውሰድ ከጀመሩ ባለፈው ወር ለስንት ቀን ያህል ሆስፒታል ተኝተው ህክምና ተከታትለዋል?	1. _____ ቀናት ሆስፒታል ተኝቼ ታክሜያለሁ።		
310	ባለፈው አንድ ዓመት ባሉት ጊዜያት ለህክምና ሆስፒታል ተኝተው ነበር?	አዎ አልተኝሁም 80 አላውቅም 90 መልስ የለኝም		► 312

የጠያቂው መልስ ለ310ኛው ጥያቄ አዎ ከሆነ በቀጥታ ወደ 311ኛ ጥያቄ ይሂዱ።

311	ባለፈው አንድ ዓመት ውስጥ ሆስፒታል ለስንት ቀን እንደተኙና በዓመት ስንት ጊዜ ሆስፒታል እንደገቡ ይጥቀሱ?	1. _____ ቀናት ሆስፒታል ተኝቼ ታክሜያለሁ 2. _____ ጊዜ በዓመት ውስጥ ሆስፒታል ገብቻለሁ።		
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ክፍል አራት

የዕድሜ ማራዘሚያ መድኃኒት ላይ የኤችአይ ቪ/ኤድስ ህመማን ባህርይ፣ የህብረተሰብ አመለካከትና የአካባቢ ገጽታ

ቁጥር	ጥያቄዎችና፣ ማጣሪያቸው	መልሶች	ኮድ	ዝለል
401	የእድሜ ማራዘሚያ መድኃኒት ከመጀመርዎ በፊት በሐኪም ስለ መድኃኒቱ አወሳሰድ፣ ጥቅም፣ ሊያስከትል ስለሚችለው ጉዳት፣ ለምን ያህል ጊዜ እንደሚወሰድ ከተገለፅዎት በጎላ መድኃኒቱን ለመውሰድ አምነውና ተስማምተው ነው የጀመሩት?	1. አዎ 2. አልገለፅልኝም 3. አልተስማማሁም 80 አላውቅም 90 መልስ የለኝም		
402	የእድሜ ማራዘሚያን መድኃኒት በሰዎች ፊት /ለዎች ባሉበት ቦታ/ በሚወስዱበት ጊዜ ለብቻዎ ሆነው ከሚወስዱበት ጊዜ የተለየ ስሜት ይሰማዎታል?	1. አዎ 2. ምንም ልዩነት የለኝም 80 አላውቅም 90 መልስ የለኝም		
403	የእድሜ ማራዘሚያ መድኃኒት በሐኪም ትእዛዝ መሠረት በትክክል አስታውሰው ለመውሰድ የሚጠቀሙበት ዘዴ ነበርዎት?	1. የእንክብል መያዣውን ሳጥን ፊት ለፊት በማስቀመጥ ማስታወስ መሞከር 2. በጽሁፍ የተዘጋጀ ፕሮግራም በማዘጋጀት 3. ምንም አይነት የማስታውስበት ዘዴ አልጠቀምም 4. የሰዓት ደወል በመጠቀም		

		80 አላውቅም 90 መልስ የለኝም		
404	በኃሳብ፣ በሞራልና በተግባር የሚረዳዎት /ድጋፍ/ የሚያደርግለሎት አለ? ይነበብላቸው የጠቀሱት ሁሉ ይከበብ	1. አዎ 2. የሚረዳኝ የለም 80 አላውቅም 90 መልስ የለኝም		→ 407

የተጠያቂው መልስ ለ404ኛ ጥያቄ የሚረዳኝ የለም ከሆነ ወደ ጥያቄ 407 በቀጥታ ይዝለሉና መጠይቁን ይቀጥሉ፡፡

ቁጥር	ጥያቄዎችና ማጣሪያቸው	መልሶች	አዎ	አይ	ኮድ	ዝለል
405	በኃሳብ በሞራልና በተግባር የሚረዳዎት /ድጋፍ የሚሰጥዎት/ ካለ ይጥቀሱ፡፡ ይነበብላቸው የጠቀሱት ሁሉ ይከበብ	1. ቤተሰብ 2. ባልንጀራ 3. ህብረተሰብ 4. ሌሎች _____ 80 አላውቅም 90 መልስ የለም	1 1 1	2 2 2		
406	ድጋፍ ከሚያደራጉለሎዎት መንገድ ጥቂቱን ይጥቀሱ? ይነበብላቸው የጠቀሱት ሁሉ ይከበብ	1. የገንዘብ ድጋፍ 2. እንክብካቤ የሐሳብ ድጋፍ 3. ምግብ፣ የሐሳብና፣ የሞራል ድጋፍ 4. መድኃኒት እንዲወሰዱ ማበረታታት 5. ሌሎች _____ 80 አላውቅም 90 መልስ የለም	1 1 1 1	2 2 2 2		
407	ቫይረሱ በደሞት አለ ከተባለ በኃላና የእድሜ ማራዘሚያ መድኃኒት መውሰድ ከጀመሩ ወዲህ ሞራሎትና የአኗኗር ሁኔታዎት ምን ይመስላሉ?	1. ያልተረጋጋ አኗኗርና፣ ሞራልበሊስ 2. የተረጋጋ አኗኗርና በደንብ የተገነባ ሞራል 3. ሌሎች _____ 80 አላውቅም 90 መልስ የለኝም				
408	በመውሰድ ላይ ያሉትን የእድሜ ማራዘሚያ መድኃኒት ትዕዛዝ የሚወስዱበት ጊዜና፣ ሰዓት ከአኗኗር ጋር አመች /የተቀናጀ/ ነው?	1. አዎ 2. አመች (የተቀናጀ) አይደለም 80 አላውቅም 90 መልስ የለኝም				→ 410

የተጠያቂው መልስ ለጥያቄ 408 አዎ ከሆነ በቀጥታ ወደ ጥያቄ 410 በመዝለል መጠይቁን ይቀጥሉ፡፡

409	የእድሜ ማራዘሚያ መድኃኒት ትዕዛዝ ለመውሰድ አመች ወይም ያልተቀናጀበትን ምክንያት ይጥቀሱ	1. _____ 2. _____ 3. _____ 4. _____ 80 አላውቅም 90 መልስ የለኝም				
410	ከዚህ ቀደም ባሉት ጊዜያት /ዘመናት/ በተለያዩ ሱስ በሚያሰቡ መድኃኒት፣ ሲጋራ ወይም ሌሎችን ተጠቅመው ያውቃሉ?	1. አዎ 2. በሱስ ተይዜ አላውቅም 80 አላውቅም 90 መልስ የለኝም				→ 412

የተጠያቂው መልስ ለጥያቄ 410 በሱስ ተይዜ አላውቅም ከሆነ ወደ ጥያቄ 412 በቀጥታ ይዘለሉ፡፡

ቁጥር	ጥያቄዎችና ማጣሪያቸው	መልሶች	አዎ	አይ	ኮድ	ዝለል
411	ሱስ ከሚያሰቡት የተጠቀሙት የቱን ነበር?	1. ጫት 2. መጠጥ 3. ሲጋራ 4. ሐሽሽ 5. ሌሎች _____ 80 አላውቅም 90 መልስ የለኝም	1 1 1 1	2 2 2 2		
412	የኤችአይ ቪ/ኤድስ ህመማን የእድሜ ማራዘሚያ መድኃኒት በትክክለኛ ጊዜና ሰዓት በአግባቡ ሳቋርጡ እንዲወስዱ ሊረዳቸው ይችላል የሚሉት ኃሳብ የትኛው ነው?	1. የቤተሰብና የሌሎችን ድጋፍ ይሻል 2. መድኃኒቱ ጥቅም እንደሚሰጥና ውጤታማ መሆኑን ማመን አለባቸው 3. ስለ እድሜ ማራዘሚያው መድኃኒት በይበልጥ ግንዛቤ ለማግኘት ተከታታይ ትምህርት ለህመማንና ለህብረተሰቡ መስጠት ያስፈልጋል 4. በፕሮግራም የተደገፈ የመድኃኒት አሰጣጥ ዘዴ መቀየስ ያስፈልጋል 5. ህመማን መድኃኒት መውሰድ አለመውሰዳቸው ለማረጋገጥ የቤት ለቤት ጉብኝት ያስፈልጋል 6. የእድሜ ማራዘሚያውን መድኃኒት የሚጠቀሙ ህመማን ለምን? እንዴት? ለስንት ጊዜ መውሰድ እንዳለበት ጠንቅቆ ማወቅና መድኃኒቱን ለመውሰድ መስማማት አለበት? 100 ሁሉም ትክክል 00 ሁሉም ትክክል አይደለም 80 አላውቅም 90 መልስ የለኝም	1 1 1 1 1 1 1 1 1	2 2 2 2 2 2 2 2 2		
413	የዕድሜ ማራዘሚያ መድኃኒት መውሰድ የጀመሩበትን ቀን፣ ወር፣ ዓ.ም እንዲሁም በወር ምን ያህል እንክብል እንደሚወስዱ ይግለጹ?	1. _____ ጀመርኩ _____ ቀን _____ ወር _____ ዓ.ም _____ እንክብሎች በወር እወስዳለሁ፡፡				
414	የዕድሜ ማራዘሚያውን መድኃኒት ለመውሰድ የሚሰጥዎት ቀጠሮ በስንት ጊዜው ነው?	1. ወር 2. በሁለት ሣምንት 3. በሣምንት 4. በየቀኑ 80 አላውቅም 90 መልስ የለኝም				
415	የዕድሜ ማራዘሚያ መድኃኒት መውሰድ ከጀመሩበት ጊዜ አንስቶ ሣይወስዱ የቀሩበት ጊዜ አለ?	1. አዎ 2. የለም 80 አላውቅም 90 መልስ የለኝም				
የተጠያቂው መልስ ለጥያቄ 415 መልስ የለም ከሆነ በቀጥታ ወደ ጥያቄ 417 ይለፉ በመቀጠልም ጥያቄ 418 ይመልሱና ወደ ክፍል አምስት ይዘለሉ						
416	ከታዘዘሎት የዕድሜ ማረዘሚያ መድኃኒት ውስጥ ሳይወስዱ በመቅረትዎ	1. _____ ዕንክብሎች በ _____ ወር ተሰጥቶኛል 2. _____ ዕንክብል ሳልወስድ ቀርቶኝ ነበር				

	በእጅዎት ቀሪ የነበረውን እንክብል ብዛት ይጥቀሱ?			
417	ባለፈው ወር ከታዘዘሎት የእድሜ ማራዘሚያ ዕንክብሎች አሁን በእጅዎ ያለውን ይግለጹ::	1. _____ ጀመርኩ ቀን _____ ወር _____ ዓ.ም 2. _____ እንክብሎች ለ_____ ወር እወስዳለሁ:: 3. _____ ዕንክብሎች አሁን አሉኝ 80 አላውቅም 90 መልስ የለኝም		
418	አሁን በእጅዎ ያለውን የዕድሜ ማራዘሚያ መድኃኒት እንድቆጥር ይፈቅዱልኛል?	1. አዎ 2. አልፈቅድም 3. አልያዝኩም 4. ሌሎች _____ 80 አላውቅም 90 መልስ የለኝም		
419	ከታዘዘሎት የዕድሜ ማራዘሚያ መድኃኒት ውስጥ ባለፈው ሣምንት ምን ያህል እንክብል አልወሰዱም?	1. _____ ዕንክብሎችን አልወሰድኩም		
420	በሐኪም ከታዘዘሎት የእድሜ ማራዘሚያ መድኃኒት ውስጥ ባለፈው ወር ውስጥ ለስንት ቀን ያህል ሳይወስዱ ቀሩ?	1. _____ 2. _____ 3. _____ 4. _____ 80 አላውቅም 90 መልስ የለኝም		
421	በሐኪም የታዘዘውን የእድሜ ማራዘሚያ መድኃኒት በታዘዘው መሠረት ለመውሰድ ያልቻሉበትን ምክንያት ይጥቀሱ	1. _____ 2. _____ 3. _____ 4. _____ 80 አላውቅም 90 መልስ የለኝም		

ክፍል አምስት

በኤች.አይ.ቪ/ኤድስ ህመማችንና በህክምና ባለሙያዎች መካል ያለው ግንኙነት

501	በሐኪሞችና በእርስዎ መካከል ያለው ግንኙነት ምን ያህል ነው?	በመግባባት ላይ የተመሠረተ የቀረባ ግንኙነት አለን ከምንም አይቆጥረኝም ችግራችንም አይረዳልኝም ይዘጋኛል መግባባት አይፈልግም 80 አላውቅም 90 መልስ የለኝም		
502	በሐኪሞች የተሰጠዎትን ቀጠሮ በወቅቱ አክብረው በሰዓቱ ይገኛሉ?	አዎ አላከብርም 80 አላውቅም 90 መልስ የለኝም	→	503

የተጠያቂው መልስ ለጥያቄ 502ኛ አላክብርም ከሆነ ጥያቄ 503 ይመልሱ፡፡

ቁጥር	ጥያቄዎችና ማጣሪያቸው	መልስ	አዎ	አይ	ኮድ	ዝለል
503	የቀጠሮ ጊዜና ሰዓትን ያላከበሩበት ምክንያት ለምንድነው?	1. በመርሃት 2. የሥራ ብዛት 3. መኖሪያ ቤቱ ሩቅ ስለሆነ 4. ተኝቼ 5. የመጓጓዣ ችግር 6. በህመም ምክንያት 7. ከሐኪሙ ጋር ስለማልግባባ 8. ሌሎች 80 አላውቅም 90 መልስ የለኝም	1 1 1 1 1 1 1	2 2 2 2 2 2 2		

ክፍል ስድስት

ጭፍግግ (ለስሜት) የሚያደርግ ምልክት ባለፈው አራት ሣምንት ካሎት

ቁጥር	ጥያቄዎች	መልሶቻቸው	
		አዎ	የለም
1	ራስ ምታት ዘወትር ነበርዎት?		
2	የምግብ ፍላጎቶች ቀንሷል?		
3	ለመተኛት ይቸገራሉ?		
4	በቀላሉ ፍርሃት ፍርሃት ይሰታል? (ፍርሃት ይሰማዎታል)?		
5	እጆት ይንቀጠቀጣል?		
6	ብስጭትና ጭንቀት ይሰማዎታል?		
7	ምግብ ከበሉ በኋላ የመንሸራሸር ችግር አለቦት?		
8	የሚያስቡትን ሃሳብ በግልፅ ለማወቅ ይቸገሩ ነበር?		
9	ደስተኝነት አይሰማዎትም?		
10	የሐዘን ስሜት ከወትሮው በተለየ ሁኔታ ይሰማዎታል?		
11	መዝናናት ሲፈልጉ ችግር ይገጥሞታል?		
12	ውሳኔ በነገሮች ላይ ለመስጠት ይቸገራሉ?		
13	ሥራዎች አስቸጋሪ ይሆኑባቸዋል?		
14	አስፈላጊና ጠቃሚ በሆኑ ነገሮች ላይ ለመጫወት (መወያየት) ይቸገራሉ?		
15	ፍላጎትዎ በማንኛውም ነገር ላይ ቀንሷል?		
16	ራስዎን ዋጋ ቢስ አድርገው ያስባሉ?		
17	ህይወቴ፣ ኑሮዬ፣ ተበላሽ አበቃ፣ አከተመ ብለው ያስቡ ነበር?		
18	ድካም በየጊዜው ይሰማዎታል?		
19	ሆድዎ ውስጥ ጥሩ ስሜት አይሰማዎትም?		
20	በቀላሉ ድካም ይሰማዎታል?		