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Evaluation of ART Service in Private Hospitals in Addis Ababa: A Quality Assessment

By Michael Berega (MD)

Advisor: Mesfin Addisse (MD, MPH)

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By Michael Berega

Department of Community Health, Faculty of Medicine,
Addis Ababa University

Approved by the Examining Board

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Advisor	Signature
Examiner	Signature

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TABLE OF CONTENTS

LIST OF TABLES

Page Number

Abbreviations and Acronyms

AAU- Addis Ababa University

ABC - Abacavir

AIDS - Acquired Immuno Deficiency Syndrome

ART - Antiretroviral Therapy

ARV - Antiretroviral

AZT – Zidovidine

ddI - Didanosine

D4T - Stavudine

EFV - Efavirenez

FHAPCO- Federal HIV/AIDS Prevention & Control Office

HAART- Highly Active Antiretroviral Therapy

HCSUS- Health Cost and Service Utilization Study

HIV- Human Immuno Deficiency Syndrome

HRQoL- Health Related Quality of Life

IND – Indinavir

LPV/r – Ritonavir boosted Lopinavir

MDG- Millennium Development Goal

MoH- Ministry of Health

MOS SF- Medical Outcome Study-Short Form

MIS- Management Information System

NFV - Nelfinavir

NRTI- Nucleoside Reverse Transcriptase Inhibiter

NNRTI-Non Nucleoside Reverse Transcriptase Inhibiter

NVP - Nevirapine

OI- Opportunistic Infections

PLWHA- People Living With HIV/AIDS

PMAQ- Patient Medication Adherence Questionnaire

PMTCT-Prevention of Mother to Child Transmission

QoL- Quality of Life

SQV/r – Ritonavir boosted Saquinavir

STI- Sexually Transmitted Infections

TDF – Tenofovir

3TC - Lamuvidine

Abstract

BACKGROUND: To scale up the Anti Retroviral Therapy (ART) program the Government of Ethiopia has recently expanded the service to include private hospitals. But the quality in ART service provision is hardly known particularly in such a setting.

OBJECTIVES: The main objective of the study is to assess the quality of ART service in private hospitals in Addis Ababa with respect to clients' satisfaction, change in quality of life and adherence to medications. In doing so it identifies unexpected problems that should be corrected immediately and it will be a good prelude for future out come studies.

METHODS: A cross sectional study was conducted which used qualitative and quantitative approaches to look in to the inputs, process of care and outcome as indicators of quality of ART service being delivered in private hospitals in Addis Ababa. A total of 183 ART clients who were selected through cluster sampling from ART clinics in private hospitals in Addis were assumed for exit interview on client satisfaction, perceived quality of life and adherence to medications using adapted questionnaires. Both health care providers and ART clients were approached through in-depth interview for the above indicators of service quality. Additionally check lists were used to asses the structural status of ART services in these hospitals.

RESULTS: A total of 183 clients accessed of which 130 of them responded (non respondent rate of 28.4%) to the questionnaire and from which 78.5% and 67.7% of them have a level above the mean satisfaction score and above the mean for quality of life respectively. Most of the clients were highly satisfied by the cleanliness and comfort of the environment but of the clients who were dissatisfied a significant number of them were complaining of the high cost they incur for laboratory. Comparing the various domains for perceived quality of life the role/social functioning and health distress were lower than the other domains. Adherence rate was found to be 87% at 95% adherence requirement. Otherwise this study showed a strong relation ship between the variables client satisfaction and adherence & quality

of life and adherence. A closer look via in-depth interview has revealed supportive evidences for the above results and a checklist for the minimum package for ART service provision has shown no major gaps in the inputs.

CONCLUSION: Clients of ART service in private hospitals are significantly satisfied with the service, have generally witnessed a better quality of life and had satisfactory adherence record. To improve these measures of quality of care further the gaps identified should be filled by the health facilities and the major stakeholders involved. The investigator recognized the variables that contributed for the optimal level of quality of care at these hospitals and recommended a means to lower laboratory cost and provide psychosocial support along with others.

1. INTRODUCTION

Above 30 millions lives have passed away and the world is still suffering from social and economic calamity due to the emergence of HIV (Human Immuno- Deficiency Virus) which is a cause for the global epidemic Acquired Immuno Deficiency Syndrome (AIDS). In many sub-Saharan Africa countries this epidemic has changed the make up of the population, with potentially terrifying consequences for the transfer of knowledge and values from one generation to the next (1, 2).

Globally there are 33.2 million adults and children infected with the virus of which 68% of them are living in the Sub Saharan African where more than 4500 new infections per day and as many as that die daily(3).

Ethiopia is one of the hardest hit Sub Saharan African countries by the HIV pandemic. According to a recent estimate of single point prevalence the national prevalence of HIV infection is 2.1(1.7 for male 2.6 for female) with urban prevalence of 7.7 and 0.9 in rural. These rates indicate that the total number of HIV positive population in the year 2007 is near to one million amongst which more than 258, 000 were in need of Anti Retroviral Treatment (ART) (5). After the advent of ART there are reports coming out which show promising signs such as a decrease in the death toll, improved quality of life of PLWHA as well as a change in the trends of the epidemic (2, 3 & 16).

Initially Ethiopia responded to the HIV epidemic promptly, though the measure taken was focused on prevention, with little attention to treatment. But with the introduction of ART in resource limited settings in early 2000's, Ethiopia introduced fee based ART in 2003 in selected health facilities following the issuance of the National ARV's supply and use policy. The Ethiopian free ART scheme was launched in 2005 through an ART Road-map 2004-2006 with the motto *"Accelerating Access to HIV/AIDS Treatment in Ethiopia"*. The time period for the road map came to an end with a 67.2% achievement of uptake by individual starting treatment of the targeted 100,000 by the end of Dec. 2006. So, to achieve universal access to HIV/AIDS services nationwide and thereby to reach the MDG, the country is undergoing a rapid

and voluminous expansion through further decentralization of the HIV/AIDS services to more sites with involvement of various stake holders. These HIV/AIDS services include HIV counseling and testing, PMTCT, HIV/AIDS care, support and treatment and infection prevention (6, 7). As an integral part of the continuum of HIV care provision of free ART to health centers and to private hospitals became a necessity and is being carried out as part of phase II of the roll out of ART program(6).

Even though the government remained as the nation's main health care provider and financer, a growing share (from about 6% to 15% in a period of 2004 to 2007) of the private sectors in health service was observed. As most private health facilities particularly hospitals are accessible to the urbanites where the HIV prevalence is higher their importance in the expansion of ART service indisputable (6, 12, 13). Conventionally these private health facilities are believed to provide a better quality of service.

Obviously these facilities are rendering ART service after accreditation (full or partial) by the respective authority and are attracting many clients but no firm data is there on the quality of service they render.

Recognizing this and the fact that the nation is at a stage and a setting where quality is as important as access Road Map 2007-2008/10 came with a broad focus on four points amongst which quality of prevention, care and treatment is one (7). Similarly FHAPCO recently came with a preliminary document on quality of HIV/AIDS services in Ethiopia which could be used as a platform to work on quality of care in regard to HIV/AIDS(8).

2. STATEMENTS OF THE PROBLEM

After the introduction of ART, the nature of the HIV/AIDS pandemic has changed from a deadly disease to a chronic manageable health condition, and there are reports coming out showing signs of stabilization of the disease with a decrease in morbidity and mortality. Of course, safe and effective ART helps to improve the quality of life, reduce HIV related morbidity, increase survival, decrease AIDS death, prevent emergence of drug resistance, decrease the number of orphanage caused by AIDS, and the incidence of the disease. Quality of service is a fundamental concept in bringing about the ideal health outcome in response to ART through a sustainable, safe and effective service.

With the scale up of ART program in the country private hospitals started to deliver ART service for free but the quality of service is hardly known. These private health institutions are conventionally thought to have a better capacity to fulfill the inputs and so deliver a relatively better quality of service.

Up on completion the study could be used as a base line data as well as a reference material to researchers, experts or policy makers for intervention.

3. RATIONALE OF THE STUDY

Currently Ethiopia is accelerating its ART program with a good accomplishment, but little is known about the quality of ART services and taking the immaturity of the program it was too early to talk about quality of ART service in a private hospital. The country's plans to respond to the HIV/AIDS emergency can not be complete with out adequate focus on improving quality of care or treatment as it is clearly stated in the 2007-2010 Road Map. There is a growing evidence that access to antiretroviral therapy is insufficient to alter the poor health profile of PLWHA and that the quality of ART services may be a key determinant of ART outcomes (15, 19).

It is obvious that there are many gaps in people's knowledge of positive living, and providers' perceptions of the quality of ART services and the restraint experienced by providers in the delivery of services, the impact of quality of care on ART outcomes, and the perspectives of PLWHA on ART. Therefore, to fill this gap and in view of the national ART scale up program, assessment of the existing quality of ART services in health facilities is needed. This study focusing on quality of ART service in private settings, therefore can serve as a significant contribution to answer this question.

Acknowledging gaps in reference to the Guideline for Implementation of ART set by MoH and recognizing the importance of quality of care both to meet clients' need and to improve the service status, assessment of ART service and quality of care in private hospitals has been defined as a point of research.

Not even a single published study is available about the quality of ART service in private settings where health service is being commercialized for a presumed better quality of service delivered. Looking at the factors from different perspective made the evaluation of the ART service provision at the private settings important and timely.

Moreover, knowing the existing quality of ART service in private hospitals in a country like Ethiopia which started ART program recently could help to take timely measures and lessons for the improvement of the program. This study on quality of ART services can also serve as bottom line information for other similar studies.

4. LITRATURE REVIEW

ANTI RETROVIRAL THERAPY

With the advent of ARV drugs, AIDS has become a treatable chronic disease. Their impact on the management of HIV infection has been startling, with improvements in health proving to be far more marked and enduring than anticipated when combination ART first emerged in the mid-1990s. Even in developing countries like ours, with increasing people with AIDS accessing services, a decline in death rates is clearly visible (16).

The public health approach which is recommended by WHO for resource-poor settings is becoming the mainstay in the management of HIV/AIDS. By this approach, large numbers of people are made to access ART and survival is maximized. These guidelines standardize and simplify the initiation and monitoring of ART. Standardized formulary for first and second-line ART, with the use of two NRTIs /AZT or D4T / plus 3TC an NNRTI /NVP or EFV/ as the standard first-line approach and ABC or TDF or ZDV (if not taken) + ddI +LPV/r or SQV/r *or NFV or IND/r* as second line regimen (17, 18).

Provision of quality HIV/AIDS services in a decentralized manner can mitigate the socio economic impact of the epidemic and will also increase the uptake and decrease the defaulter rate, further more it improves the adherence and retention. To play a convenient and sustainable role in the fight to turn down this epidemic through a continuum of care one has to be aware of the way the ART program is being conducted and interfere for improvement of the quality when it is necessary.

The Federal MoH has introduced a fee based ART in 2003 and made it for free since July 2005 and then after adopted and modified the WHO recommendation and came with standard guidelines with regular updates for use in all the health facilities. Till the beginning of 2008, more than 90.000 people were on ART in about 330 health facilities.

Quality in Health Care

The International Organization for Standardization (ISO) defines quality as "the totality of features and characteristics of an entity that bears on its ability to satisfy a stated or implied need" (15). Quality of health service is becoming a public health concern in many countries including the developing world.

From public health perspective, quality means offering the general health benefits, with the least health risk to the greater number of people, given the available resources. But this study sought to define and measure quality in a manner that was both sensitive to the context, and capable of exposing areas responsive to improvement. The study adopted the Institute of Medicine (34) definition that: 'Quality of care is the degree to which health services for individuals and populations increase the likelihood of desired outcomes and are consistent with current professional knowledge' because this definition is focused and could be translated in the study context. In health care, the perception of the needs of a client or community varies with the different views and perspectives of the client, service provider and society and the social, political and economic environment (15).

The Donabedian model, the group of three which has become a frame work for assessment of quality emphasizes on the relation ships among the structure, process and outcome of health care (35). Most quality improvement measures used to focus on assessing the structure or processes of care, but recent studies has shown a considerable stakeholder interest in assessing the out comes, or "end results," of health care services(10).

As the goal of quality assurance is to improve the outcomes of patients, this should be accomplished in part by attaining a better understanding of which aspects of structure and process affect outcomes. These measures are interrelated and poorly demarcated and will be convincing when structure and process measures are associated with out comes of care and vice versa. The measurement method used depends on how quality is defined and what is feasible given the prevailing circumstances. The basic concept is that more effective and more appropriate processes between provider and clients will improve health outcomes. Better facilities, equipment, staffing, and training

affect outcomes indirectly by improving processes. Quality of care is a multi dimensional construct and so indicators that could capture this nature are necessary (See Fig. 1. Adapted Conceptual Framework for the study *Evaluation of ART Service in Private Hospitals in Addis Ababa*).

There are studies coming out from different corners focusing on quality of health care. Even though these reports try to use different approaches they are bound by the principle mentioned above – the Donabedian framework. Here in our country most of the studies are conducted from the clients perspective through assessment of client satisfaction and interestingly are performed in different settings and on different program area (23 – 27).

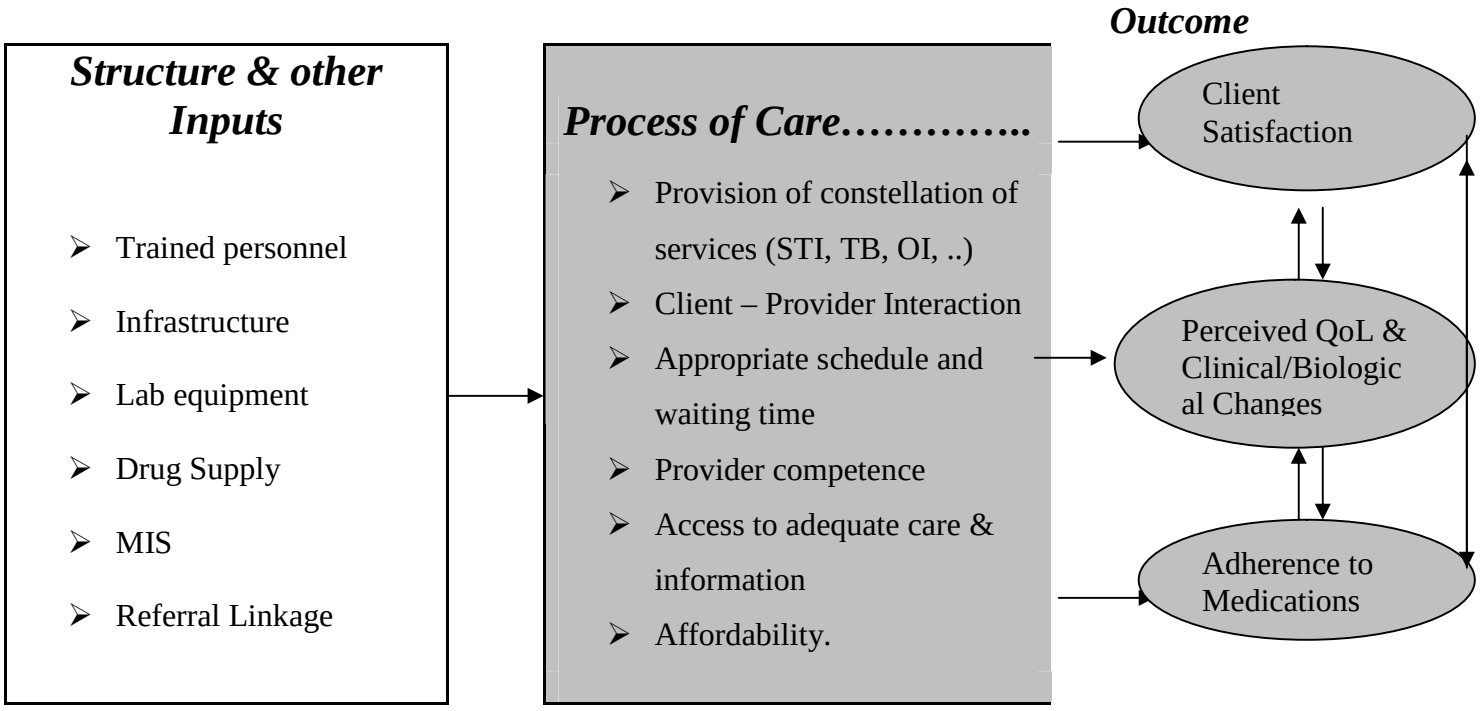

Fig. 1 Adopted Conceptual Frame work for Evaluation of ART Service at Private Hospitals in Addis Ababa

Client Satisfaction

Asking patients what they think about the care and treatment they have received is an important step towards improving the quality of care, and ensuring that health services are meeting patients' needs becoming one of the quality indicators. Studies have shown that, satisfied patients are more likely to utilize health services, comply with medical treatment, and continue with the health care providers (10, 36).

So measures of client satisfaction lie somewhere between 'process' and 'outcome' measures. When the concern is with the extent to which clients are satisfied with the context, processes, and perhaps the costs of a treatment service or network, the relevant measures of satisfaction can be viewed as process measures. Client satisfaction with treatment processes may influence, and be influenced by, treatment outcomes. In practice, these mutual influences may be difficult to disentangle. It is worth keeping in mind that satisfaction with the treatment processes, treatment adherence, and positive treatment outcomes are inter- related (14).

The approach for measurements of client satisfaction used in this study arose from the components set in Bruce's Analytic Framework and Logical model of Health Care Quality (10, 14, and 26). It includes:

Client - provider relationship: clients want respect, to be treated with courtesy and understanding and have humanly relations.

Techniques & skills of health professional: clients could assess and judge comprehensiveness of physical examination, being confidential to them and access essential information on their health problem.

Structural and systemic capability of the health facility: fair and ready access to services, services have to be reliable, affordable, and with out barriers as well as presence of constellation of services.

Quality of Life

The concept of quality of life is increasingly recognised and used as an important dimension of measurement of outcome in clinical trials and other forms of evaluative research (14). Assessment of health related quality of life (HRQOL) indicates quality of care to the extent that the care provided influences quality of life.

Quality of care could be assessed from different perspectives but the only person truly qualified to assess a patient's health related quality of life (HRQOL) is the patient him/herself (30). This covers broad aspects of physical and mental health that are rarely assessed directly in routine medical encounters. Because of the myriad mental and physical manifestations over the course of the illness, HIV infection would be an important chronic condition in which to study HRQOL could make a great difference through appropriate and timely intervention to improve quality of care.

Among the commonly used instruments to assess quality of life in HIV population is included Medical Outcome Study, Short Form (MOS SF-36) which is a well validated generic health measure and is adapted so as to fit and be used in this study. The data from 36 questions are combined to provide a measure of health related quality of life in nine dimensions. These are: General Perceived Quality of Life and Body Pain (GQOL and BP), perception of General Health (GH), Physical Functioning (PF), Role Functioning (RF), Social Functioning (SF), Health Distress and Vitality (HD and VT), Cognitive Functioning (CF), Mental Health (MH) and Health Transition (HT). But some of the variables are blended together for a better convenience (30).

The above variables are only in regard to the perceived quality of life but there are other biological and clinical measurements (put in this study as ART outcomes) that show the client's health status. They are found to be interrelated with the perceived quality of life as found in different studies.

Adherence

Adherence is a client's behavior coinciding with the prescribed health care regimen, which is agreed upon through a shared decision making process between the client and the health care provider. Adherence is perceived as a patient agreeing to make behavioral changes that improve his or her health while compliance, a similar but different term, is defined as acting in accordance to a command and in a health care it is often perceived as obeying a provider's instructions.

Strict adherence to the prescribed drug regimen is one of the most important predictors of success in the antiretroviral therapy of HIV infection. Ideally, patients should learn to optimise their drug adherence before they start ART. Evidence from clinical trials suggests that very high levels of adherence (>95%, less than 3 doses missed per month) are required for optimally suppressing viral load and preventing the emergence of resistant virus (2). As successful HIV treatment requires exceptional adherence to ART, knowing clients adherence status and the related factors, and interventions to improve and maintain adherence are fundamental. Client satisfaction

and perceived quality of life are thought to be one of the factors that affect adherence and vice versa (21, 27, 31).

There are lists of materials for adherence assessment of which a self reported questionnaire, which is one of the commonly practiced approaches, is summarized and tailored to be used in this study (31).

Evaluation

Though there are many definitions of evaluation best suited to the milieu Evaluation Research could be defined as 'a systematic and empirical examination of the accomplishment and effectiveness of a certain operation/program through careful data collection and thoughtful analysis.' Some could consider evaluation as a luxury, especially in a setting where multitude of problems are competing for the scarce resources, but it is the only and best way to verify practicability of those ideas that that seems perfect but could possibly fail in practical settings. An evaluation approach that uses multiple data collection method, both quantitative and qualitative, is more likely to address diverse evaluation needs than is a more limited approach. Today, for example, there is consensus that both quantitative and qualitative data are valued and recognized as legitimate for program evaluation. In fact, these methods are by no means incompatible and should be used in tandem (11).

Evaluation has different stages and components to be applied. Evaluation of HIV/AIDS prevention, care and treatment programs has different stages and components to be applied at different phases of the program cycle. These are: Formative Evaluation, Process Evaluation, Effectiveness Evaluation and Cost-Effectiveness Evaluation. Once activities are underway, there is a need to examine whether they are being carried out correctly, on time, and with the quality they were anticipated - best addressed through process evaluation.

Process evaluation can also play an important role in improving or modifying interventions by providing the information necessary to adjust delivery strategies or program objectives in a changing epidemic. One can draw a conclusion about the quality of service being rendered from a process evaluation which could also comprise inputs and outputs (10).

5. OBJECTIVES OF THE STUDY

5.1. General Objective

- To evaluate ART service in private hospitals in Addis Ababa.

5.2. Specific Objectives

- To assess the existence of inputs required for ART services in private hospitals.
- To look for clients satisfaction, perceived quality of life and adherence to medications.
- To identify unexpected problems those need to be corrected immediately.

6. METHODOLGY

6.1. Study Design:

A cross sectional descriptive study with analytic components, through quantitative and qualitative approaches, was carried out to assess ART service provision in private hospitals in Addis Ababa from March 17 to March 22, 2008.

6.2. Study Area:

The study was conducted in Addis Ababa, the capital city of Ethiopia, where more than 2.7 million people reside and where the prevalence of HIV was thought to be 7.9 with an estimated total HIV positive population of 171,222 of whom 48,846 were in need of ART. ART service was being delivered in 24 hospitals (private, public & military) and 27 health centers and clinics for clients residing in the city and referred from all corners of the country. Most of the private hospitals in the country are located in the metropolitan out of which 12 of them were providing ART for free. This includes general and specialized hospitals (Annex, Table 1: Monthly HIV Care and ART Update for Private Hospitals as of November 2007).

6.3. Source Population:

All private hospitals in Addis Ababa providing ART service and all their clients who are on ART.

6.4. Study Units:

Those private hospitals in Addis Ababa which were providing ART service and met the inclusion criteria and PLWHA who were aged 18 years & above receiving ART service from these facilities selected for interview based on the sampling procedure.

6.5. Sample Size Determination:

With the assumption that at least 50% of the clients could skew to positive side of the indicators for quality of care, a sample size of 442 subjects, with the margin of error of 5% and a 95% CI and taking a non- respondent rate of 15% (bearing in mind the sensitiveness of the area of interest) was anticipated. Using the single population proportion formula:

$$n = Z_{\frac{\alpha}{2}}^{2} \frac{P(1-P)}{d^2}$$

Where:

Z (α/2) = Z-score at 95% confidence interval = 1.96

d = 0.05 (Margin of error)

P= 0.5 (proportion of 50% was taken because there is no available information on the study topic)

n= sample size, calculated to be 442

But up on pilot study, the flow of clients was observed and taking in to consideration budget and time constraint, an adjustment was made. So, to pull off the maximum number of study units, all ART clients who came to those selected private hospitals with ART service during the study period and met the inclusion criteria were included for the study, accordingly 183 clients were accessed.

6.6. Inclusion and Exclusion Criteria:

Among private hospitals in Addis those which provide ART service for at least six months and currently have well above hundred clients were the candidate for this study. This was important to assess the quality of service through a timeline from a relatively convenient number of clients. All adult PLWHA under ART from private hospitals and who were selected for the study through cluster sampling (i.e. clients who came in the third week of March, 2008), and at least who has been on ART for six months were included. This is because it was believed that they are able to give adequate information on the service and their CD4 count was more likely to be available. In addition, respondents had to be willing and well enough to have an interview a length of 30-45 minutes to participate in this study. Clients less than 18 years, judged to be too ill to participate and those who were on ARV treatment for less than six months were excluded from this study.

6.7. Sampling Technique:

Six out of twelve private hospitals that deliver ART service were selected for the study as they were the ones that met the criteria, of which one of the hospitals defied, making them only five. A cluster probability sampling (clients who came to the ART

clinic in the third week of March, 2008 scheduled/ unscheduled) was used to select each study participant for exit interview (9). A non probability purposeful sampling was used for in depth interview.

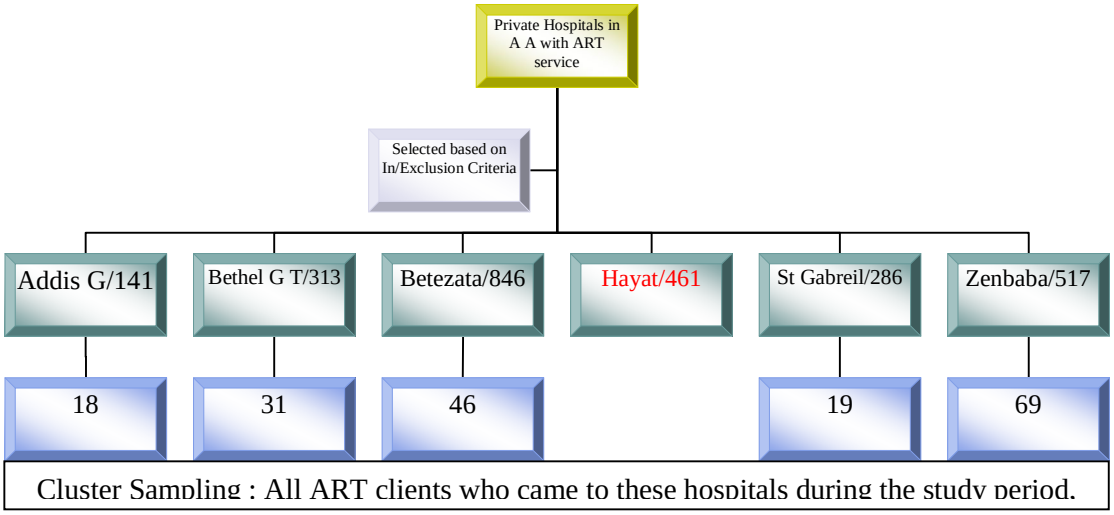

Fig. 2. Sampling Technique and Procedure.

6.8. Data Collection:

6.8.1. Data Collectors

Six data collectors (who are nurses by profession) were recruited and two day training was given by the principal investigator on administering the questionnaire, with theoretical and practical sessions for exit interview at hospitals. Data collectors were assigned to a hospital which is not her/his workstation and a supervisor, a statistician by profession, was monitoring and assisting in data collection. The principal investigator was responsible for supervising & checking the completeness of exit interview and was also conducting in-depth interview.

6.8.2 Instruments

Questionnaire

A structured questionnaire was used for exit interview. It addresses issues like: background information/socio-demographic characteristics/ and, questions that could address the theme of the study, about service delivery through client satisfaction, perceived quality of life, adherence and outcome.

The questionnaire was developed by reviewing relevant literatures such as the Health Cost and Services Utilization Study (HCSUS), Client Satisfaction Questionnaire (CSQ-8), Patient Medication Adherence Questionnaire (PMAQ), Medical Outcome Study - Short Form 36 (MOS-SF 36) and Bruce's Analytical Framework. A number of questions that could address the objective of this study was collected and adapted.

Questionnaire was first prepared in English and then translated to a local language/Amharic/ (Annex 2 & 3). In order to improve the developed questionnaire valuable comments were received from different sources. Training was given for data collectors & supervisors and the questionnaire was pre-tested among 10 PLWHA on ART, in two of the hospitals, to ensure its clarity and correct ambiguity, lengthy sentences and overlapping options.

Checklist

For the qualitative part that intended to assess the status of ART services in the hospitals checklist was used. It focused on observation of inputs for ART services and functions related to service delivery. It was prepared based on the minimum package for ART clinic, pharmacy and laboratory guideline set by the FMoH.

In depth Interview

To supplement the quantitative data, in-depth interviews using semi structured questionnaire with a probing nature were done with five health professional and eight clients who were selected through purposeful sampling.

6.9. Study variables

Dependent Variables

- Satisfaction,
- Adherence, and
- Perceived Quality of Life.

Independent Variables

- Status of ART service in relation to standards
- Provision of constellation of services (STI, OI, TB and Palliative care)
- Regimen of ART the client is getting
- Provider competence
- Convenience of service hours
- Cost of laboratory
- Waiting time to get services
- Time spent to arrive hospital
- Client provider interaction
- Information provision
-

6.10. Data Quality Assurance:

Data collectors were checking the completeness of each questionnaire at the end of an interview. The supervisor was rechecking completeness of the questionnaire immediately after interview at the spot. The principal investigator was also checking completeness and logical flow of responses during submission.

6.11. Data Analysis:

Data clearing, editing and entry in to the appropriate computer software package, SPSS Version 15.0 was done. Descriptive statistics were computed and associations between variables (in dependent & dependent) using general linear model through unadjusted and adjusted differences in mean was looked for. Questionnaires addressing the attributing factors with a five point Likert scale were categorized in to two with a cut off point which was taken as a mean value for the main indicator. Qualitative analysis was translated to English, transcribed and summarized manually.

6.12. Ethical Consideration:

Before carrying out the study, ethical clearance and formal letter of cooperation was secured to each study hospitals from School of Public Health - Faculty of Medicine, Addis Ababa University. Data collectors and the principal investigator explained the objectives of the study and the benefit thereof to the participants and the management body of the hospital. To maintain confidentiality, nurses/counsellors or physicians treating PLWHA were requesting for clients' consent to participate in the study before they met data collectors for interview. These counsellors or physicians were also responsible to write/give information on some relevant information like CD4 count on the space provided in the questionnaire. Then those clients willing to participate meet the data collector for a face to face interview. Response of respondents was anonymous and data collectors informed respondents that they have full right to discontinue or refuse to participate in the study at any time. A letter of agreement was attached to the questionnaire to obtain the written permission of each individual.

6.13. Dissemination and Utilization of Results:

The finalized paper will be submitted to School of Public Health, Faculty of Medicine, AAU, thereby reaching the abovementioned bodies. In addition, a copy of this material will be given to FHAPCO, AAHAPCO, FMoH, Addis Ababa Regional Health Bureau, respective hospitals as well as stakeholders and all interested bodies.

7. RESULT

7.1. RESULT FROM QUANTITATIVE STUDY

A total of 183 clients were enrolled out of which 130 (71.6%) of them responded for the exit interview with non response rate of 28.4%. Among the respondents 69 (52.7%) were from Bethezata Hospital, 46 (35.1%) were from Zenbaba Hospital, 31 (23.7%) were from Bethel General Teaching Hospital, 19(14.5%) were from St Gabriel Hospital, 18(13.7%) from Addis General Hospital.

7.1.1. Socio-demographic Characteristics

Among the respondents females constituted 58.5 % and half of the respondents fell in the age range of 24-35 years with a mean age of 37.7 years and SD of 9.5. The majority (64.6%) of the respondents were Orthodox Christians and 59 (36%) of the respondents were married and living together followed by singles which count to 40 (30.8%). More than 75% of the respondents had at least a secondary level education while only 3.1% of the respondents are illiterate.

Almost half (49.2%) of the respondents were earning a monthly income of less than 600 ETB and around a quarter (23.1%) of the total respondents were unemployed at the time of the study. More than half (60%) of the clients were on ART for not more than 12 months while 12.3% took for more than 36 months. Only 13.8% of the total clients were living alone while the vast majorities were either with their family, parents or relatives.

7.1.2. Introduction to ART Service

The majority (86.9%) of the respondents have disclosed their HIV status to some one other than the health worker. Clients were asked how and where the first time they heard about ART, and discovered that 78 (60%) of them heard before or during their illness while 42 (32.3%) after and 10 (7.7%) don’t remember exactly when; while 72 (55.4%) of the clients heard about ART service from health professionals from their respective hospitals or other health institution the rest heard from mass media.

Table 1- Socio demographic characteristics of ART Clients in five private hospitals in Addis Ababa, March 2008(n=130)

Variable	Frequency	%	Variable	Frequency	%
Sex			**Occupation**		
Male	54	41.5	Employee	46	35.4
Female	76	58.5	Merchant	28	21.5
			Student	10	7.7
Age			Unemployed	30	23.1
<=24	2	1.6			
24-35	63	50.0	Others	16	12.3
35-49	49	35.9	**Living with**		
>=50	16	12.5	Alone	18	13.8
Religion			Family	90	69.2
Orthodox Christian	83	64.6	Parents	14	10.8
Protestant Christian	32	24.6	Relatives	2	1.5
Muslim	15	10.8			
Catholic	0	0.0	**Relation to Head of Household**		
Marital Status			Head	40	36.4
Married and living together	59	36	Spouse	46.2	32.7
Married but living apart	13	10.8	Daughter/Son	24	21.8
Single	40	30.8	Relative	8	7.3
Widowed	12	9.2	Others	2	1.8
Divorced	6	3.1	**Family Size**		
Educ. Level			2-3	46	42.6
Illiterate	4	3.1	4-5	30	27.8
Write & read	6	4.6	Above 5	32	29.6
Primary School	22	16.9			
Sec. School	54	41.5			
College/University Dip.	44	33.8			
Monthly Income/ETB/					
<=300	46	35.4			
300-600	18	13.8			
600-1500	30	23.1			
1500-3000	22	16.1			
>=3000	14	1.3			

7.1.3. Client Satisfaction

Regarding time to arrive to hospital, 24(18.5%) clients claim that it took them more than 2 hours, for 30 (23.1%) clients it took one to two hours, for another 30(23.1%) half to one hour but for most of them, 46 (35.4%), it took less than half an hour to arrive at their respective hospitals. 116 clients that is 89.23% responded they are comfortable with the schedule (working days & opening hours) the hospitals are operating.

The vast majority, 104 (81.3%), of the respondents have said they would recommend their respective hospital to someone for HIV/AIDS care and treatment, while the remaining 24(18.7%) said they wouldn't citing different reasons such as not happy by the approach of the care provider and the laboratory cost they incur.

The study looked at the different variables that could affect the overall satisfaction of the clients. These variables are put in a domain of client - provider relationship, techniques & skills of health professional and structural and systemic capability of the health facility; and it is discovered that availability of drugs and supplies and the cleanliness/comfort within the hospitals are the major satisfying variables as 90% and 84.6% of the clients respectively are satisfied with these variables. The time it took them to get the service & back home and the laboratory cost they are being charged are the main dissatisfying variables (43.8% and 43.1 % of the clients respectively are dissatisfied with these variables). While courtesy and respect by the ART team, way of clinical examination and measures taken to assure privacy lie in between with 16.7%, 17% and 19.2% of the clients being dissatisfied respectively.

(Table 2 shows satisfaction rating of respondents in two categories)

Table 2- Responses to different satisfaction variables by ART clients in five private hospitals in Addis Ababa, March 2008 (n=130)

Variables	Satisfaction Rating	
	Dissatisfied n (%)	**Satisfied n (%)**
Client – provider relationship		
-Courtesy & Respect by the ART Team	21(16.2)	109(83.8)
-Way of Clinical Examination	22(17)	108(83)
-Measures taken to assure privacy	25(19.2)	105(80.8)
Techniques & skills of health professional		
-Time to get the service & back home	57(43.8)	73(56.2)
-Info/counselling on ART, PMTCT, OIs…	26(20)	104(80)
Structural and systemic capability of the health facility		
-Availability of drugs & supplies	13(10)	117(90)
-Lab cost	56(43.1)	74(56.9)
-Cleanliness & comfort	20(15.4)	110(84.6)
-Measures to assure confidentiality	28(21.5)	102(78.5)

The above determinant variables are measured on a five point Likert scale from the very satisfied to the very dissatisfied and are categorized in to two with the cut point, of mean value 2.42 so that those who scored above 2.42 are taken as dissatisfied while

those below are satisfied. Hence it is found that 102 (78.5%) are satisfied while 28(21.5%) are dissatisfied by the service they received.

7.1.4. Quality of Life

To determine the perceived health related quality of life of ART clients, which covers a broad aspect of physical and mental health, variables of different domain are addressed. These domains are General Health Perception, Role and Social Functioning, Physical Functioning, Mental Functioning, Cognitive Functioning, Health Distress. ART clients are asked different questions on each variables which are prepared in five point Likert scale in an increasing order of quality and around two third of the clients have responded as having improved quality of life on variables of Physical Functioning and Cognitive Functioning while just above half of them said they have improved quality of life in variables of General Health Perception and Mental Functioning but the majority of clients 89(68.5%) have poor quality of life considering variables in Role & Social Functioning and in relation to the Health Distress they are in.

Later the five point Likert scale is categorized in a two point scale with the cut point, mean value of 1.57 and those whose point is below 1.57 as being poor or not improved while those above 1.57 as good or improved. Hence 88 (67.7%) have good quality of life while 12 (32.3%) are in a poor quality of life. (Table 3-shows rating of QoL in two categories)

Table 3- Responses to domains of perceived quality of life by ART clients in five private hospitals in Addis Ababa (n=130)

Domain	**Ratings of Clients HRQoL**	
	Poor/Not Improved/ n (%)	**Good/Improved/ n (%)**
General Health Perception	62(47.7)	68(52.3)
Physical Functioning	44(33.8)	86(66.2)
Mental Functioning	57(43.8)	73(56.2)
Health Distress	74(56.9)	56(43.1)
Cognitive Functioning	47(36.1)	83(63.9)
Role & Social Functioning	89(68.5)	41(31.5)

7.1.5. Health Outcome of ART

As Table 4 shows, looking at clinical and laboratory conditions for assessment of the health outcome it was found that 78 (61%) of the clients had a working functional status after receiving ART as compared to only 48 (37.5%) which was before. Grossly looking at the HIV/AIDS related symptoms the vast majorities (90.6% and 95.3% respectively) had said no for any diarrhea and lung disease in the last one month.

About 109 (85%) of the clients had an increase in body weight while 120 (92.3%) of the clients were found to have an increase of CD4 count (retrieved from patient's chart) of which two third of them had more than 100 cells/mm3 in six month time after initiation of ART.

Table 4-Health outcome of ART clients as measured by clinical variables in five private hospitals in Addis Ababa, March 2008. (n=130)

Variables		N	%
Functional status before ART	Working	48	37.5
	Ambulatory	48	37.5
	Bed-ridden	32	25.0
Current functional status	Working	78	60.9
	Ambulatory	48	37.5
	Bed-ridden	2	1.6
Any diarrhoea	Yes	12	9.4
	No	116	90.6
Any lung disease	Yes	6	4.7
	No	122	95.3
Overall health condition	Excellent	36	27.7
	Very good	72	55.4
	Good	22	16.9
	Fair	0	.0
	Bad	0	.0
Change in Body Weight	<0	20	15.5
	0-5	39	30.2
	5-10	32	24.8
	>10	38	29.5
CD4 cell count before ART	<50	20	15.4
	50-100	22	16.9
	100-200	56	43.1
	>200	32	24.6
Change in CD4 Count	<0	10	7.7
	0-100	39	30.0
	>100	81	62.3

7.1.6. Adherence

Considering as one of the variables for assessment of quality of service adherence to ART medications was measured through self reporting. 104 clients (80.0%) were found to be adherent (never missed a single dose of ART medications at least in a month time) leaving 26 clients (20.0%) as non adherent which have missed at least a single dose in a period of one month. 114 (87.7%) missed less than three doses in a month time while 16(12.3%) have missed three or more doses of ART medications in a month time. Most of the clients (7 out of 26) who missed their drugs said they simply forgot taking when asked for any reasons while majority others reasoned out traveling, run out of meds, busy at work, sick to take medications etc.

7.1.7. ASSOCIATION BETWEEN INDEPENDENT AND DEPENDENT VARIABLES

To look in to the association of different independent variables on the dependent ones univariat analysis was made through general linear model using the marginal mean difference.

7.1.7.1 Factors affecting Client Satisfaction

As shown in Table 5 the study looked at different variables for their association with client satisfaction. Clients' educational level was found to have an association (p = 0.018) and a mean difference of -0.197 (-0.432 to 0.038) at 95% CI while time to arrive to hospital (p = 0.012) and mean difference 0.267, (0.059-0.475) at 95% CI.

However when adjusted (to other factors) these association were not found significant rather convenience of schedule and adherence to medications were found to have a strong association with satisfaction. That is those who were not satisfied with the convenience of the schedule were 76% less likely to be satisfied (p = 0.040) at 95% CI; with a mean of difference 0.239(0.011-0.467)) and those who were less adherent to ART medications were 67.5% less satisfied than the ones that adhered (p = 0.003) at 95% CI; with a mean of difference 0.325(0.113-0.536)).

Table 5- Determinants of satisfaction of clients on ART service in five private hospitals in Addis Ababa, March 2008 (n=130).

Variable		Overall satisfaction				Non adjusted estimated marginal Difference at 95% CI	Sig.	Adjusted estimated marginal Mean Difference at 95% CI	Sig.
		Yes		No					
		n	%	n	%				
Sex of Client	Male	44	43.1	10	35.7	1		1	
	Female	58	56.9	18	64.3	0.052(-0.094-0.197)	0.484	0.052(-0.094-0.197)	0.484
Age in years	<=24	2	2	0	0				
	24-35	48	47.1	16	57.1	0.250(-0.339-0.839)	0.403	0.250(-0.548-1.048)	1
	35-49	40	39.2	8	28.6	0.167(-0.426-0.759)	0.579	0.167(-0.636-0.969)	1
	>=50	12	11.8	4	14.3	0.250(-0.365-0.865)	0.423	0.250(-0.584-1.084)	1
Marital status	Single	34	33.3	6	21.4	1		1	
	Married & together	46	45.1	14	50	0.083(-0.083-0.250)	0.324	0.083(-0.157-0.324)	1
	Married & apart	12	11.8	2	7.1	-0.007(-0.260-0.246)	0.956	-0.007(-0.373-0.358)	1
	Divorced	2	2	2	7.1	0.350(-0.078-0.778)	0.108	0.350(-0.267-0.967)	1
	Widowed	8	7.8	4	14.3	0.183(-0.085-0.452)	0.179	0.183(-0.204-0.571)	1
Educational level	Sec school	36	35.3	18	64.3	1		1	
	Write & read	6	5.9	0	0	-0.333(-0.678-0.011)	0.058	-0.333(-0.831-0.164)	0.578
	Primary	18	17.6	4	14.3	-0.152(-0.354-0.051)	0.141	-0.152(-0.444-0.141)	1
	Illiterate	4	3.9	0	0	-0.333(-0.748-0.082)	0.114	-0.333(-0.932-0.266)	1
	12 & above	38	37.3	6	21.4	-0.197(-0.360-(_)0.034)	0.018*	-0.197(-0.432-0.038)	0.18
Occupation	Student	8	7.8	2	7.1	1		1	
	Merchant	24	23.5	4	14.3	-0.057(-0.352-0.238)	0.702	-0.057(-0.483-0.369)	1
	Unemployed	24	23.5	6	21.4	0(-0.292-0.292)	1	0(-0.422-0.422)	1
	Employee	38	37.3	8	28.6	-0.026(-0.305-0.253)	0.854	-0.026(-0.429-0.377)	1
	Others	8	7.8	8	28.6	0.300(-0.023-0.623)	0.068	0.300(-0.166-0.766)	0.681
Monthly income	<=300	38	37.3	8	28.6	1		1	
	300-600	14	13.7	4	14.3	0.048(-0.181-0.278)	0.678	0.048(-0.283-0.380)	1
	600-1500	24	23.5	6	21.4	0.026(-0.168-0.220)	0.79	0.026(-0.254-0.306)	1
	1500-3000	16	15.7	6	21.4	0.099(-0.115-0.313)	0.362	0.099(-0.210-0.408)	1
	>=3000	10	9.8	4	14.3	0.112(-0.140-0.364)	0.381	0.112(-0.252-0.476)	1
family size	2—3	34	42.5	12	42.9	1		1	
	4—5	20	25	10	35.7	0.072(-0.133-0.278)	0.485	0.072(-0.179-0.324)	1
	above 5	26	32.5	6	21.4	-0.073(-0.275-0.128)	0.471	-0.073(-0.320-0.174)	1
Is there anyone who knows	Yes	88	86.3	22	78.6	1		1	
	No	12	11.8	6	21.4	0.133(-0.074-0.341)	0.206	0.133(-0.121-0.388)	0.618
	I don't know	2	2	0	0	-0.200(-0.782-0.382)	0.498	-0.200(-0.914-0.514)	1
Time to arrive to hospital?	1-2 hr	28	27.3	2	7.1	1		1	
	1/2-1 hr	20	19.6	10	35.7	0.267(0.059-0.475)	0.012*	0.267(-0.015-0.548)	0.074
	<1/2 an hr	36	35.3	10	35.7	0.151(-0.038-0.340)	0.117	0.151(-0.105-0.407)	0.702
	> 2 hr	18	17.6	6	21.4	0.183(-0.037-0.404)	0.102	0.183(-0.115-0.482)	0.614
Convenience of the schedule?	Yes	94	92.2	22	78.6	1		1	
	No	8	7.8	6	21.4	0.239(0.011-0.467)	0.040*	0.239(0.011-0.467)	0.040*
Quality of life perceived	Poor	38	37.3	4	14.3	0.177(0.027-0.328)	0.021*	0.177(-0.027-0.268)	0.09
	Good	64	62.7	24	85.7				
Adherence Status	Adhered	94	92.2	20	71.4	1		1	
	Not Adhered	8	7.8	8	28.6	0.325(0.113-0.536)	0.003*	0.325(0.113-0.536)	0.003*

7.1.6.2. Factors that Affect Perceived Quality of Life

As Table 6 shows looking at the association of different variables to perceived QoL, the study discovered an unadjusted association between exposing ones HIV status to another people and perceived QoL as well as between overall satisfaction and perceived QoL with a p value of 0.033 and 0.021 respectively.

But the strong association reported is between educational status, p = 0.000, with a mean of difference of 0.579 (0.274-0.884) at 95 CI, family size, p = 0.004, with a mean difference of 0.326, (0.085-0.567) at 95 % CI and adherence, p = 0.006, with a mean difference 0.344 (0.103-0.586). That is those with a less educational status had a 42 % less likelihood to have a better perceived QoL with the above statistics, similarly those with a bigger family size had a 67% less likelihood of having a better perceived QoL while those who had not adhered to the medications were 65.5% less likely to have a better perceived QoL.

Table 6- Determinants of perceived QoL among ART clients in five private hospitals in Addis Ababa, March 2008. (n=130)

Variable		Perceived Quality of life				Non adjusted estimated marginal Mean Difference at 95% CI	Sig.	Adjusted estimated marginal Mean Difference at 95% CI	Sig.
		Poor		Good					
		N	%	N	%				
Sex of Client	Male	21	37	33	63	1		1	
	Female	22	28.9	54	71.1	-0.081(-0.246-0.084)	0.335	-0.081(-0.246-0.084)	0.335
Age in years	<=24	0	0	2	100				
	24-35	22	34.4	42	65.6	0.344(-0.319-1.007)	0.307	0.344(-0.554-1.242)	1
	35-49	11	25	37	75	0.250(-0.416-0.916)	0.459	0.250(-0.653-1.153)	1
	>=50	8	50	8	50	0.500(-0.193-1.193)	0.156	0.500(-0.438-1.438)	0.933
Marital status	Divorced	2	50	2	50	1		1	
	married & together	21	36.7	39	63.3	-0.133(-0.586-0.320)	0.561	-0.133(-0.787-0.521)	1
	married & apart	10	71.4	5	28.6	0.214(-0.283-0.712)	0.395	0.214(-0.504-0.932)	1
	Single	6	15	34	85	-0.350(-0.810-0.110)	0.135	-0.350(-1.014-0.314)	1
	Widowed	2	16.7	10	83.3	-0.333(-0.840-0.173)	0.195	-0.333(-1.065-0.398)	1
Educational level	Sec school	8	14.8	47	85.2	1		1	
	Write & read	4	66.7	2	33.3	0.519(0.159-0.878)	0.005*	0.519(0.000-1.037)	0.050
	Primary	17	72.7	6	27.3	0.579(0.368-0.790)	0.000*	0.579(0.274-0.884)	0.000*
	Illiterate	2	50	2	50	0.352(-0.081-0.784)	0.110	0.352(-0.273-0.976)	1
	12 & above	12	27.3	32	72.7	0.125(-0.045-0.294)	0.148	0.125(-0.120-0.369)	1
Occupation	Student	2	20	8	80	1		1	
	Merchant	14	50	14	50	0.300(-0.037-0.637)	0.081	0.300(-0.187-0.787)	0.808
	Unemployed	11	33.3	20	66.7	0.133(-0.201-0.468)	0.431	0.133(-0.349-0.616)	1
	Employee	14	30.4	31	69.6	0.104(-0.215-0.424)	0.519	0.104(-0.357-0.566)	1
	Others	2	12.5	14	87.5	-0.075(-0.444-0.294)	0.688	-0.075(-0.608-0.458)	1
Monthly income	<=300	12	26.1	35	73.9	1		1	
	300-600	6	33.3	12	66.7	0.072(-0.188-0.333)	0.583	0.072(-0.304-0.449)	1
	600-1500	13	40	18	60	0.139(-0.081-0.359)	0.213	0.139(-0.178-0.457)	1
	1500-3000	8	36.4	14	63.6	0.103(-0.140-0.346)	0.404	0.103(-0.248-0.453)	1
	>=3000	4	28.6	10	71.4	0.025(-0.261-0.311)	0.864	0.025(-0.388-0.438)	1
Family size	2—3	8	17.4	39	82.6	1		1	
	4—5	6	20	24	80	0.026(-0.174-0.226)	0.796	0.026(-0.219-0.272)	1
	above 5	16	50	16	50	0.326(0.130-0.522)	0.001*	0.326(0.085-0.567)	0.004*
Is there anyone who knows?	Yes	32	29.1	78	70.9	1			
	No	8	44.4	10	55.6	0.154(-0.079-0.386)	0.194	0.154(-0.132-0.439)	0.581
	I don't know	2	1	0	99	0.709(0.056-1.362)	0.033*	0.709(-0.091-1.509)	0.100
Convenience of the schedule?	Yes	36	31	79	69	1		1	
	No	6	42.9	8	57.1	0.118(-0.145-0.381)	0.375	0.118(-0.145-0.381)	0.375
	I don't know								
Overall satisfaction	No	4	14.3	24	85.7	1		1	
	Yes	37	37.3	65	62.7	0.230(0.035-0.425)	0.021*	0.230(-0.035-0.25)	0.09
Adherence Status	Adhered	10	62.5	6	37.5	1		1	
	Not Adhered	32	28.1	82	71.9	0.344(0.103-0.586)	0.006*	0.344(0.103-0.586)	0.006*

7.1.6.3. Factors affecting Adherence

Table 7 shows some of the determinants of adherence. As shown in the table, religion (p = 0.046), marital status (p< 0.05), educational level (p = 0.000), occupation (p = 0.002), monthly income (p = 0.000), perceived QoL (p = 0.006) and overall satisfaction (p = 0.003) were significantly associated with adherence. However, after adjustment was made only educational level (p = 0.004, mean difference of 0.290 (0.002-0.517) at 95% CI), occupation (p = 0.021, mean difference of 0.357(0.032-0.683) at 95% CI), monthly income (p = 0.001, mean difference of 0.320(0.088-0.552) at 95% CI as well as perceived QoL (p = 0.006, -0.17(-0.289-(-)0.055) at 95% CI and overall satisfaction(p = 0.003, -0.207(-0.342-(-)0.072)at 95% CI.

Looking at the table below one can see that those who were less educated were 29% less likely and those whose occupation was merchant were 35.7% less likely to adhere to the medications while those whose monthly income was above 1500 ETB were 68-100% less likely to adhere as compared to the ones whose income was less than 300 ETB, those who were satisfied by the service they received and those who have a better perceived quality of life were 21% and 17% more likely to adhere than their counterpart of that variable.

Table 7- Determinants of adherence status among ART clients in five private hospitals in Addis Ababa, March 2008. (n=130)

Variable		Adherence Status				Non adjusted estimated marginal Mean Difference at 95% CI	Sig.	Adjusted estimated marginal Mean Difference at 95% CI	Sig.
		Not Adhered		Adhered					
		N		N	%				
Sex of Client	Male	6	11.1	48	88.9	1		1	
	Female	11	13.2	65	86.8	0.020(-0.096-0.137)	0.729	0.020(-0.096-0.137)	0.729
Age in years	<=24	0		2	100	1		1	
	24-35	12	18.8	51	81.2	0.188(-0.276-0.651)	0.425	0.188(-0.441-0.816)	1
	35-49	4	8.3	45	91.7	0.083(-0.383-0.549)	0.724	0.083(-0.548-0.715)	1
	>=50	0		16	100	0(-0.484-0.484)	1	0(-0.656-0.656)	1
Religion	Orthodox	9	9.5	77	90.5	1		1	
	Protest	4	12.5	28	87.5	0.030(-0.105-0.164)	0.662	0.30(-0.135-0.195)	1
	Muslim	4	28.6	10	71.4	0.190(0.004-0.377)	0.046*	0.190(-0.039-0.420)	0.138
Marital status	Divorced	2	50	2	50	1		1	
	married & together	8	13.3	53	86.7	-0.367(-0.699-(_)0.034	0.031*	-0.367(-0.847-0.114)	0.310
	married & apart	2	14.3	12	85.7	-0.357(-0.722-0.008)	0.055	-0.357(-0.885-0.170)	0.552
	Single	4	10	35	90	-0.400(-0.738-(_)0.062)	0.021*	-0.400(-0.888-0.088)	0.207
	Widowed	0		12	100	-0.500(-0.872-(_)0.128)	0.009*	-0.500(-1.037-0.037)	0.088
Educational level	Sec school	4	7.4	50	92.6	1		1	
	Write & read	1		6	100	-0.074(-0.343-0.195)	0.586	-0.074(-0.462-0.314)	1
	Primary	8	36.4	14	63.6	0.290(0.132-0.447)	0.000*	0.290(0.062-0.517)	0.004
	Illiterate	0		4	100	-0.074(-0.397-0.249)	0.651	-0.074(-0.541-0.393)	1
	12 & above	4	9.1	40	90.9	0.017(-0.110-0.144)	0.793	0.017(-0.166-0.200)	1
Occupation	Student	0		10	100	1		1	
	Merchant	10	35.7	18	64.3	0.357(0.132-0.583)	0.002*	0.357(0.032-0.683)	0.021
	Unemployed	2	6.7	29	93.3	0.067(-0.157-0.290)	0.556	0.067(-0.256-0.389)	1
	Employee	4	8.7	43	91.3	0.087(-0.127-0.300)	0.422	0.087(-0.221-0.395)	1
	Others	0		15	100	0(-0.247-0.247)	1	0(-0.356-0.356)	1
Monthly income	<=300	2	4.3	44	95.7	1		1	
	300-600	2	11.1	16	88.9	0.068(-0.105-0.240)	0.439	0.068(-0.181-0.316)	1
	600-1500	4	13.3	27	86.7	0.090(-0.056-0.235)	0.224	0.090(-0.120-0.300)	1
	1500-3000	8	36.4	13	63.6	0.320(0.160-0.481)	0.000*	0.320(0.088-0.552)	0.001
	>=3000	0	0	14	100	-0.043(-0.233-0.146)	0.650	-0.043(-0.317-0.230)	1
Family size	2—3	6	13	40	87	1		1	
	4—5	0	0	30	100	-0.130(-0.283-0.022)	0.092	-0.130(-0.317-0.056)	0.270
	Above 5	8	25	24	75	0.120(-0.030-0.269)	0.115	0.120(-0.063-0.303)	0.345
Is there anyone who knows	Yes	12	10.9	98	89.1	1		1	
	No	4	22.2	14	77.8	0.113(-0.053-0.279)	0.180	0.113(-0.090-0.316)	0.539
	I don't know	0	0	2	100	-0.109(-0.575-0.356)	0.644	-0.109(-0.680-0.462)	1
Time to arrive to hospital?	1-2 hour	4	13.3	26	86.7	1		1	
	half-an hour	2	6.7	28	93.3	-0.067(-0.234-0.100)	0.431	-0.067(-0.293-0.160)	1
	<half an hour	4	8.7	42	91.3	-0.046(-0.198-0.106)	0.547	-0.046(-0.252-0.159)	1
	> 2 hour	6	25	18	75	0.117(-0.061-0.294)	0.195	0.117(-0.123-0.357)	1
	I don't know	0	0	0	100				
Convenience of the schedule?	Yes	14	12.1	102	87.9	1		1	
	No	2	14.3	12	85.7	0.022(-0.163-0.207)	0.813	0.022(-0.163-0.207)	0.813
	I don't know	0	0	0	100				
Perceived Quality of life	Poor	10	23.8	32	76.2	1		1	
	Good	6	6.8	83	93.2	-0.170(-0.289-(_)0.051	0.006*	-0.170(-0.289-(_)0.051	0.006
Overall satisfaction	No	9	28.6	19	71.4	1		1	
	Yes	8	7.8	94	92.2	-0.207(-0.342-(_)0.072	0.003*	-0.207(-0.342-(_)0.072	0.003

7.2. RESULTS FROM QUALITATIVE STUDIES

Complementary to the quantitative findings, below are findings from qualitative studies which are performed through in-depth interview of health care providers and ART clients.

7.2.1. Summary Results from In- depth interviews with health care providers

Two physicians and three nurses, who took in-service training on ART and have been working in ART clinic in their respective hospital for a time ranging from four months to a year and half, were interviewed. All the participants said that clients are really satisfied by the service they are receiving even to the extent that it spurts towards them. The health workers attributed the satisfaction as being a big reward in their career- looking at a smiling face and grateful client.

Usually clients come to these private facilities by choice looking for a better quality and privacy/confidentiality as the participants underlined and they said the facilities and the health workers are trying to achieve the maximum on these aspects.

The relation ship with the clients is becoming more like a sister and brother that they are free to give a call in case of any inconvenience or discomfort. One of the health workers said that *"Relationships with the ART clients is so intimate that they are not happy visiting another doctor once they are accustomed to you. They are greatly satisfied by the service they are receiving at the clinic and look full of hope and strength."* But they could not hide that there are few clients who are not satisfied by the quality of service they are getting. One of the health worker caught citing the reason for the disappointment like this: *'Every body knows that PLWHA are getting ARV drugs for free here in Ethiopia, be it from government or private health facility, but it is reasonable to pay for the accessory service you earn in the private institution and they are getting the right service for their money if not more'* he continued uttering *'for me there seems a misconception in the society that money could do any thing disregarding professional ethics- that's what some clients are after.'* And he told us that he came across some clients who insist to take ART while they are ineligible.

When asked what they would suggest to solve this misunderstanding they said first and foremost it is our (both clients' and health care providers') awareness on health and related things that should rise. By doing so every one of us could have a full understanding of what is going on and could talk the same language to improve the quality of service.

Two of the participants agreed that the laboratory tests (like CD4, LFT, RFT and chemistry) could be a little costly at a private hospitals but there are still people from the lower income category that want the service here even though they are given a choice, government hospitals where every service is for free. Again these participants are saying that this should not be taken as a major complaint as these laboratory tests are not frequently ordered.

'Most of the complaints and disappointments are really forgotten because clients are overwhelmingly thinking about the remarkable change they saw in a health related quality of life, especially the change in physical well being, since the time of ARV initiation' that is what one of the health worker said when asked of the change he noticed on health related quality of life of his clients. *'Most of my clients were being managed as an in patient but once they are put on ART every thing seems a miracle for them and at times for me too'* the other health worker added. Even though clients coming to private health facility are in relative terms aware and proud to talk about variables of quality of service, there is still some preservation for fear of service compromise.

Most of the participants seemed to be satisfied by the adherence status of their clients as they were so concerned for the five minutes delay, but not forgetting to mention a few clients who were reckless to medication adherence. But there were many clients who were supporting this, one of the physicians put it like: *'it seems because of the wonderful adherence our clients have that there are a significant change in health related quality of life and the relatively lower number of clients on a second line regimen.'*

All the health professional believe that the health facilities they are working in has met at least the minimum criteria for the accreditation for initiation of ART provision

as set by the MoH and got qualified professional with state of the ART machineries - all these constitute the input for the program which could be taken as a platform to render standard quality of service. But it is important to mention that there are no separate ART laboratory in any of the hospitals, could be one area of improvement.

A couple of the health workers admitted that they didn't spend enough time with their clients as they should have - listening for their complaints and proper physical examination. They reasoned out that it is due to the work load, as they have to do in the wards or in other program areas. What they suggest is having a devoted and permanently working physician and nurse in the ART clinic.

7.2.2. Summary Results from In- depth interviews with ART CLIENTS

We selected ten clients for an in depth interview but two of them rejected the offer because of time constraint (they are by no means different from the remaining clients regarding the question of the study); eight of them (05 women and 03 men) were in the age range of 25 – 60 years.

Generally, all our participants are satisfied with the ART service, have witnessed a remarkable change in health related quality of life and believe that they are adherent to the medications. Asked what they understand by quality of ART service they said: '*one could say the service meets the expected quality when a client is holistically taken care of by the clinicians and witness an improvement in his/her general health condition.'*

Except one of the participants who by chance started and continued in the same hospital the other participants said they preferred private hospitals generally for a better quality of service they are thought to have. They came to this particular private hospital for a better privacy and the convenience in location.

Talking of the incurring cost one of the clients said *'I wouldn't say that the lab cost is expensive thinking the benefit I am getting but I will be the happiest if the cost is less, if not free like government hospitals. That money could have covered a lot of holes at*

home' another participant continued *'some of the drugs prescribed for concomitant health problems are really expensive'* suggested that *'it will be so nice if the government considers distributing these medications for the private hospitals too.'*

All of the participants underlined on the way they are being taken care of while talking about satisfaction: that is the respect and the humanly relation they are getting one participant said '*once you accustomed to one of the clinicians you will be so close to her/him that you will share your private secrets to no one but that clinicians'*. This is true in most of the cases but there are clients who are really dissatisfied by the client provider relation ships in some of the hospitals to the extent of looking for a transfer out to other hospital. One of the participants couldn't hide her disappointment mentioning the way the clinician examines his clients: '*he barely gives his ears to you*.' '*It seems intuitive,* she continued, *that every body likes somebody who gives time and attention to listen to your problem not only medical but also all the ups and downs of life even though that person is incapable to fix it'*.

Regarding the health related quality of life it seems that the remarkable improvement in health condition has veiled the dissatisfaction in service delivery. One client put this feeling beautifully saying *'I would be ashamed to express my dissatisfaction, if there is one; it seems forgetting that this second chance of life they gave me.'*

All the participants reminded those bad days they suffered from recurrent OIs and the chronic health ailments they come over with these ART. One of the clients said:*' I couldn't forget the times I had in the wards, I was almost there in the same ward, admitted with some other OI every fortnight, thanks God now, I feel so healthy my weight is ok, my CD4 count has risen to be in the normal range as I am told and I feel energetic and capable and above all I am hopeful.* Some clients have a fear that the service they are receiving will be compromised if they talk their disappointment in public.

Most of the participants never missed a single dose of their ARV medications, in two of our cases they took medications with a delay of half an hour or so which made them worry as they told us. Otherwise they know some clients who miss their medications now and then because they are so busy and they didn't put the daily dose in to their routine activities and they suggest having a reminder till they habituate.

The quality of ART service was pretty good and appreciable in all the hospitals but there were still some elements that should be improved like improving client provider relation ship in some cases, better coordination between departments and with the other hospitals and the cost these hospitals charge.

7.2.3. SUMMARY OF RESULTS FROM CHECK LISTS

A check list is used to assess the minimum package that a hospital should meet in regard to the clinic, pharmacy and laboratory for the purpose of ART service provision. These units are evaluated for personnel, infrastructure, equipment, related manuals and guidelines, MIS (Management Information System) and referral systems. So accordingly, for each of the variables set almost all the hospitals under the study have met the corresponding minimum package for ART clinic, ART pharmacy and ART laboratory.

But there are still important gaps and some flaws observed: like absence of some clinical examination tools, manuals and guidelines and weakness in the comprehensiveness of the HIV/AIDS health service and the MIS and referral system that should be strengthened. And unlike government hospitals which have a separate block for ART service provision here in the private facilities the service is being conducted in one small room usually amongst the OPDs.

8. DISCUSSION

The study assessed the ART clinic, pharmacy and laboratory for adequacy of personnel, infrastructure available, manuals and guidelines used and constellation of services as well as monitoring and evaluation of the service. Accordingly it has revealed that all the hospitals under the study have by and large fulfilled the minimum package for initiation of ART service according to the accreditation criteria put in the National ART Implementation Guideline (19).

This study faced a 28.4% non response rate that seems higher but it is in the lower normal range according to a meta analysis study which said that client satisfaction data is plagued by low response rate, in which as much as 28%-83.3% of the clients are found to be non respondent the median being 64%(20).

Among 130 respondents, 102 (78.5%) of them were satisfied with the quality of service they received in the ART clinic at private hospitals as measured by the different variables that are believed to contribute for overall satisfaction. Trade-offs, as being alive meant accepting the loss of important QoL determinants and social desirability were found to have a contribution in amplifying the satisfaction level as it was found through in-depth interview with clients (37). Around two third of the clients were found to have a better perceived QoL as measured by different variables that has been widely used to evaluate the effect of ART; this was highly propped up by the ART outcome measure, which are clinical and laboratory variables. The study found that the vast majorities (87%and 80%) of the clients have adhered to the medications taking the 95% and 100% adherence requirement respectively. Association in between client satisfaction, QoL and adherence was discovered and the role of other determinants on these study questions was well entertained.

Client Satisfaction

As the study showed 78.5% of the respondents who received ART service at the respective ART clinics in the private hospitals had a satisfaction score above the mean value and 81.3% of all the respondents recommended the service at their respective ART clinic for others with same problem. This selectivity in satisfaction may reflect

many factors, including, client - provider relationship, techniques & skills of health professional, structural and systemic capability of the health facility as well as client's personal culture and values. Most of these factors have been shown to shape their perceptions, views, and assessment of the quality of care received.

A study conducted two years back assessing the quality of ART service in government hospitals in Addis Ababa has shown only 54.2% of the clients were satisfied with the service they are receiving(21) significantly below the findings in private hospitals. Looking at the variables of satisfaction, availability of drugs and supplies and cleanliness and comfort of the environment could be taken as satisfactory variables because most (90.0% & 84.6% respectively) of the respondents were satisfied by these variables. Similarly most of the respondents were satisfied by the availability of drugs and supplies in the government hospitals but more than a quarter (26.2%) of them were dissatisfied by the cleanliness and comfort of the environment. This is thought to affect the overall satisfaction; probably patients put cleanliness and comfort of the environment top on their need as shown in a study done in government health facilities to assess the level of satisfaction in out patients (22). These are followed by variables of client provider interaction which go in similar trends in both private and government hospitals in ART care so could not be the reason for the difference.

For obvious reason most of the health institutions which are run by the private sector have a relatively clean and comfortable waiting areas and rooms than the government institutions. Having a free supply of ARV drugs on top of the above mentioned factors will definitely take the level of satisfaction to a higher level. Only 56.2% and 56.9% of the clients are satisfied by variables 'time to get the service and back home' and 'laboratory cost' respectively. This trend has been seen in a survey undertaken in private clinics in Addis Ababa where a high rate of satisfaction in general medical care (64%- 99%) were found in all aspects of care except affordability of service charges which includes the laboratory cost(23). In this study, the different satisfaction variables have a range of score from 56.9% as in case of laboratory cost to 90% as in case of availability of drugs and supplies similar to the one demonstrated in a study conducted in Jimma (24).

Generally clients coming to private health institution are believed to be highly cognizant of variables of quality of the service and are looking forward to these as they come to the institution. This may be related to the fact that their expectation of service quality may raise when they incur certain costs to the service.

Studies like the one carried out by Park-Wyllie L. et al in Canada(37), which tried to look for the impact of ART on QoL, has detected the concept of trade offs, which is a misconception that being alive meant accepting the loss of important quality of life determinants. This fact may hinder clients to recognize the shortcomings of ART services like lack of completeness of information, privacy, respect and confidentiality and even the cost they are being charged. They might be satisfied just only because they received ARV drugs for free, able to prolong their life. This is demonstrated through the qualitative methods implemented which uncovered this trade off and social desirability bias.

In a study that is conducted to look for the quality of hospital service in Eastern Ethiopia, a government set up, about 54% of the clients were not satisfied with the health service provided; similarly a study done in Jimma shown 57% of outpatients reported satisfaction with service delivered(24,25). These figures are much lower than the one in the present study and the figure from government hospitals in their ART clinic; this might be explained by the results from the different satisfaction variables.
Different studies have shown convenience of schedule as a major determinant of overall satisfaction, in a study conducted in Jordan in prenatal care clinic 79% of those who are comfortable with the working hour schedule are generally satisfied as well as in a study carried out to assess the quality of ART service in government hospitals. In this study too, one can see a significant association of convenience of schedule and overall satisfaction as well as between satisfaction and ARV medication adherence. (21, 26)

Having a convenient schedule, availability of ARV drugs for free in a clean and comfortable environment are the main variables that brought the satisfaction levels to a higher level. These are the points that needs to be encouraged while the laboratory cost and time to get the service and get back (waiting time and time to arrive to hospital) are factors that need actions/further studies to take actions for improvements.

A study conducted in Barbados to see the client satisfaction with an up graded HIV/AIDS programme has shown a great majority (97.5%) of the clients being satisfied with the service in the clinic (27). Though there could be some factors that brought this exaggerated figure in the above study like: clients are not charged, availability of transportation and food bank, it remains indicative of a room for improvement.

Quality of Life

Though HIV infection is a life long condition, PLWHA can live with it for a long period of time, and have productive, fulfilling lives with the proper care and treatment. However the threat of losing functional capacity and developing complications that affect functioning and well being often persists. This study looked at it using the different domains for perceived quality of life and clinical and biological variables which are HIV/AIDS related.

As assessed by the different domains and variables of perceived quality of life the study found that around two third (67.7%) of the ART clients have an improved health status, a score above the mean value. Clients perceived an improvement of domains of QoL due to ART when they are asked for their situation for a period of one month prior to the day of interview.

Findings from published studies have varied between reporting positive and negative effects of HAART on QoL (40, 41), this particular study has a similar finding with the study done in Addis Ababa, in 2007 at government hospitals rendering ART service which discovered 64.2 of the participants showing better perceived QoL.(21) Another study conducted in South Africa demonstrated the change in the mean score for HRQoL from 61.7 at base line to 76.1 after 12 months on HAART(28).

Of the domains the poorest scores were that given for role and social functioning and health distress, only 41 (31.5%) and 56 (43.1) respectively of the clients have above the mean score while the highest for physical functioning which 88 (66.2%) clients have a score above the mean, improved QoL. Similar finding in a study in US revealed that HAART users had improved QoL scores for almost all domains through

out the time range considered for the study except for role functioning(5.08; P = 0.01), pain (4.53; P = 0.01), social functioning(4.33; P = 0.01), and perceived health index (4.25; P = 0.01) reaching a statistically significant level(29). The figure in our study could have shown a high number of clients with regard to role or social functioning one factor could be the absence of psychosocial support along with HIV care and treatment but demands further exploration.

Perceived QoL is found to have association with educational status & family size i.e. clients with better educational status and lesser family size were in a better degree of health related QoL while those who were adherent to ARV medications have a better perceived QoL. People who were educated and who have lesser family member were relatively in a better position to keep themselves at ease from related socio economic problems. Clients who are well adherent to their medications are likely to benefit more from that regarding perceived QoL as it is true for satisfaction of clients by the service they received(21, 42).

Regarding ART outcome the study tried to look through various clinical and laboratory variables and it revealed that there is significant change in variables like functional status, body weight and CD4 count before ART and after 06 months of ART; while only 14 (10.7%) of the clients shown HIV related symptoms like diarrhoea or lung disease in the last one month. These variables have effects in some of the dimension of HRQoL as shown in previous studies (28, 30, and 32). In this study 93% of the clients who have good QoL have a better functional status; 86% of the clients who have shown better QoL have an increase in body weight while 95.5% of the clients who have said have a better QoL have an increase in CD4 count.

Adherence

Assessment of client's adherence to ARV medications could be done in various ways from a self report to electronic monitoring device but there is no single "gold standard" method. Clients' self-reports have been consistently shown to overestimate adherence, both in the HIV and non-HIV settings. But provided we are using a carefully constructed, well structured questionnaire self reporting is potentially

thought to be the most accurate measure of behavioural adherence as the client is the only one that could report on the behaviour (31).

104 (80%) and 114 (87%) of the 130 clients were found maintaining adherence level of 100% and 95% respectively. A study conducted in 2007 in government hospitals in Addis Ababa showed 81.6% and 92.6% for 100% and 95% adherence requirement respectively (21) which is comparable to the one found in this study. Two earlier studies conducted in Addis Ababa reported 81.2% and 82.8% adherence to more than 95% of doses (38, 39). Several studies carried out in other resource poor settings showed a significant proportion of the patients adhering to the medications: for instance one study reported adherence among patients in Soweto, South Africa, to be 88% similarly a study in Senegal came up with 78% of adherence (43, 44).

Adherence of patients could be affected by different behavioural and social and structural factors, this study has observed an association between adherence and socio demographic factors like: lower educational level, job, lower monthly income. But there are contradictory results coming out in published literatures on association of key socio demographic and others factors to adherence. For instance in contrary to this study, one study strongly associates non- adherence with having regular daily routines(23), supporting the fact that being a merchant could make one in a better position to adhere to medications while monthly income and educational level having no significant effect. In studies carried out here in Ethiopia these socio demographic factors have shown no definite and uniform association (38, 39, and 45).

But satisfaction and perceived QoL of the client remained to have strong associations with adherence of ART medication. Satisfaction with care could have a role both as predictor and an out come of ART and in this study though one cannot infer temporal relationships, the relation is strong as in other studies (38, 39). In a similar way, perceived QoL has a strong relation with adherence as it is shown in different studies.

9. STRENGTHS AND LIMITATIONS OF THE STUDY

Strengths of the Study

- The fact that the study is an evaluative kind in a private setting makes it the pioneer.
- It tried to include all eligible hospitals and subjects which make it more representative.
- The study used different approaches and methodologies which are complementary so that trying to make the validity of the outcome more credible.
- The tools used for measuring the variables are from sources which are standard and proofed for validity and accuracy.

Limitations of the Study

- Only less than 200 clients were accessed while one of the hospitals totally rejected the request, this forced the investigator to shift to a fitting sampling technique; the low budget and short study period are the main reasons.
- The hospital that rejected the request could be a pool of non satisfied clients receiving low quality service.
- Social desirability and recall bias are taken to be one of the restrictions that followed methodologies of the study.
- The study could have been more valuable if the results were put timely.

10. CONCLUSION

ART clients at private hospitals were found to be much satisfied by the service they received, have witnessed the improved quality of life to a great extent and had an optimal adherence record. Even though there are some factors that could enforce our clients to overlook the draw backs in the quality of service there are ample evidences, both quantitative and qualitative, for the optimal quality of ART service in private hospitals in Addis Ababa.

Furthermore, some of the variables are found to have significant effect in determining the indicators for quality of service, similar to other studies, like laboratory cost affecting the level of satisfaction and presence of poor role/social functioning in the face of good physical performance would tell us there are some gaps at the service providers' side as well as at the community level that need further studies and immediate decision. Except for some gaps and weakness in flow of work most of the structural and systemic inputs which are needed for service provision are in place.

11. RECOMMENDATIONS

As the study has recognized some gaps here after are recommendation put forward for private hospitals, MoH, and various institutions working in HIV/AIDS related areas.

- Provide affirmative action at different levels to PLWHA so that they will be able to resume the role and social functioning they used to play while they were healthy.

- Look for mechanism to charge lesser cost for laboratory or arrange any means to have these costly laboratory tests done at the government hospital for those who can't afford at the private hospitals.

- Embrace psychosocial support and counseling within the clinical management in the ART clinic.

- Adequate counselling on personal habituating mechanisms to adhere to treatment such as cues, memory aids and alarms to solve forgetting of taking medication.

- As cleanliness of the rooms and the environment as a whole are given due emphasis in determining the satisfaction level of clients these private hospitals should be encouraged in this regard and replicating this practice in other hospitals/settings should be considered.

- Improvement of inputs (manuals and guidelines, examination tools….) and the coordination and functionality of the system like MIS and referral linkage should routinely be monitored by the responsible body.

- Encourage private hospitals to assign health professional to the ART clinic who could work there for a relatively longer time if not permanently.

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ANNEXES

Annex 1. Monthly HIV Care and ART Update for Private Hospitals in Addis Ababa Update as of end of Tikmit, 2000 (November 10,2007)

	Hospitals Reporting	Ever Enrolled	Ever Started	Currently on ART
1	Addis G Hospital	937	493	141
2	Bethel G Teaching Hospital	746	711	313
3	Bethezata Hospital	1256	1134	846
4	Dinberwa Hospital	0	0	0
5	Ethio-Tebib Hospital	94	91	31
6	Hayat Hospital	929	810	461
7	MCM Hospital	379	210	140
8	MMD Hospital	169	131	47
9	St Gabriel Hospital	621	591	286
0	Tibebe Hospital	220	207	101
11	TZNA Hospital	95	83	60
13	Zenbaba Hospital	1031	973	517

Annex 2. Questionnaire- English version

INFORMATION SHEET

Hello. I am _____ (Name & profession) I am working for an investigator doing his thesis on *Evaluation of ART Service in Private Hospitals in Addis Ababa* for the partial fulfilment of his master's degree in Public Health (MPH) at AAU-Medical Faculty. We would like to ask you few questions about your satisfaction level, health status and adherence relevant to the services you receiving on antiretroviral treatment. This will help us to identify some of the barriers to quality of antiretroviral therapy services based on your answer to our questions.

You have full right to refuse, withdraw or completely reject part or all of your participation in the study. But we encourage your full participation as the answers you give on this form are of paramount importance to this study and to plan ways to help other people who must take ART on a difficult situation. We need also to take some information from your files and records archived in the ART Unit of this hospital.

We would like to assure you that all of your responses to our questions will be kept confidential throughout the study process. Any of your information you provide will be used only by the research team and will, by no means, be revealed to a third party. We will ask you those questions in a place where other people or conditions couldn't interfere. We would like to assure you that your participation on this research will not affect any of your treatment and other benefit that you get from any organization.

We would be thankful if you spend sometime with us answering questions related to the issues described above. The interview will take 30-45 minutes.

May I get your permission to continue my interview? Yes ☐ No ☐ → Stop

CONSENT FORM

I have read the information sheet above and clearly understood the purpose and anticipated benefit of the research. I hereby need to assure with my signature below that I, without any coercion or forceful act by the research team, have decided to voluntarily participate in the study to contribute my part in the effort being made for the betterment of ART service.

Unique ART ID No. _____ Signature _____ Date_____

Data collector's Supervisor's

Name& Sig. _____ Name &

Sig._____

Questionnaire for Exit Interview

PART I ……ON SOCIO-DEMOGRAPHIC CHARACTERISTICS

1. Sex 1. Male 2. Female

2. Age in years 1 …… 2. Don't know

3. Religion 1 Orthodox Christian 2. Catholic 3. Protestant 4. Muslim Other (Specify)

4. Marital status

1. Single 2. Married and living together 3. Married but don't living tighter

4. Divorced 5. Widowed

5. Educational level

1. illiterate 2. Write and read only 3. Primary school (1-8) 4. Sec. School (9-12)

5. Twelve and above

6. Job 1. Employee(Gov.,Private,NGO…) 2. Merchant 3.Student 4. Unemployed

5.Others(Specify)

7. What is your monthly income?_____ETB/Mention if she/he doesn't have any source of income.

8. Currently with whom are you living?

1. Alone----------Skip to Part II

2. Family 3. Parents 4. Other (specify)____

9. Relation to head of the house holds

1.head 2. Spouse 3. Daughter/Son 4. Relative 5. Other (Specify)

10. Family size

1. 2-3 2. 4-5 3. Above 5

Part II …….ON GENERAL HEALTH PROFILE

1. How long has it been since you knew your Sero-status? _____months

2. Is there any one else who knows about your HIV status?

1. Yes

2. No----------Skip to Q. #4

3. I don't know……..Skip to Q. #4

3. Who knows about your HIV status?

1. Partner 2. Offspring 3. Parent(s) 4. Brother/sister 5. Other (Specify)

4. For how many months, did you take ARV? _____ months.

PART III ……ON SERVICE SATISFACTION

1. When did you hear about the introduction of ART?

1) Before illness 2) During illness 3) After diagnosis 4) I don't remember when

2. From whom/where did you happen to know about the ART services in this hospital?

1.Health professional 2. Mass media 3. PLWHA association 4. Relative/Friend 5. Other (Specify)

3. How long did it take to you to arrive at this hospital?

1. less than ½ hr 2. ½ to 1 hr 3. 1 to 2 hrs 4. More than 2 hrs 5. Don't know

4. Did you feel that the schedule (hospital) hours at the hospital were convenient for you?

1. Yes 2. No 3. Don't know the opening hours

5. How satisfied are you with the courtesy and respect of the ART team during your visit?

1. Very satisfied 2. Satisfied 3. Neutral 4. Dissatisfied 5. Very dissatisfied

6. How satisfied are you by the clinical examination done by the nurse/doctor?

1. Very satisfied 2. Satisfied 3. Neutral 4. Dissatisfied 5.Very dissatisfied

7. How satisfied are you with the measures taken to assure privacy during your examinations?

For example, a private room, curtained or screened area, etc…

1. Very satisfied 2. Satisfied 3. Neutral 4. Dissatisfied 5.Very dissatisfied

8. How satisfied are you by the waiting time to get the health service and get back?

1. Very satisfied 2. Satisfied 3. Neutral 4. Dissatisfied 5.Very dissatisfied

9. How satisfied are you by the information/counseling you got on prevention of HIV/AIDS, ART, PMTCT & OI treatment & prophylaxis? 1. Very satisfied 2. Satisfied 3. Neutral 4. Dissatisfied 5.Very dissatisfied

10. How satisfied are you with the availability of drugs and supplies?

1. Very satisfied 2 Satisfied 3 Neutral 4 Dissatisfied 5Very dissatisfied

11. How do you get the laboratory cost? 1. Very cheap 2. Cheap 3.Reasonable 4. Expensive 5 Very expensive

12. How do you evaluate the overall cleanliness and comfort of the waiting area, examination room and the compound? 1. Very satisfied 2. Satisfied 3. Neutral 4. Dissatisfied 5. Very dissatisfied

13. Were you satisfied with the measures taken to assure confidentially about your health problem?

1. Very satisfied 2. Satisfied 3. Neutral 4. Dissatisfied 5. Very dissatisfied

14. How much are you satisfied with the information of the service of the hospital?

(E.g. in locating the rooms for registration, exam. Rooms, lab and drug dispensing)

1. Very satisfied 2. Satisfied 3.Neutral 4.Dissatisfied 5.Very dissatisfied

15. How do you rate your overall level of satisfaction regarding the delivery of the health service you received? 1. Very satisfied 2. Satisfied 3.Neutral 4.Dissatisfied 5.Very dissatisfied

16. Do you know any other hospital that provides ART Services? 1. Yes 2.No

17. Do you have the intention to change your ART follow up site?

1- Yes

2- No……..Skip to Q#19

18. If the answer to the above question is Yes, then why? ----------

19. Would you recommend the services of this hospital to some one else?

1- Yes …… Skip to Part III

2- No

20. If the answer to the above question is No, then why?----------

PART IV ……ON QUALITY OF LIFE AFTER ART

1. General Health Perception

1.1. In general, would you say your health in the past four weeks was?

1. Excellent 2. Very good 3. Good 4. Fair 5. Poor

1.2. You have been feeling bad recently

1-Definitely true 2-Mostly true 3-Don't know 4-Mostly false 5-Definitely false

***2- Physical Functioning*:-** the following questions are about activities that a person might do during a typical day. Does your health now limit you in the following activities? If so, how much?

(Interviewer: Probe; if respondent says did not do activity, ask is that because of your health? If not because of health, code no, not limited at all)

2.1. The kind or amounts of strenuous activities you can do like washing clothes, moving a jerry can of water or moving a bundle of fire wood from one place to another.

1-Yes, limited a lot 2-Yes limited a little 3-no, not limited at all

2.2. The kind or amounts of moderate activities you can do like washing clothes, moving a jerry can of water or moving a bundle of fire wood from one place to another.

1-Yes, limited a lot 2-Yes limited a little 3-no, not limited at all

2.3. Bending, lifting light objects or kneeling 1-Yes, limited a lot 2-Yes limited a little 3-no, not limited at all

3. Psychosocial Assessment: the following questions focus on social activities and your emotional state/mood in the past four weeks

3.1. Does your health keep you from working at job, doing work around the house or attending school?

1. Yes 2. No

3.2. During the past four weeks, how many days did your health make you stay in bed? ---------- Days

3.3. How much of the time has your health limited your social activities, like visiting your friends or family?

1-All of the time 2-Most of the time 3-A good bit of the time

4-Some of the time 5-A little of the time 6-None of the time

3.4. Have you been a very nervous person? 1-All of the time 2-Most of the time 3-A good bit of the time 4-Some of the time 5-A little of the time 6-None of the time

3.5. Have you felt clam and peaceful? 1-All of the time 2-Most of the time 3-A good bit of the time 4-Some of the time 5-A little of the time 6-None of the time

3.6. Have you felt depressed? 1-All of the time 2-Most of the time 3-A good bit of the time

4-Some of the time 5-A little of the time 6-None of the time

3.7. Have you been a happy person? 1-All of the time 2-Most of the time 3-A good bit of the time

4-Some of the time 5-A little of the time 6-None of the time

3.8. Have you felt so depressed that nothing could cheer you up?

1-All of the time 2-Most of the time 3-A good bit of the time 4-Some of the time

5-A little of the time 6-None of the time

3.9. Did you fell full of life and energy? 1-All of the time 2-Most of the time 3-A good bit of the time

4-Some of the time 5-A little of the time 6-None of the time

3.10. Did you feel totally with out energy?

1-All of the time 2-Most of the time 3-A good bit of the time 4-Some of the time

5-A little of the time 6-None of the time

3.11. Do you feel tired? 1-All of the time 2-Most of the time 3-A good bit of the time

4-Some of the time 5-A little of the time 6-None of the time

3.12. Did you have enough energy to do thing you wanted to do?

1-All of the time 2-Most of the time 3-A good bit of the time 4-Some of the time

5-A little of the time 6-None of the time

3.13. Did you have difficulty reasoning and making decisions, for example, making plans or, learning new things?

1-All of the time 2-Most of the time 3-A good bit of the time 4-Some of the time

5-A little of the time 6-None of the time

3.14. Did you forget things that happened recently for example, where you put things or when you had appointment? 1-All of the time 2-Most of the time 3-A good bit of the time 4-Some of the time

5-A little of the time 6-None of the time

3.15. Did you have trouble keeping your attention of any activity for long?

1-All of the time 2-Most of the time 3-A good bit of the time 4-Some of the time

5-A little of the time 6-None of the time

3.16 Did you have difficulty doing activities involving concentration and thinking?

1-All of the time 2-Most of the time 3-A good bit of the time 4-Some of the time

5-A little of the time 6-None of the time

4-Health Distress: How often in the past four weeks

4.1 Did you feel weighed down by your health problems?

1-All of the time 2-Most of the time 3-A good bit of the time 4-Some of the time

5-A little of the time 6-None of the time

4.2 Were you discouraged by your health problems?

1-All of the time 2-Most of the time 3-A good bit of the time 4-Some of the time

5-A little of the time 6-None of the time

4.3 Did you feel despair over your health problems?

1-All of the time 2-Most of the time 3-A good bit of the time 4-Some of the time

5-A little of the time 6-None of the time

Part V ……ON ADHERENCE SITUATION

1. Check on the patient's chart for the regimen & drugs (frequency &dose) he/she is taking?

2. What ART drugs are you taking currently? Dose and frequency

3. How frequent did you follow the instruction given along with the medication like twice or three times a day/ before/after/with meal? 1-All of the time 2-Most of the time 3-A good bit of the time

4-Some of the time 5-A little of the time 6-None of the time

4. Did you miss taking any of your ART drugs

3.1 Yesterday? 1. Yes 2. No

3.2 In the last 3 days? 1. Yes 2. No

3.3 In the last 7 days? 1. Yes 2. No

5. How many doses have you missed taking?

4.1 Yesterday? _____ 4.2 In the last 3 days? _____ 4.3 In the last 7 days? _____

6. During the past 7 days on how many days have you missed taking all doses?

1. None 2. One Day 3. Two days 4. Three days 5. Four days 6. Five days or more

7. When was the last time you missed your medication?

1.1-2 weeks 2.2-4 weeks 3.1-3 weeks 4 Before 3 weeks 5.Never missed one (…..Skip to Part VI)

7.1 What caused you to miss dosage of ARV medications? (Interviewer: Probe; if the respondent hesitates to give you one)

PART VI: ……ON ART OUTCOMES

1. Before you start taking ART

1.1. How much was your body weight? 1. _____ kg 2. I don't know

1.2. What was your functional status? 1. Working 2. Ambulatory 3. Bed-Ridden

1.3. CD4+ Count? 1. _____ cells /mm^3 2. I don't know

2. What is your current

2.1. Body weight? 1._____kg 2. I don't know

2.2. Functional status? 1. Working 2. Ambulatory 3. Bed-Ridden

2.3. CD4+ Count? 1 _____ cells /mm^3 2. I don't know

3. In the past four weeks do you have any diarrhea disease ?

1. Yes 2. No

4. In the past four weeks do you have any lung diseases?

1. Yes 2. No

Check from the patients chart/ record

5. The respondent's clinical AIDS stage, current & at the start of ART.

6. The respondent's CD4+ cell counts before(s) he started ART

7. The respondent's CD4+ cell counts six months after(s) he started ART & the recent one.

8. The overall health condition of the respondents is

1. Excellent 2. Very good 3. Good 4. Fair 5. Bad

THANK YOU

Annex 3. Questionnaire - Amharic Version

□መረጃ ቶን

ሰላም,ጋ ,,ጋ ስፐል ን -------------------------------- ባላለሁ:: በሙ ------------- ስሆግ በአ.አ.ዩ. □ህ□ም,ጋ ኛ ·ልቲ በህብረተሰብ ,,ጋ ሳ ግስ .□ር መግ □ማስተርስ .ፅሪ ·ግ ለማሟላ «□ናረ ጫጨጫ ቪ. መትሃኗ ጫ□ዓ በጫ.ስ ጫባ □ፅል ሆስ ል ሲቶሙፑም» በሚል ርክስ □ስራ ላለ ጫጥ ጫ . መረጃ በመሰብሰብ ላ ቶፃለሁ:: ጫዮግ □ ሰ ባሉ □ናረ ጫጨ ጫ ቪ. መትሃኗ ምግ ህል ተረትተ ል? □ ,,ኌ ስ ሁን ግ .ሁም መትሃኗቱግ ለማቋረዓ □ ሰ ን · ? ስለሚሉ ኝን ቦጨ.ል ቶ ለሁ:: □ሚሰ · ም መረጃ □ናረ ጫጨ.ጫ ቪ. መትሃኗ ጫ□ዓ ዓራ ላ ለ ·ግ ጨር ኝቅሰግ ግት.ጋ □ በ□ም ቅመ.ጋል::

ህግ ስግል □ፅሞ በ□ህ ዓ,ጋ ለመሳተአ፣ □ማቋረዓ ግ .ሁም በ ኝልም ሆን ግ ለ □መተ · ሙሉ መብ ግ ሉ ስ ስግ ን ·:: ሆ ም ፅግ □ርስ- □ልብ ተሳ ,ጋ □ሚሰ ·ግ መልስ ለዓ,ጋቱ አተገ □ሆን ቀሜ ብሉም በጫ ፋሪ ሁን ·ስዓ ሆን · ህግ መትሃኗ ለሚ ስ ካሚ- ጨ. ·ዓግለማ ·□ ፀቶግ ረ ,ጋል::

□ህም ፋር ጫ □ግ ለዓ ቂ- □ሚሰ ·ግ መልሶጨ.ሁሉ በዓ,ጋቱ ሂ□ ·ስዓ በ አተገ ሚስ .ር ግ□ሚ □ ል,ጋፉፅዓል- ግ ለግ:: ዓ ቂ- ግ □ም,ጋርብሎ አናም ሌሎጨ.ሰ- ጨም ሆን ሁን - ጨ.□ልቃ በማ ቱኮብ ቦ ሲሆግ □ሚሰ ·ግ ማግገ ·ም መረጃ ጫ . ቡትግ ·ቸ በምግም ጫን ሁን ለሶስተገ ጫል ጫ ቱለንም::በ□ህ ዓ,ጋ መሳተ ህ□ም,ኌ ግም ሆን ማግገ ·ም ትርፀ □ሚ ቶ· ግ ዓቅማ ዓቅም ግ□ማ ኝካ ,ጋፉፅዓሉ ለግ::

ላ ተ ቀሰ · ቶ ፋር በተ □ለሚ ሩግ ዓ ቂ- ጨ.ለመመለስ ቲ□- ግ ቢሰ ·ግ ምስፉ,ጋጨግ ፀፅ □ሰቀ ን ·:: ቃለመ ቂ 30-45 □ቂቃ ሊ. ስትብግ ጨል::

ቃለ መ ቂግ ለመቀ ል አቃት- ግ ጫ ሆግ? ጫ ------ ጫ □ለም------- ቂሙ

□ስምምን ቅ□

ላ □ተ ቀሰ ·ግ መረጃ ጫብቤ □ን,ጋቱግ ጫማ,ጋ ሊ. ረ · □ሚጨ ·ግ ዓቅም በሚቶባ ተረት ለሁ:: ስለ□ህም ለ□ሁ □ናረ ጫጨ.ጫ ቪ. ህ□ም,ጋ መስኛኛ □በ ·ሌግ ትርሻ ለመ □ ስል ለምግም □ ,ጋ,ጋ ፅኝ (በጫ . · ቡትግ) ሳ □ረፅብ ,ጋ በራሴ መልካም አቃት በዓ,ጋቱ ለመሳተአ መ ሰንግ በኝርማ ጫፋፅ□ለሁ::

ል □ናረ ጫጨ.ጫ ቪ. መ.ቂ------------------ ኝርማ--------------ቀግ----------------
□መረጃ ሰብሳቢ. · ስም,ጋ ኝርማ--------------------
□ተቶ□□ሪ · ስም,ጋ ኝርማ------------------------

QUESTIONNAIRE/መጠይቅ/

□ክል 1: *.....ON SOCIO-DEMOGRAPHIC CHARACTERISTICS*

1. ፆታ 1.ወንድ 2.ሴት

2. እድሜ 1._____ 2. አላወቅም

3. ሃይማኖት

1.አርቶዶክስ 2.ካቶሊክ 3.ፕሮቴስታንት 4.ሙስሊም 5.ሌላ (ይገለፅ)

4. የጋብቻ ሁኔታ 1.ያላገባ 2.ያገባና አብሮ የሚኖር 3.ያገባና ተለያይቶ የሚኖር

4.የተፋታ 5.ባለቤቱ/ቷ ሞተ

5. የትምህርት ደረጃ 1.ያልተማረ 2.ማንበብና መፃፍ ብቻ 3.የመጀመሪያ ደረጃ (1-8)

4.የሁለተኛ ደረጃ (9-12) 5.12 እና በላይ

6. □ሥራ ሁኔታ

1. ተማሪ 2. ገበሬ 3. ስራ ፈቺ 4. ተቀ□ሪ (□መግዕስ ፡የግለሰብ.. ትርፀ)

5. ሌላ(ዘለን)

7. ፋይናካ ርሃዊ ክፍ. ---------በብር/ ሌላ ነገም ዘለን---------

8. በአሁኑ ወቅት ከማን ጋር ይኖራሉ?

1.ለብቻዬ……. <u>ወደ ክፍል 2 ይለፉ</u>

2. ከቤተሰቤ ጋር 3. ከወላጆቼ ጋር 4. ሌላ (ይገለፅ)

9. ከቤቱ አባዎራ ጋር ያሉት ዘመድና 1. አባወራ 2. የትዳር ጓደኛ 3. ልጅ

4. ሌላ (ይገለፅ)

10. የቤተሰብ ብዛት 1. 2-3 2.4-5 3. ከ5 በላይ

□ክል 2: *.....ON GENERAL HEALTH PROFILE*

1. በደምም ወሰጥ ኤ ች ኣይ ቪ ቫይረስ መኖሩን ካወቁ ምን ያህል ጊዜ ሆኖታል ---------- ወራት

2. ከእርስዎ ሌላ ከኤች-አይ-ቪ. ጋር እንደሚኖሩ የሚወቅ ሰው አለ?

1. አለ

2. የለም …….. <u>ወደ ጥያቄ ቁ. 4 ይለፉ</u>

3. አላወቅም …….. <u>ወደ ጥያቄ ቁ. 4 ይለፉ</u>

3. መልስዎ አዎ ከሆነ ከኤች-አይ-ቪ. ጋር እንደሚኖሩ የሚወቅ አካል ማን ነው?

1.የትዳር ጓደኛ 2.የራስ ልጅ 3.ወላጅ 4.ወንድም/እህት

5.ዘመድ 6.ጓደኛ 7. ሌላ (ይገለፅ)

4. የፀረ-ኤች-አይ.ቪ መድሐኒት ለምን ያህል ጊዜ ወስደዋል? ----------ወራት

□ክል 3 ..... ON SERVICE SATISFACTION

1. የፀረ-ኤች አይ ቪ ሕክምና አገልግሎት መጸመሩግ መ□ ን ፡ □ስሙ ?

1. መ መሜ በኝ 2. መም ፡ በሀ ላ 3. ቫ ረሱ □ሜ ፡ስዓ መ ሩ ተጓዚረ በሀ ላ

4.ዲ□ ፡ግ ጫስ ፡ስም

2. በዚህ ሆስፒታል የፀረ-ኤች አይ ቪ ሕክምና አገልግሎት መኖሩን ለመጀመሪያ ጊዜ ከማን/ □ ነው የሰሙት?

1.የጠፍ ባለሙያ 2.መገናኛ ብዙሃን (ቴሌቪዥን፣ሬድዮ) 3.ከኤች አይ ቪ ጋር ከሚኖሩ ሰዎች

4.ዘመድ/ጓደኛ 6.ሌላ (ይለገፅ)

3. ሆስፒታሉ ጋር ለመድረስ ምን ያህል ጊዜ ይወስድብዎታል?

1.ከግማሽ ሰዓት ያነሰ 2.ከ1/2-1 ሠዓት 3.ከ1-2 ሰዓት .ከ2 ሰዓት በላይ 5.አላወቅም

4.የሆስፒታል የአገልግሎት መስጫ ሰዓት ይስማሞታል ወይ? 1.አዎ 2. የለም

3.ሰጫዉም በ □□ል ጫ ቅም

5. በART Team በተሰጥዎት ሰብዓዊነትና አክብሮት ምን ያህል ተደስተዋል?

1.በጣም ተደስቻለሁ 2.ተደስቻለሁ 3.ምንም አይልም 4.ደስተኛ አይደለሁም 5.በጣም ደስተኛ አይደለሁም

6. ሐኪም/ነርስዎ ባደረገለት ምርመራ ምን ያህል ተደስተዋል?

1.በጣም ተደስቻለሁ 2.ተደስቻለሁ 3.ምንም አይልም 4.ደስተኛ አይደለሁም 5.በጣም ደስተኛ አይደለሁም

7. ሐኪም/ ነርስዎ ጋር በነበሩት ጊዜ ስለወይይታቸሁ ሌሎች ሰዎች አንዳይሰሙ እና አንዳይረበሹ በተደረቶ ፡ ጥረት ምን ያህል ተደስተዋል?(Privacy)

1.በጣም ተደስቻለሁ 2.ተደስቻለሁ 3.ምንም አይልም 4.ደስተኛ አይደለሁም 5.በጣም ደስተኛ አይደለሁም

8. የፀረ. ኤች. አይ. ቪ ቫይረስ ህክምናውን ለማገኘት ሆስፒታል ደረሰው ወደ ቤት ለመሳስ በ ሰ□ብ- ጊዜ ምን ያህል ደስተኛ ናት? 1.በጣም ተደስቻለሁ 2.ተደስቻለሁ 3.ምንም አይልም

4.ደስተኛ አይደለሁም 5.በጣም ደስተኛ አይደለሁም

9. ስለ ጫጪጫ ቪ መተላለኝ ጋ መ ላ መግዶ ጩኂ ስለ ተጃ በሽ - ጩኂ ን ሁም ስለ ናረ-ጫጪጫ ቪ ሕ□ም ጋ ከሐኪም/ነርስዎ ባገኙ ም□ር ጋ መረጽ ምግ ህል ተ□ስተ ል?

1.በጣም ተደስቻለሁ 2.ተደስቻለሁ 3.ምንም አይልም 4.ደስተኛ አይደለሁም

5.በጣም ደስተኛ አይደለሁም

10. በሆስፒታሉ ባለው የመድሐኒትና ሌሎች ግባዕቶች አቅርቦት ምን ያህል ተደስተዋል?

1.በጣም ተደስቻለሁ 2.ተደስቻለሁ 3.ምንም አይልም

4.ደስተኛ አይደለሁም 5.በጣም ደስተኛ አይደለሁም

11. How do you get the laboratory cost? 1. Very cheap 2. Cheap 3.Reasonable 4. Expensive 5. Very expensive

12. በሆስፒታሉ የሜዙያና ምርመራ ክፍል እንዲሁም በግቢው ንፅህና ምን ያህል ተደስተዋል?

1.በጣም ተደስቻለሁ 2.ተደስቻለሁ 3.ምንም አይልም

4.ደስተኛ አይደለሁም 5.በጣም ደስተኛ አይደለሁም

13. ስለችግሮ/ሁኔታዎ ሚስጥር(Confidentiality) በማክበቅ ሐኪምዎ/ነርስዎ ባደረጉት ጥረት ምን ያህል ተደስተዋል?

1.በጣም ተደስቻለሁ 2.ተደስቻለሁ 3.ምንም አይልም

4.ደስተኛ አይደለሁም 5.በጣም ደስተኛ አይደለሁም

14. በሆስፒታሉ ስላሉ የተለያዩ ክፍሎች /ምርመራ ክፍል ላብራቶሪ ፣ ፋርማሲ/ በተማከተ ባገኙት መረጃ ምን ያህል ተደስተዋል? 1.በጣም ተደስቻለሁ 2.ተደስቻለሁ 3.ምንም አይልም

4.ደስተኛ አይደለሁም 5.በጣም ደስተኛ አይደለሁም

15. ባ ቃላ በተሰዓ- □ናረ ጫጪጫ ቪ ህ□ም ጋ ጫጪልፅሉ ምግ ህል ተ□ስተ ል?

1.በጣም ተደስቻለሁ 2.ተደስቻለሁ 3.ምንም አይልም

4.ደስተኛ አይደለሁም 5.በጣም ደስተኛ አይደለሁም

16. □ሀ ሆስ ል ሌላ □ናረ ጫጨ.ጫ ቪ. ሀ□ም.ጋ ጫልፅሎ □ሚሰዓበ ሆስ ል ·ቃሉ ?

1. ጫ·ቃለሁ 2. ጫ ·ቅም/□ለም

17. □ሀ ሆስ ል □ ሌላ ቦቋ □ናረ ጫጨ.ጫ ቪ. ሀ□ም.ጋ ጫልፅሎ □ ል □ሙቀ□ር ሃሳብ ገበር- /ጫሁግስ ጫ ? 1. ጫ

2. □ለም-- □ ዓ ቄ ቁ.19 ለኘ

18. ለዓ ቄ ቁዓር 17 መልስ- ጫ ግ ሆን ለምግ-------------------------------------

19. ሀ ሆስ ል ሌሎጨ. ጫጨ.ጫ ቪ./ጫትስ ፋር ለሚ ና ሰ- ጨ.ጫልፅሎ ለማፅ ግ. ቀሙበ መ□ራሉ? 1. ጫ -- □ ዓ ቄ □ክል 4 ለኘ

2. □ለም/ጫልመ□ርም

20. ለዓ ቄ ቁዓር 19 መልስ- □ለም/ጫልመ□ርም ሆን ለምግ?-----------------------------------

□ክል 4 .... ON QUALITY OF LIFE AFTER ART

1 General Health Perceptions: ባለኘ ጫ ሳምግ □ገበሮ ጫ ቃላ □ ,ጋ ሁኔ ቶመፅማል

1.1 በአጠቃላይ የጤንነትዎን ሁኔታ እንዴት ይገልፁታል

1. እጅግ በጣም ጥሩ 2. በጣም ጥሩ 3. ጥሩ 4. ደህና 5. ጤንነት አይሰማኝም

1.2 ሰማ- □ገበረ ·ግ ጫሳዊ ሀመም ግ ቶል□ ል?

1.ምግም ጫልገበረ ም 2.በ□ም ቅተገ ገበር 3. ቅተገ ገበር 4መካ ለገ ገበር

5.ብሶብገል 6. በ□ም ብሶብገል

.2 Physical Functioning □ሚ ተሉ ግ ዓ ቄ- ጨ.ጫ ጫ ብ □ምግስራ ·ግ □ስራ ን ጨ. □ረ ራል:: ,ግን □ ዋ ግ □ሥራ ን ጨ.ለመሥራ ምግ ሀል ስ ፅሮ ል?

2.1 አተገ □ቶልበ ሓ ል ለሚ ስ□ልፉ · ስራ- ጨ. ግ□ ቁኛሮ፤ ባት ሸ□ም ማግሳ ፤ መሮዓ.ጋ ስ□ር መስራ □ሙሣሰሉ ግ ለመሥራ ምግ ሀል ስ ፅሮ ል?

1. ብ□ ቲ□ ስ ፅረገል 2. ጫ ግት ቲ□ 3. በ ራሽ

2.2 መካ ለገ □ቶልበ ሓ ል ለሚ ስ□ልፉ · ስራ- ጨ. ግ□ ልብስ ማ ብ፤ ·ሃ በባል . ማግቀሳቀስ፤ጫስተገ ሸ□ም በ በ ማግቀሳቀስ □ሙሣሰሉ ግ ለመሥራ ምግ ሀል ስ ፅሮ ል?

1. ብ□ ቲ□ ስ ፅረገል 2. ጫ ግት ቲ□ 3. በ ራሽ

2.3 ግበስ ቀ.ጋ ማለ ፤ቀላል ክቃ- ጨ ማግሳ .ጋ □ሙሣሰሉ ግ ለመሥራ ምግ ሀል ስ ፅሮ ል?

1. ብ□ ቲ□ ስ ፅረገል 2. ጫ ግት ቲ□ 3. በ ራሽ

3 **Psycho-Social Assessment:** □ሚ ተሉ ዓ ቄ- ጨ. ባለኘ 4 ሳምግ በገበሮ ስሜ .ጋ ማህበራዊ ግቅስቃሴ □ር □ሚ ኅን ን .ጋ ·::

3.1. □ ,ኋ ሁኔ መ□በገ ስራ- ግ ለምሳሌ □ክለ ተክለ ግቅስቃሴ- ግ ማትረፅ ጫ ል?

1. ጫ 2. □ለም

3.2. በ ,ጌ ሁን ምገ መሥራ ሚ ቅ - ሥራ መ ሃ/ ን ለምሣሌ ቤ ት ሰዓ ሥራ፤ ምሕር መ ተል ጫ ሚ? 1. ጫ 2. ለም

3.3. ምግ ህል ቀጋ በ ,ጌ ምን ፅማሽ ቀግ በላ ጫፉ- ትሰዓ ጫልሎ ል? ------------ቀጋ

3.4. ማህበራዊ ግሮ ግቅስቃሴ- ለምሳሌ ጃ ገ ም ቤተሰብግ መ ብ ጫተኛ ሉብ ል?

1 ሁል ቲ 2 ብ ቲ 3 ቀላል ማ ባል ቲ 4 ጫ ጫ

5 በ ራሽ

3.5 በ ,ማን - ምገ መበሳፊ ሁን በ ዝር?

1 ሁል ቲ 2 ብ ቲ 3 ቀላል ማ ባል ቲ 4 ጫ ጫ

5 በ ራሽ

3.6 ተረፋፋጋ ሰላማዊ ሁን ዝር- ?

1 ሁል ቲ 2 ብ ቲ 3 ቀላል ማ ባል ቲ 4 ጫ ጫ

5 በ ራሽ

3.7 መረበሽ ሁን (በር) ዝር- ?

1 ሁል ቲ 2 ብ ቲ 3 ቀላል ማ ባል ቲ 4. ጫ ጫ

5 በ ራሽ

3.8 ስተገ ዝሩግ?

1 ሁል ቲ 2 ብ ቲ 3 ቀላል ማ ባል ቲ 4 ጫ ጫ

5 በ ራሽ

3.9 መጋጋ ስ ቅ - ትረስ ሀግ ዝረብ- ?

1 ሁል ቲ 2 ብ ቲ 3 ቀላል ማ ባል ቲ 4 ጫ ጫ

5 በ ራሽ

3.10 መንቃቃ ጋ ዓ ግካሬ (ቶልበ) ማዕ ስሜ ዝር-

1 ሁል ቲ 2 ብ ቲ 3 ቀላል ማ ባል ቲ 4 ጫ ጫ

5 በ ራሽ

3.11 ሙሉ በሙሉ ጫቅም ማ ስሜ ዝር-

1 ሁል ቲ 2 ብ ቲ 3 ቀላል ማ ባል ቲ 4 ጫ ጫ

5 በ ራሽ

3.12 ትካም ስሜ ሰማ- ዝር

1.ሁል ቲ 2 ብ ቲ 3 ቀላል ማ ባል ቲ 4 ጫ ጫ

5 በ ራሽ

3.13 ሚልቶ ግ ንዥ ለመሥራ በቂ ጫቅም /ቶልበ ግር- ?

1. ሁል ቲ 2 ብ ቲ 3 ቀላል ማ ባል ቲ 4 ጫ ጫ 5 በ ራሽ

3.14 ሀሳብግ ጫቃሂ መፅለ (ማስረ) ጫመ ል ም ሳን መስ ጫመ ል (በሃሳብ መ ላ ል) ለምሳሌ ቅት ለማ መ ቱር ጫ.ስ ንዥ መረ ጫመ ል ዝርበ- ?

1 ሁል ቲ 2 ብ ቲ 3 ቀላል ማ ባል ቲ 4 ጫ ጫ

5 በ ራሽ

3.15 ማስተ ል ሚስለቶ ግ ሥራ ረም ላለ ቲ መስራ ፅረ- ዝር?

1 ሁል ቲ 2 ብ ቲ 3 ቀላል ማ ባል ቲ 4 ጫ ጫ 5 በ ራሽ

3.16 ረ ግ ም ማሰብግ ሚ ቅ ሥራ ለማ ጋ ግ ተ ፅረ ዝር?

1 ሁል ቂ 2 ብ ቂ 3 ቀላል ም ባል ቂ 4 ጫነ ጫነ
5 በ ራሽ

4.Health Distress: ባለኝ ጫፉ ሳምማ ምማ ህሉማ ቂ

4.1 ,ንን ልቅ ህመም ስሜ ማል ብ- ንበር?

1 ሁል ቂ 2 ብ ቂ 3 ቀላል ም ባል ቂ 4 ጫነ ጫነ
5 በ ራሽ

4.2 በ ,ጋ ጨረ- ም ማ ም ማ ለ ርቶ ሰቡ ማ ንዙር ማ ሰሩ ሆን ፡ ንበር?

1 ሁል ቂ 2 ብ ቂ 3 ቀላል ም ባል ቂ 4 ጫነ ጫነ
5 በ ራሽ

4.3 በ ,ጋ ጨረ- ም ማ ተሰኛ መቁረዓ ሁን (ስሜ) ንበር- ?

1 ሁል ቂ 2 ብ ቂ 3 ቀላል ም ባል ቂ 4 ጫነ ጫነ 5
በ ራሽ

ኽል 5 ……ON ART ADHERENCE

1. ተ ቂ ፡ ምሚ ስ ማ መተህን ፡ኽል(Regimen):መ ሚጋ ትፅፅሞሽ ካሚ ፡ መ ዛባ ላ መል ቱ?
2. በሙን ቅ ርስ- ምሚ ስ መተህን ጨስም ትፅፅሞሽጋ መ ማ ፡ቃሉ?
   1.ጫ 2.ስም (ዓ ቁ ቁ. 3 ለኝ)
   2.1 ስም---------- 2.2 መ ሚ---------- 2.3 ትፅፅሞሽ----------
3. ጫበ ፡ ኽረ ጫጨ ጫ ቪ መተህን ጨ በ ክ መሰረ (በቀማ 2 ቂ በቀማ 3 ቂ/ መፅብ በኝ ም በሀ ላ) መ ፡ሰት ጫባ ፡:: ርስ- ባለኝ 4 ቀጋ ስዓ ህምጋ ክ ምማ ህል በ ኡሉ ተ ለ ል?
   1.በአ ዱም ጫለተ ተል ፡ም 2.ጫነ ጫነ ተ ለ ፡ 3. በ ኝል ተ ለሀ
   4.ጫበ ፡ማ ቂ ተ ለሀ 5.ሁልሟም ቂ ተ ለሀ
4. ሚ ስ ኽረ- ጫጨጫ ቪ መተህን ፡ስዓ ቢ ሸነ ሙ ማ
   4.1 ጋማ ሳ ስ ቀርተ ል?
   1.ጫ 2 ስም
   4.2 ባለኝ ሶስ ቀጋ ሳ ስ ቀርተ ል?
   1 ጫ 2 ስም
   4.3 ባለኝ ሰባ ቀጋ ሳ ስ ቀርተ ል? 1 ጫ 2 ስም

5. በቀማ ፡ስዓ ማ , ስ ኡል- ኽረ- ጫጨ ጫ ቪ መተህን ኽፅፅሞሽ ምማ ህሉማ
   4.1 ጋማ ጋ ሳ ስ ቀርተ ል? ------
   4.2 ባለኝ ሶስ ቀጋ ሳ ስ ቀርተ ል?-----
   4.3 ባለኝ ሰባ ቀጋ ሳ ስ ቀርተ ል? ----------
6 ካለኝ ሰባ ቀጋ ፡ስዓ ስንቱማ ቀማ ሙሉ ለሙሉ መተህን ሳ ስ ጫልኽ ል?
   1.ሁሉሟም ቀማ ስጸለሁ 2. ለ1 ቀማ 3.ለ2 ቀጋ 4.ለ3 ቀጋ 5. ለ4 ቀጋ 6.ለ5 ቀጋ ,ጋ በላ
7. ለመፊ ረሻ ቂ ኽረ ጫጨጫ ቪ መተህን - ማ ሳ ስ ኽሩ መፎ ንበር ?
   1.1.1-2ሳምማ 2.2-4 ሳምማ 3.1-3 ራ 4.3 ራ
   5.በአ ዱም ረስኽ ጫ ፡ቅም.....ወደ ክፍል 6 ይለፉ

7.1 ሳ ስ ኽሩበ ምማ ምማ ንበር? Interviewer: Probe; if the respondent hesitates to give you one)

□ክል 6……………………ON ART OUTCOMES

1. □ናረ ጫጪ.ጫ ቪ. መትሀኟ መ ·ሰት መጼመር- በኝ
   1.1 □በ□ - ምግ ሀል ዝበር?1.---------- ..ዕ. 2. ጫ ·ቀ ·ም ዝበር
   1.2.□ ግቅስቃሴ- □ረጽ ምግ ሀል ዝበር? 1.ስራ ሰራ ዝበር 2.ተመላላሽ ካሚ ዝበር ·
   3.□ጫ ፉ ቁራገ ዝበረ ·

   1.3 □CD$_4$ቁዓር- መ ግ ምግ ሀል ዝበር?1--------cells/mm^3 2. ጫ ·ቀ ·ም ዝበር

2. በጫ·ን ቅ
   2.1 □በ□ - ምግ ሀል ን ·?--------------- ..ዕ. 2. ጫ ·ቀ ·ም
   2.2 □ ግቅስቃሴ- □ረጽ ግ ን ·? 1.ስራ □ስራሀ ን · 2.ተመላላሽ ካሚ ን ·
   3.□ጫ ፉ ቁራገ ን

   2.3 □CD$_4$ቁዓር- መ ግ ምግ ሀል ን ·?---------cells/mm^3 2. ጫ ·ቀ ·ም

3 ባለኘ 4 ሳምግ ·ስዓ ማኸገ ·ም ጫ ን □ተቅማዓ ሀመም ዝበር- ?

   1 ጫ 2. □ለም

4 ባለኘ 4 ሳምግ ·ስዓ ማኸገ ·ም ጫ ን □ሳምባ ሀመም ዝበር- ?

   1 ጫ 2. □ለም

ሀመምተዋጪ.□□ ል መ ቶበ □ሚሞሉ· መረጽ- ጪ.

5 □ተ ቂ · □ጫጪ.ጫ ቪ. /ጫትስ □ምል□ □ረጽ (Stage of HIV)--------------

6 □ተ ቂ · □ናረ ጫጪ.ጫ ቪ. መትሀኟ መ ·ሰት □መጼመሩ በኝ □ተ·ቶለና · □CD$_4$ቁዓር መ ግ

7 □ተ ቂ · □ናረ ጫጪ.ጫ ቪ. መትሀኟ መ ·ሰት ጸመረ ስትስ ራ በሃላ ግ .ሁም በ□ም □ቅርብ ቷ□ □CD$_4$ቁዓር መ ግ

8 □ተ ቂ · ጫ ቃላ □ ,ጋ ሁን ሲቶመቶም

   1. ፀዕ በ□ም ዓሩ 2 በ□ም ዓሩ 3. ዓሩ 4. □ሀጋ 5. □ካማ 6. በ□ም □ካማ

ጫመሰዕ,ጋለሁ::

Annex 4. Checklist

This checklist is part of the tools to assess the quality of antiretroviral therapy services given in private hospitals in Addis Ababa.

Name of the hospital _____

1- Minimum Packages for ART Clinic

SN	Category	Specific pre-requisite	No.	Seen by Evaluator
1	Personnel	-Specialist on ART -MD trained on ART -ART trained Nurses -Data clerk		
2	Infrastructure	-Examination room -Confidential counselling room		
3	Equipment	Examination tools and supplies (ophthalmoscope, otoscope, stethoscope, BP cuff Reflex hammer)		
4	Manuals and Guidelines	Guidelines for Implementation of ART in Ethiopia, Guideline for use of ARV drugs.		
5	Services	Comprehensive HIV Services(VCT,STI,OI,TB and palliative care) with SOPs		
6	MIS (M&E)	-Log book - Recording/reporting forms - Special ART prescription - Lockable filing cabinets -A two-way referral system between clinical service delivery sites and community, and home-based care and support programs		
7	Referral services & Community links	supportive care for or refer patients to CBOs		

2-Minimum Package for Pharmacy

SN	Category	Specific Items	No	Seen by Evaluator
1	Personnel	Pharmacy staff trained on ART		
2	Infrastructure	On site storage		
		Secure storage space		
		Confidential counselling room		
3	Equipment	Refrigerator		
4	MIS(M&E)	Lockable drawer		
		Drug supply and management (bin card, stock card, receiving voucher, models, prescription forms, registration book, report forms)		

3-Minimum Package for Laboratory

SN	Category	Specific Items	No.	Seen by Evaluator
1	Personnel	Trained laboratory staff		
2	Infrastructure	Specimen collection area & additional rooms		
3	Equipment and supplies	CD_4 Count machine		
4	MIS(M&E)	Lockable drawers		
		Log book		
		Recording/reporting forms		
5	Types of tastes	CD_4 count		

Annex 5. Guideline for in-depth interview with ART clinicians and Clients.

1. Do you think this hospital has met the standard to give ART service?

2. How do you explain the quality of ART Services at this hospital?

3. What looks like client's satisfaction receiving ART services at this hospital?

4. What do you suggest to improve client's satisfaction at this hospital?

5. What are the changes in health status observed in client's who started receiving ART?

6. How common/rare is missing ART drugs among PLWHA on ART in this hospital?
   Why? What should be done to improve adherence to ART in this hospital?

7. What would you do if you lost your clients in the middle of his/her follow up?

8. Have you ever heard any complain on cost of laboratory/visiting fee?

9. What is the strongest & weakest side of this hospital as an ART service deliverer?

10. Do you have any additional comment on quality of ART service?

Annex 6. Declaration

I, the undersigned, declare that this is my original work and has not been presented for a degree in this or any other university/institute and all sources of materials used for this thesis have been acknowledged.

Name: Michael Berega
Signature _____
Place _____
Date of submission _____

This thesis has been submitted with my approval as University advisor.
Name _____
Signature _____
Place _____
Date of submission _____