

Addis Ababa University School of Public Health

Assessment of Quality of Adult Antiretroviral Treatment Services in Public Hospitals of Addis Ababa

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A thesis submitted to school of public health, Addis Ababa
University in partial fulfillment of the requirements for the degree
of masters of public health

June/2008
Addis Ababa, Ethiopia

**Addis Ababa University
School of Public Health**

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ACKNOWLEDGMENT

First of all, I would like to extend my gratitude to my advisors Dr. Mesfin Addisie and Dr. Amha Haile for their close guidance, comments and suggestions.

I would like to thank my family and friends for their support and to raise my morale through out this work.

I am also indebted to my friend Dr. Tigistu Adamu for his morale support and relevant literatures supply since topic selection & proposal development.

I am grateful to Addis Ababa University, School of Public Health and Addis Ababa City Government, Regional Health Bureau for granting approval for the study and communicating to different hospitals in the region.

My special thanks also go to providers and coordinators working in ART clinics of public hospitals of Addis Ababa; and clients who participated in this study.

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LIST OF ABBREVIATIONS

- . AA Addis Ababa
- . AARHB Addis Ababa Regional Health Bureau
- . AIDS Acquired Immunodeficiency Syndrome
- . ALERT All African Leprosy Rehabilitation Center
- . ANC Anti natal care
- . Anti TB Anti Tuberculosis Drugs
- . AOR Adjusted Odd's Ratio
- . ART Anti Retro viral Therapy
- . ARVs Anti Retro Viral drugs
- . B/P Blood Pressure
- . CI Confidence Interval
- . CPT Cotrimoxazol Preventive Therapy
- . FHAPCO Federal HIV/AIDS Prevention and Control Office
- . GoE Government of Ethiopia
- . HAART Highly Active Antiretroviral Therapy
- . HAPCO HIV/AIDS Prevention and Control Office
- . HIV Human Immunodeficiency Virus
- . IEC Information, Education and Communication
- . INH Isoniazid
- . IOM Institute of Medicine
- . IP Infection Prevention
- . ISO International organization for standardizations
- . JHU John Hopkins University
- . MD Medical doctor
- . MDT Multidisciplinary team
- . MOH Ministry of Health
- . MPH Master of Public Health
- . MTCT Mother To Child Transmission
- . NGOs Non Governmental Organizations
- . OCP Oral Contraceptive Pills
- . OI Opportunistic Infections
- . OPD Out Patient Department
- . OR Odd's Ratio
- . PEP Post exposure prophylaxis
- . PEPFAR President's Emergency Plan For Aids Relief
- . PLWHA Person Living with HIV/AIDS
- . PMTCT Prevention of Mother To Child Transmission
- . RHB Regional Health Bureau
- . STI Sexually Transmitted Infections
- . TB Tuberculosis
- . TSEHAI Technical Support for Ethiopian HIV/AIDS ART Initiative
- . UNGASS United Nations general Assembly special sessions
- . VCT Voluntary Counseling and Testing
- . WHO World Health Organization

ABSTRACT

Background: Antiretroviral therapy (ART) is a breakthrough intervention in care, support & prevention of HIV/AIDS. This program has been scaled up and decentralized in our country recently. Multiple works should be done to assess the quality of the service in Addis Ababa.

Objective: The study tried to assess the quality of ART services in public hospitals of A.A. with emphasis on client satisfaction, providers' views, functional & structural status of the ART service.

Methodology: Quantitative & qualitative designs were used. 420 clients were considered for exit interview about their satisfaction using structured questionnaire. To assess the structural & functional aspects in ART sites, self-administer questionnaire for ART coordinators and observation check list were used. In-depth interview of providers was conducted for their views on services. Descriptive statistics was used for most variables. SPSS version 15 was used for data entry, cleaning and analyses.

Result and Discussion: Nearly half clients had consultations time less than 10 minutes. Critical information of procedures, ongoing counseling was not given for many clients. All ordered laboratory tests & all prescribed drugs were not available for 21.8% and 14.4% of clients respectively which is not in accordance with recommendations (national & WHO's) for ART implementation. Linkage of clients to care and support functions were a major gap (84.0% were not linked despite having the need). It hampers the comprehensiveness of ART care in this study area. The overall none satisfaction rate was 44.4%. It is a large figure which negatively affects the prime objectives of the program; like good adherence, safe & effective drugs, expansion of the service. The major determinants for none satisfaction were availability of OI drugs; care & support functions, waiting & consultation time. The determinants were similar to different studies for clients satisfaction. Poor motivational schemes & workload were big gaps.

Conclusion: The overall none satisfaction rate was too large. Most sites had the minimum recommended packages for implementation of ART. However, there was significant work load; long waiting time, and short consultations time. Shortage OI drugs and poor care and support interventions were a big challenge.

Recommendation: Strengthen programs on care and support through resource mobilization, community involvements through health education need to be done. Attention should be given by all stakeholders for continuous availability of OI drugs. Offering services in extra time, decentralization & task shifting should be encouraged. Hospitals should increase responsiveness to preferences of clients using suggestion boxes, during meeting and decisions. Build the capacity of hospitals to address the problems of telephone, laboratory services, and motivational aspects.

1. INTRODUCTION

1.1. Back ground Information

The human immunodeficiency virus (HIV) has created an enormous challenge worldwide. Since its recognition, HIV has infected close to 70 million people, and more than 30 million have died due to acquired immunodeficiency syndrome (AIDS). The epidemic is increasing at alarming rate with over 14,000 infections per day. More than 90 % of the estimated 42 millions people living with the human immunodeficiency virus and acquired immunodeficiency syndrome (HIV/AIDS) around the globe are found in the resource limited countries of Africa, Asia, Caribbean and Latin America; and more than 66% of these people living with HIV/AIDS are found in sub-Saharan Africa, where AIDS is the leading cause of death (3).

Ethiopia is the second most populous and one of the seriously affected countries by the pan endemic in Sub-Saharan Africa. The country has the HIV/AIDS prevalence rate of 2.1%; the fifth country hosting largest number of people living with the virus globally. There exist more than 1.3 million people living with HIV and an estimated 277,800 people requiring treatment (2, 4).

Although the urban epidemic in Ethiopia appeared to decline since 2001, it has still higher burden. Addis Ababa city is not different from others urban areas, rather it has the most reliable HIV/AIDS data trend since multiple rounds of ANC based surveillance were conducted. The single point estimate of HIV prevalence for Addis Ababa is 7 %. A total of 211,446 people in city were expected to be living with HIV/AIDS. It was also estimated that

there were a total of 22, 724 new HIV infections, 19,553 new AIDS cases and 11,248 AIDS deaths in the year of 2007 (1, 4).

HIV/AIDS has created multiple fabrics of problems from economic, social and health aspects of societies in many countries, especially those of sub Sahara African. In this urgent situation, WHO and its partners launched to treat 3 million by 2005 (3 by 5) initiatives. This global target was a necessary and an achievable target on the way to the ultimate goal of universal access to ART (3, 5).

The Government of Ethiopia has also taken measures to reduce the risk of HIV transmission and mitigate the impact of the epidemic on the society. Based on several policies and guidelines in the support of the implementation and scale-up of the national responses to this epidemic, and on the recommendations of the UNGASS, it launched fee-based antiretroviral treatment (ART) initiative in 2003 and free ART initiative in 2005. In January 2005, the GoE launched the accelerating access to HIV/AIDS treatment in Ethiopia, the road map 2004-2006. According to the road map, the plan was to enroll 100,000 patients by the end of 2006 (1, 2).

Currently 90,212 clients have accessed ART nationally from 267 reporting sites as of end of Tahsas, 2000 E.C. The country has scaled up its ART programme - the service is now provided at 329 sites - and is planning to decentralize the service further to existing health facilities. Of the people ever started on ART nationally only 4% were children.

According to recent release of the 6th report AIDS in Ethiopia by federal HIV/AIDS prevention and control office (FHAPCO), 46,184 people living with HIV/AIDS (PLWHA) in

Addis Ababa were in need of antiretroviral therapy by the year 2007. About 23,489 PLWHA are currently on ART in 9 public hospitals and 20 health centers of the city; and other 3,213 PLWHA in city have been getting ART from private facilities (1, 5).

HIV/AIDS care in Addis Ababa has been under the process with help of many supporting agencies. JHU – TSEHAI under the PEPFAR program supports the health care facilities with clinical mentoring, laboratory services, Monitoring & Evaluation, quality systems and trainings related to ART, VCT and PMTCT.

Global fund as partner of MOH assists ARVs and OI drugs supply, IP and Universal precaution capacity building for health care facilities. It also works around care and support of PLWHA in strengthening HBC, Community care and tracing lost to follow up cases by facilities (supporting telephone services for facilities, home visits, and expert patients).

World Food program under its Urban HIV/AIDS project planned to provide nutritional supports for about 26,000 PLWHA & their families in Addis Ababa in 2000 E.C. These PLWHA are selected using criteria of health status and household food insecurity of the beneficiaries.

The potential benefits of ART include improving the quality of life of the PLWHA, reducing HIV related morbidity, increasing survival and preventing emergence of drug resistance; and specifically ART decreases the occurrences of AIDS deaths and the number orphanage children caused by AIDS. The secondary goal of ART is to decrease the incidence of HIV through increasing uptake of VTC, reducing risks of mother to child transmission (MTCT) of HIV, minimizing HIV transmission at community level, reducing stigma and discrimination so as to ensure enhanced participation of the community (2, 7).

The concept of quality is one of the leading forces in improving health care. The perception what quality entails differs between countries and sectors because of different value systems. Many definitions are in use, all may be justified depending on the perspectives and objectives. A common aspect of the center of quality is the need of the client or community. The international organization for standardizations (ISO) defines quality as "a totality of features and characteristics of an entity that bears on its ability to satisfy the stated or implied needs." In health care, the perceptions of the needs of a client or community vary with different views and perspectives of the clients, providers and society and the social, economic and political environments.

Although morbidity and mortality from HIV and AIDS disease declined dramatically since late 1990s due to improvement in antiretroviral therapy, the decline was uneven across the PLWHA because of poor access to the services and variability in quality of care. Poor quality care in ART will have deleterious effect on the safety and effectiveness of the drugs, adherence to treatment by patient, users' satisfaction and continuity of care and treatment; besides it hampers expansion and accessibility of the services (6).

Even though millions have been ill and died from AIDS, many others are living with virus and have started on different HIV/AIDS care including ART services. Current practices regarding ART services are poorly described, standards are barely developed, and there exist also adherence problems, risk of drug resistance, and poor social support and community involvement of treatment process.

Due to the fact that ART services in Ethiopia have been recently expanding, nothing much has been done to evaluate the quality of ART services. Few studies in other countries show that quality of ART services are not fully addressed at different aspects. Thus, assessing the quality of ART services would identify the existing gaps and challenges, provide recommendations to tackle them timely.

1.2. Literature Review

The primary goal of Care and support of people living with HIV/AIDS (PLWHA) is to play an important role in preventing the spread of HIV/AIDS, and highly active antiretroviral therapy (HAART) is an important component of the care. The objectives of safe and effective ART program are to prolong and improve the quality of lives of PLWHA, reduce mother to child transmission of HIV (MTCT) and reduce accidental HIV infection within health institutions.

Care, treatment and support programs should be responsive to the needs and demands of people living with HIV/AIDS and their families. Access to the antiretroviral therapy will help to mitigate the effect of multiple problems that PLWHA face. Treatment of people with HAART is only part of a broad range of services that the PLWHA need. It includes supportive functions to assure adequate nutrition; psychological, social, and daily living support; prevention information and measures; other medical care and pharmaceuticals (2, 7, 12).

Of the estimated 7million PLWHA who need treatment in Sub Saharan Africa, only 30% have access to the life saving ART at the end of 2007. However, there are positive developments, including drop of price of the ART drugs and increasing global support to make treatment accessible (3).

With increasing access to ART and recognition of its positive impact in improving the lives of PLWHA, the Ethiopian government through the MOH endorsed a policy on support of supply and provision of antiretroviral drugs in 2002; and a revised and published policy in

January 2005. The policy demonstrates the Ethiopian government's commitment to improving access to antiretroviral treatment to its people (12, 13).

What is quality?

The 1990 institute of medicine (IOM) definition of quality of health care is : "quality of health care is the degree to which health services for individuals and populations increase the likelihood of desired health outcomes and consistent with the current professional knowledge." It is a widely accepted definition and robust reference for many quality assessment and improvement practical approaches.

According to the IOM definition, health services mean wide array of services given in health facilities for that affect health; health services also implied for all health care professionals in any health care setting. The definition emphasizes high quality of care increases the likelihood of desired outcome. There is always likelihood; unknown aspect from any intervention even from best ones. But, the services provided are expected to provide more benefits than harm based on the best available information about every aspect of the diseases and effectiveness of a particular kind of treatment. Individuals and populations in the definition conceptualize equity; whether all parts of the populations have accessed to the needed and appropriate services. Desired outcome focuses on health effects, patients' preferences and values. A comprehensive approach to measuring the quality of care requires attention to the three kinds of quality problems: too much care (over use), too little care (under use) and miss use to mean flaws and errors in technical and interpersonal aspect of care (9).

The concept of quality, as defined by Alves Donabedian, the property or characteristics of medical care which ranges from one spectrum to another and it manifests in different attributes. The first category of attributes includes technical aspects and the human context

in which it is provided. The second categories of attributes include accessibility and continuity of care. That means access to structure, cost, location of care and a well defined `point of entry` (e.g. emergency services) whenever possible round – the – clock services. Another significant contribution of Bruce in the definition of quality includes the ways in which individual users are treated by the system (14, 17).

From public health perspective, quality means offering the general health benefits, with least health risks to large number of people, given the available resources. Also good quality means either meeting minimal standards for adequate care or achieving high standards of excellence. Quality can refer to technical quality of care to the non technical aspects of services such as clients` waiting time, staff attitudes and to programmatic elements such as policies, infrastructures, access and management (14, 18).

In health care services, quality means offering a range of services that are safe, effective and that satisfy clients` need and wants (14, 16). Quality has different meaning to different persons.

Quality in this study is defined in terms of the availability of standardized resources (staffs, tools, infrastructures, drugs, equipments, etc); continues provision of appropriate services which lead to desirable health outcome, addressing the need of clients and satisfaction of service providers. It has a meaning of the way individual clients are treated in ART sites.

Expanding the role of clients and communities in quality health care:

Achieving sustainable quality requires not only decided actions and commitments of providers side, it is also essential to have informed and proactive participation of users of

the health services. There are several ways in which clients can make key contribution to the reinforcements of changes and performance improvements. Clients can provide inputs on their perceptions and preferences on the quality. They can be advocates of quality improvements and act as source of control for quality improvement. They even can participate and support quality improvement activities. Addressing the clients' concern is as essential to good quality of care as technical competence. For clients quality largely depends on their interaction with providers, such attributes as waiting time, privacy, and ease of access to care (7, 17, 18).

Providers' perspectives in quality of care:

Historically, for health care providers, quality has meant clinical quality of care offering technical competence, effective, safe care that contributes to the an individual's well being, For their part, program managers recognize that support functions, for example, logistics and recording keeping are also important to the quality of health services (8).

Effects of poor quality care

Studies in other countries show that services in ART clinics are not up to the standards which may decline the safety and effectiveness of the drugs, may have negative impact on adherence, satisfaction and continuity of care and treatment; besides it hampers expansion and accessibility of the services. For example, a cross-sectional descriptive study was conducted to assess the quality standards of health facilities providing antiretroviral treatment (ART) in Dares Salaam from May to July in 2005. The study findings indicated that there were inadequate trained personnel, laboratory equipments & antiretroviral drugs, and isoniazid was under utilized. There were inadequate confidential places for counseling; and information system was weak. Not all the eligible patients were able to

start ART and comprehensive HIV care and treatment was not provided in all the designated facilities (19).

However, Client satisfaction with an upgraded HIV/AIDS Program: The Barbados Model showed over 97.5% of respondents was satisfied with their treatment by health care workers (20).

A study done in rural Bangladesh to assess the degree of client satisfaction and quality of health care provided, It is found that the most powerful indicator of client satisfaction is provider behavior especially respect and politeness. For patients these aspects are more important than technical competence of the provider. Further more; a reduction in waiting time (on average >30minutes) was more important than prolongation of quite short consultation period (on average 2min.22sec.), 75% being satisfied (21).

A study conducted in 2007 to assess the quality of ART service in Addis Ababa with special focus on clients' satisfaction and adherence showed 54.2 % of the clients were found to be satisfied with services of ART. In this study, Lack of information about services at reception area (14.2%), Lack of cleanness and comfort at waiting areas, examination rooms and compound (6.1%), waiting time (4.7%) and discomfort in the queue process (4.7%) were leading causes of dissatisfactions (22).

A cross sectional study done to assess the quality of VCT services in Addis Ababa in 2006 showed that 69.5%of VCT sites were provided follow up counseling besides pre- and post-testing counseling, 22 out of 41 VCT sites have separate room for counseling with adequate space. In-service training was given for only 16.6% of the counselors and over 79% of the clients are generally satisfied with service (23).

A cross sectional survey was conducted in Tigary Region to assess the level of client satisfaction in out patient departments of zonal hospitals in 2006 and the overall satisfaction level in the out patient department was 43.6%. Satisfaction was rated highest with courtesy and respect with 93.8%. Lack of drugs and supplies in hospitals' pharmacies were the major dissatisfaction factor (64.9%). Nearly half of the clients (46.7%) were not satisfied with the information provided about the services and their problems. Above 44% of the clients was dissatisfied about the waiting time to get the services (24).

Another study conducted in Amhara region to assess the quality of expanded program of immunization in 2006, showed that 93.7 % of the clients were satisfied with the overall services of expanded program of immunization. All the providers had knowledge of the dose of the drugs, route of administration, and recommended age for the administration of the antigen, interval between the successive sessions and recommended storage temperature for the vaccines. Waiting time, history of facing problem after immunization and information and discussion with health care providers were found to be the main determinants of dissatisfaction in the service (25).

Conceptual framework to assess quality:

The conceptual framework is adapted from Bruce J. framework of quality in reproductive health care, and WHO, standards for the quality of HIV/AIDS care: a tool for quality improvement, assessment and accreditation. It views healthcare delivery within the continuum of service which begins with structures fulfilled through processes, and end with outcomes.

The concept of 'structure' includes human, physical, finance, tool, organizational settings. The concept of 'process' is defined as set of activities the take place between the provider and clients. It refers to the actual transaction of services during providers' managements of technical and personal aspects of health.

The concept of 'out come' includes the direct impact of treatment on the current or future health of the clients and the indirect impacts on users' satisfaction and health seeking behaviors.

Conceptual frame work for this study is adapted from Bruce J. framework for reproductive healthcare and WHO's standards for quality of HIV/AIDS services: a tool for Quality assessment, improvement and accreditation.

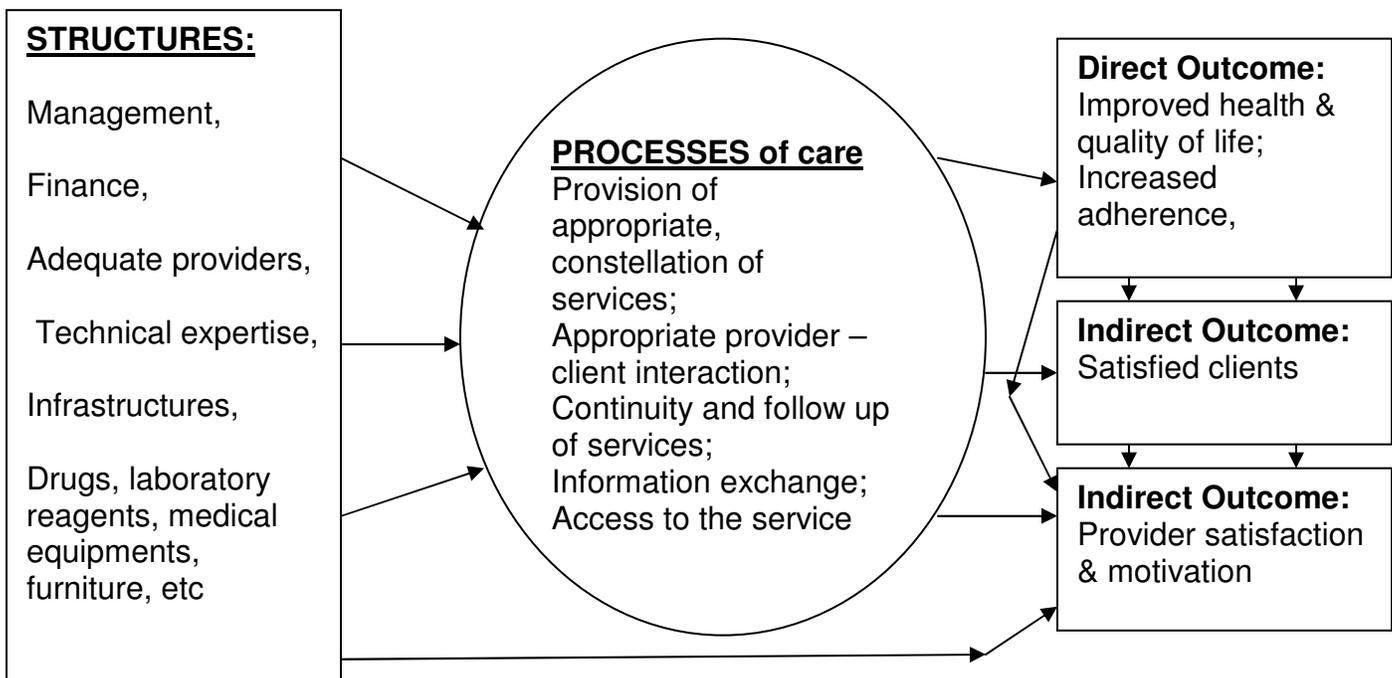


Figure 1: adapted conceptual framework for study of quality of ART services.

Rationale of the Study

The government of Ethiopia has been undertaking different interventions to curb HIV/AIDS destruction on the societies; among which ART program is the one to mention. Rapid scaling up of ART services has been started to the existing hospitals and health centers since 2005. Addressing the issues of quality for the ART services needs focus of attention by all stakeholders in order to benefit maximum from the program.

Quality of the ART services is a comprehensive and challenging process; need multiple sources of supports and supervisions from clients, providers, managers, families, communities and other stakeholders. To have the knowledge about concerns, needs and preferences of clients and views of providers about the services transacted create opportunity for managers/policy makers to take corrective measures early. However, adequate studies on the quality of ART services in our country have not been conducted.

Though ART program has positively changed life of PLWHA; few sources of information revealed that challenges and flaws existed in the ART services. Providers shortage, turn over of staffs, weak clients' involvement, uncertainty of drugs and laboratory monitoring supplies, shortage of care and support for PLWHA are among the main ones. According to a recent report by FHAPCO, over one quarter of those started on ART in our country have lost to their follow up (died, dropped out, etc without traced by treatment sites).

In order to have clearer vision of these shortcomings, knowledge of gaps on the availability of essential amenities; patients' preferences and perceptions; and providers' views and challenges about the services of ART need to be solicited.

Thus, this study is intended to provide evidences about the quality of services given in ART clinics with special focus on client satisfaction, factors associated to their satisfaction and providers' views and challenges for ART services. It tries also to find out availability of minimum required infrastructures, staffs, drugs, laboratory tests, etc in ART sites.

2. OBJECTIVES OF THE STUDY

2.1. General objective

- To assess the quality of antiretroviral treatment services in public hospitals of Addis Ababa

2.2. Specific objectives

- To assess the client satisfaction with the ART services being provided in public hospitals of Addis Ababa
- To describe the functional and structural status of ART services in public hospitals of Addis Ababa
- To assess the views of service providers about the quality of services provided in ART sites of public hospitals of Addis Ababa
- To identify factors that affect ART service quality in the public hospitals of Addis Ababa

3. METHODOLOGY

3.1. Study Design:

Hospital based, descriptive cross sectional study was conducted from March to April, 2008. In this study both quantitative and qualitative design forms were used. The design of the study is summarized as follows.

Table 1: Study populations and Methods of data collections for each specific objective for assessing quality of ART services in public hospitals of Addis Ababa, 2008

Objective	Study Population	Method of data collection
To describe client's satisfaction	ART clinics' Clients	Exit interview
Views of providers on ART services	ART providers	In-depth interview
Functional & structural Status of ART services	- ART clinic coordinators (clinics managers)	Self-administer questionnaire
	- ART clinics	Check list for observation

3.2. Study Area:

The study was conducted in Addis Ababa which is the capital city of Ethiopia and seat of African Union & Economic Commission for Africa. Addis Ababa has a population size of over 3 million with annual growth rate of 1.9. The city is divided into ten sub cities and 99 Kebeles (Lowest level administrative unit in the city).

The city has 33 hospitals. Nine are public hospitals. Of which, 5 are under AARHB and 4 are specialized referral central ones. Three are uniformed forces (military); 2 are NGO`s and the rest 19 are private hospitals.

Currently, there are a total of 46 sites in the city which provide ART services. Of these, 9 are in the public hospitals; 12 are in the private facilities; 20 are in the health centers; and the rest are in NGOs' & uniformed forces hospitals. This study focused on the nine public

hospitals which have been providing antiretroviral treatment services for the PLWHA of the city and surrounding areas. The hospitals were Tikur Anbessa Central Specialized, St. Peters TB Specialized, ALERT, St. Paul, Zewditu memorial, Yekatit 12, Menelik II, Ras Desta Damtew, and Gahndi memorial Hospitals.

3.3. Source Population:

-The source populations were all adult ART clients (>18 years of age) of public hospitals in the city of A.A. for the exit interview about their satisfaction.

-All ART clinics and the clinics' coordinators of hospitals in the city of A.A. were source population for the assessment of functional and structural status of the ART services.

-All HIV/AIDS health care providers of public hospitals in the city were source population for the assessment of providers' perspectives about ART services.

3.4. Study Population:

- For the exit interview to assess clients' satisfaction: All adult PLWHA (>18 years of age) who visited ART clinics in public hospitals of Addis Ababa during the study period.

- For the assessment of structural and functional status of the ART services: All ART clinics of public hospitals in the city during the study period, and all ART clinics' coordinators in the public hospitals in the city during the study period.

- For the in-depth interview: All full time health care providers who were working in ART clinics of public hospitals of the city of Addis Ababa during the study period.

3.5. Study Units:

- Adult clients (> 18 years of age) of ART clinics in public hospitals of Addis Ababa who were selected with sampling procedure were study units for exit interview.

3.6. Inclusion and Exclusion Criteria:

All adult clients of ART clinic, who were getting the services for at least three months, were included in the study. Because these clients had more opportunities to evaluate the type of services, care & support activities rendered in the clinics. The clients were apparently healthy and willing enough to answer the questions for 30 – 45 minutes interview.

Severely ill clients were excluded from this study because of difficulty of interviewing such cases due to difficulty in getting consent, lack of tolerance to respond for existence pain, illness, etc.

3.7. Sample Size and Sampling Procedures:

3.7.1 Sample Size:

- Cross sectional survey:

The sample size in this descriptive cross sectional survey was determined using a single proportion formula, $(n = (Z\alpha/2)^2 * p (1-p)/d^2)$; since the study tried to assess the proportion of ART clients satisfied with the service.

The 95% Confidence interval, 5% margin of error and 0.54 proportions of satisfied ART clients in Addis Ababa were taken as assumptions used to determine the sample size for the study. One study conducted in Addis Ababa to assess clients' satisfaction of ART services showed the proportion of clients being satisfied with ART service was 0.54. Hence, the level of significance was 5% ($\alpha=0.05$) and $Z\alpha/2=1.96$ and the absolute precision is to be 5% ($d=0.05$). Computing with above formula, it gave a sample size of 382. When the 10 % of non response rate was considered, the total sample size became 420.

- For assessment of the status of the ART clinics:

All ART clinics of public hospitals were observed. And all coordinators of the ART clinics filled out self administer questionnaire

3.7.2 Sampling Procedures:

All the nine ART clinics in public hospitals of Addis Ababa city were included. Sample size was allocated proportionately for each hospital according to clients load of hospitals and respondents in each hospital were selected for the interview using systematic sampling method. The client load of ART clinics in each hospital was used by reviewing the; monthly HIV care and ART update as of January 10, 2008 by FHAPCO/MOH. Therefore, 137 clients from Zewditu memorial; 74 from ALERT; 47 from St. Paul; 43 from Tikur Anbessa; 35 from Yekatit 12; 34 from St. Peters; 28 from Menelik II; 16 from Ras Desta; and 6 from Gandhi memorial hospitals were assumed for the exit interview.

All coordinators of the ART clinics in the public hospitals were assumed for self administer questionnaire. All ART clinics' were observed for structural aspects of the services.

Full time ART physicians &/ or ART nurses were selected and interviewed with non random sampling method based on the purpose and the need of issues being raised (The purposive sampling method).

3.8. Measurements and Variables

3.8.1 Measurements

Structured questionnaire was used for the exit interview. The questionnaire was developed based on conceptual framework and WHO standards for quality assessment of HIV/AIDS care. The Contents of questionnaire include socio demographic characteristics of clients, type services provided in the clinics, satisfaction indicators for the services given.

The first questionnaire was an English version and was translated in to Amharic to ease the communication of data collectors with respondents.

Self administered questionnaire was used for ART coordinators. It consists of operational and functional aspects. Checklist was used for observation of ART sites. The questionnaires and observation checklist were pre tested in some ART clinics of Addis Ababa in January, 2008; and appropriate corrections were conducted accordingly.

Semi structured guidelines was used for in depth interview of service providers.

3.8.2 Study Variables

- **Outcome Variables**

Clients' satisfaction on the services

Providers' perspectives towards the ART services

Existence of the recommended packages such as staffs, equipments, drugs, tests, etc.

- **Explanatory Variables**

Socio demographic characteristics of the clients (address, age, gender, marital status, religion, occupation, education and in-come); Health status or illness related (history of disease, OIs);

Provider and client interaction, Waiting time, Consultation duration and convenience of working hours;

Access to services (Diagnosis, drugs, Information & counseling, constellation of services, Psychosocial and economic supports to clients);

Privacy, Confidentiality, Providers' competency, Characteristics of the area and services, equipments, drugs reagents; and Latrine service.

3.9. Data Collection Procedures:

Before data collection began, letters of support from AAU, School of Public Health and AARHB were obtained and submitted to the respective hospitals' administrations. Permissions were secured from each hospital's management.

The exit interview data were collected by 6 ART nurses working in different institutions of the city of AA. Data collectors were trained for one day on the study instrument and data collection procedures. During the data collection period, after clients had got services in the ART clinic, the data collectors explained the study objectives and take oral informed consents from them. The data collectors would make the interviews for those clients who were willing to participate.

Data collectors also explained the study objectives for the ART coordinators so as these coordinators fill out self administer questionnaire for facility audit and data collectors conducted observations of the structural aspects of the ART clinics in the hospitals.

During the process of data collection 2 supervisors assisted interviewers and collected filled questionnaires regularly and checked for inconsistencies and omissions. Errors found were corrected timely.

The qualitative data (in-depth interviews) were collected using flexible guidelines by the principal investigator and supervisors. The questions were translated to Amharic for ease of communications with respondents. The selected ART physicians/nurses were explained about the study objectives and invited for in-depth interview. The sessions were recorded using tape recorder and important points were jotted down at same time. The principal investigator was responsible for coordination of the overall data collection process.

Data analysis

. Quantitative data

The collected data were cleaned, coded, fed in to SPSS version 15 by principal investigator. After entry, the data were re-cleaned to correct errors and they were also categorized as necessary. Descriptive statistics were computed for most of variables. Median of the summary score of satisfaction was used to classify as satisfied and none satisfied since the distribution of summary scores was skewed; and median is the best central measure in skewed distributions. Data analysis using categorized summary scores, p value and OR was conducted to look for association of outcome and explanatory variables.

. Qualitative data

The collected data were translated to English language, transcribed, coded and summarized manually by the principal investigator.

Operational Definition

Quality of ART services - a service which has a minimum recommended package as per the national standard and conducts recommended services leading to satisfaction of clients and providers.

Satisfaction - is purely the suggestions of the clients about the rendered care and services. In this study median of overall satisfaction score (1.77) was a cut off point for satisfied and non satisfied status of clients.

Provider competency - is perceived clients' opinion about the technical knowledge and skills of their providers.

Client-provider Interaction - is any transactions of words, gestures, questions or responses occurring during service delivery as to indicate emotional ties between clients and providers. It includes respect, courtesy, greetings.

Information and counseling type - content of information/counseling given to the clients

Providers' perspectives - are Observations, experiences and thoughts of providers about service delivery.

Cleanness of a service giving area - is absence of any visible dust, paper, soiled gauzes, and webs in the floor, walls or tables. It means also absence of bad odor, breeding flies.

Comfort of a service giving area - is well ventilated, illuminated, has adequate seats and protected from sun and rains.

Solutions for Psychosocial and economic problems - are any measures taken by the clinic to mitigate psychological, social and economical problems of the clients. It includes counseling of family member in case of disharmony, linkage to stake holders for support working in these areas, expert patients.

Home based care - care given to sick people in their home by family, friends, trained volunteers, health workers or social service workers. Care may range from physical, nursing care, psychosocial to palliative.

Community care- care given by people within the community, e.g. trained volunteers, community health workers, nurses, youth groups, NGOs etc. The care offered may range from direct physical care to psychological, financial, nutritional or spiritual support.

Ethical considerations

The issue of HIV/AIDS has serious ethical issues to be considered to protect the study subjects from adverse effects and provide at least needed care for the PLWHA. It was

serious challenge for investigators in this area before the free ART, PMTCT, community based care and support services have been non existent. However, currently the availability of VCT, PMTCT, free ART and other related clinical care in the health facilities and expansion of the community based care and support services in the study area is an opportunity that minimizes the challenges. Therefore the following ethical considerations were fulfilled and assured in this study:-

- The research proposal was reviewed by the school RPC & ethical committee of AARHB and ethical clearance was obtained.
- To protect and support the study subjects, all data collectors were given orientation and continuous guidance on the method of data collection, the right of clients to participate or refuse participation, the cautions & procedures needed to be taken to assure confidentiality and the needed referral linkage and support for those who need it
- Every study subject was included in the study after giving explanation on the aim of study and taking oral informed consent using the consent.
- HIV related illness status; anonymously linked with the socio-demographic and other variables kept confidentiality.
- In this study area VCT, PMTCT, free ART and other clinical & community-based care and support services are currently available; study subjects who need additional care were referred for related PMTCT, ART, and other clinical & community based care and support services.
- Study findings will be communicated to all program planners in the study area and others for the future better program planning & implementation.

Dissemination of the Study

This study upon completion would serve as resource material for researchers, managers, policy makers, etc. To reach these targets, the finalized copy of this study will be given to school of public health, Addis Ababa University. Besides, it will be given to AARHB, MOH, FHAPCO and NGOS working around HIV/AIDS in the city. This study will also be disseminated through the available forums of publishing and workshops.

4. RESULT

4.1. Client Satisfaction on the Antiretroviral Treatment Services:

A total of 398 clients of the antiretroviral clinics in nine public hospitals of Addis Ababa were interviewed. The overall response rate was 398(94.8%); Twenty two (5.2 %) clients were not participating in the exit interview for most mentioned reasons of lack of time, lack of interest. One hundred twenty nine (32.4%) clients of ART clinic were interviewed at their exit from Zewditu memorial hospital, 71(17.8%) from ALERT hospital; 44(11.1%) clients from St. Paul hospital, 41(10.3%) from Tikur Anbessa hospital. Above one quarter of the clients (28.3%) were interviewed from the rest five hospitals.

4. 1.1. Socio Demographic Characteristics:

Out of the total respondents, about half (52.8%) were females and nearly half of them (47%) were between 31 – 45 years of age. The mean and median age of the respondents in years were 34.46 and 33 respectively with standard deviation of 9.48. Majority of the respondents about 377(94.7%) reside in Addis Ababa city. And above one third of them were married (38.4%). The majority (62%) had attended at least secondary school education. Just above one third of them were employee of government and private sectors (38.6%). In addition, over two thirds of the respondents (68.2%) were orthodox Christians.

Table 2: Socio Demographic Characteristics of patients of Antiretroviral Treatment service in the public hospitals, Addis Ababa, April 2008(n= 398)

Variable	Number	Percentage (%)
Address		
Addis Ababa	377	94.7%
Out side of Addis Ababa	21	5.3%
Total	398	100.0%
Sex		
Male	188	47.2%
Female	210	52.8%
Total	398	100.0%
AGE GROUP		
18 – 30	166	41.7%
31 - 45	187	47.0%
46 – 54	33	8.3%
55 & above	12	3.0%
Total	398	100.0%
Marital status		
Single	122	30.6%
Married	157	39.4%
Divorced	58	14.6%
Widowed	61	15.4%
Total	398	100.0%
Religion		
Orthodox	272	68.3%
Muslim	72	18.1%
Protestant	54	13.6%
Total	398	100.0%
Educational status		
No formal education	60	15.1%
Elementary	92	23.1%
Secondary & above	246	61.8%
Total	398	100.0%
Occupation		
Unemployed	156	39.2%
Government employee	58	14.6%
Private company &NGO employee	91	22.9%
Daily laborer & small trade	71	17.8%
Others	22	5.5%
Total	398	100.0%
Income class		
Less than 150	10	2.5%
150 – 499	82	20.6%
500 – 749	14	3.5%
Over 750	58	14.6%
Non response	234	58.8%
Total	398	100.0%

4.1.2. Reason for visits and time spent to get services by clients

Majority of the clients (74.2%) were on follow up visits of the respective ART clinics for three to twenty four months. One hundred fifty five clients (38.9%) came for the first time to the ART clinics when they were ill and referred. Regarding the waiting and consultation times, 17.6% waited more than two hours to get the service. About half (47.5%) of the clients claimed to have consultation time less than 10 minutes; where as only 7.0% had over 30 minutes consultation time. Working hours of the clinics were convenient for majority of clients (89.7%). Three hundred fourteen (78.9%) clients claimed that they would like to give advice for others to visit this facility for the same problems.

Table 3: Reasons for visits and time spent by ART patients in public hospitals of Addis Ababa, April, 2008(n=398)

Variable	Number of clients	Percentage of clients (%)
Duration since 1st time Clients' visit (in months)		
3 – 6	74	18.6
7 – 12	97	24.4
13 – 24	124	31.2
25 – 36	85	21.3
>37	18	4.5
Total	398	100.0
Reason for the first visit		
Ill and self referred	78	19.6
Not ill and self referred	120	30.2
Ill and referred from other	155	38.9
Not ill and referred from other	45	11.3
Total	398	100.0
Convenience of working hours		
Yes	357	89.7
No	41	10.3
Total	398	100.0
Waiting time to see the clinician		
<30 minutes	133	33.4
30 – 60 minutes	116	29.2
61 – 120 minutes	79	19.8
>120 minutes	70	17.6
Total	398	100.0
Consultation time		
<10 minutes	189	47.5
10 – 20 minutes	136	34.2
21 – 30 minutes	45	11.3
>30 minutes	28	7.0
Total	398	100.0
Advice others to visit this facility		
Yes	314	78.9
No	84	21.1
Total	398	100.0

4.1.3. Types of services given to the clients in ART clinics

The combination of three types of information and counseling (general HIV/AIDS, ARV drugs counseling and adherence counseling) was given for 330(82.9%) clients. All clinical examinations were perceived relevant by 238(59.8%) clients as compared to their major current health complaints.

One hundred eighteen clients (29.6%) had diagnosed opportunistic infections. Out of the requested laboratory tests, at least all tests were not available for about one fifth of the clients. Out of prescribed drugs, 57 clients (14.4%) could not get all drugs in respective sites.

Around sixty percent of clients had psychosocial and economic problems like financial, food, clothes, shelter, spouse & family disharmony. Of these, majority (84%) were not given any type of support and only about 16 % were given solutions in this clinic (calling and counseling of family members) or referred for such problems (linking to supporting NGOs for food supplementations, clothes provisions and financial supports). Seventy six clients (19.1%) had other health needs or problems (like family planning, pregnancy, surgical or other chronic illness); of these, sixty six clients (86.7%) had got the services either from the same clinic or linked else where.

Majority of the clients (88.4%) claimed, there were regular appointments in the clinics. Thirty clients (7.5%) claimed that there was no any opportunity to be treated if one came with out appointment for any case. Table 4 below shows type of ART related services.

Table 4: Perceived Availability and Consistency of Services in ART clinics of the Public Hospitals of Addis Ababa, April, 2008(n=398)

Variable	Number	Percentage
Information and counseling given type		
General counseling only	19	4.8
ARV drug counseling only	22	5.5
Adherence counseling only	27	6.8
Combination of general, ARV & adherence counseling	330	82.9
Perceived relevance of clinical examination		
Yes; complete	238	59.8
Yes; partial	113	28.4
Not at all	47	11.8
Perceived relevance of laboratory tests		
Yes; fully	328	82.4
Yes; partially	21	5.3
Not at all	28	7.0
Do not know	21	5.3
Diagnosis of opportunistic infection		
Yes	118	29.6
No	280	70.4
Access to requested laboratory tests		
Yes, all tests available	311	78.1
Yes, some available	69	17.4
None available	18	4.5
Access to prescribed drugs		
No drugs prescribed	29	7.3
Yes, all available	312	78.4
Yes, some available	44	11.0
None available	13	3.3
Other health problems; needs and linkage		
No other health problem & need	322	80.9
Have health problem & solved in the unit	37	9.3
Have health problem & linked to other Unit/facility	29	7.3
Have health problem & nothing done	10	2.5
Financial, food, shelter and other social problem		
Have no problems	154	38.7
Have problems and solutions given	39	9.8
Have problems and solutions not given	205	51.5
Regular appointment availability		
Yes	373	93.7
No	25	6.3
Possibility to be seen for clients coming with out appointment		
Yes	352	88.4
No	30	7.5
Do not know	16	4.1

4.1.4. Level of Satisfaction of Clients with ART Service:

To assess the satisfaction level of ART service from clients' perspectives, fourteen satisfaction indicators of the service were selected. Clients were interviewed for their satisfactions on each indicator using five responses categories ranging from very satisfied to very dissatisfied. Hence, out of the indicators of Satisfactions, majority of the clients were satisfied with providers' technical competence and their interaction with providers (95.7% and 94.9% respectively). Majority of clients were also satisfied with measures taken by health care providers to keep confidentiality and privacy (92.7% and 91.4% respectively). However; many of the clients were not satisfied with latrine cleanness and comfort (61.4%), accessibility and availability of latrines (55.7%), laboratory services (40.3%) and waiting time (28.1%).

The overall satisfaction, which is a composite measure for the fourteen indicators of satisfaction, was calculated. This calculation was done with assigning values for responses given by the clients. Accordingly, response of very satisfied was given a value of one. A value of two was assigned for response of satisfied; three for neutral response. Values of four and five were given for responses of dissatisfied and very dissatisfied responses respectively. The mean, median and mode scores for the overall satisfaction were found to be 1.80, 1.77 and 1.62 respectively.

Two hundred twenty one (55.6%) of the clients scored below the median level of satisfaction for the service give in the antiretroviral clinics of public hospitals of Addis Ababa and the rest 177(44.4%) clients scored 1.77 and above median level of satisfaction.

Table 5: Level of Satisfaction of Clients of ART clinic in the Public Hospitals of Addis Ababa, April, 2008 (n=398)

Variable	Level of satisfaction				
	V.Sat No. (%)	Sat. No. (%)	Neut. No. (%)	Dissat. No. (%)	V.Dissat. No. (%)
Information and counseling Given	269(67.6)	81(20.3)	27(6.8)	20(5.0)	1(0.3)
Services and service areas	202(50.8)	134(33.7)	50(12.5)	12(3.0)	0(0.0)
Indicators; information					
Waiting time	166(41.7)	120(30.2)	71(17.8)	34(8.5)	7(1.8)
Duration of consultation	221(55.5)	117(29.4)	48(12.1)	12(3.0)	0(0.0)
Respect and courtesy	274(68.8)	104(26.1)	14(3.5)	5(1.3)	1(0.3)
Providers' competence	271(68.1)	110(27.6)	12(3.0)	5(1.3)	0(0.0)
Privacy measures	285(71.6)	79(19.8)	27(6.8)	5(1.3)	2(0.5)
Lab. service availability and comfort	124(31.3)	113(28.4)	61(15.2)	64(16.1)	36(9.0)
Latrine access and availability	42(10.6)	134(33.7)	137(34.3)	71(17.9)	14(3.5)
Latrine cleanness and comfort	36(9.0)	118(29.6)	138(34.7)	86(21.7)	20(5.0)
Drugs availability	283(71.1)	59(14.8)	42(10.6)	14(3.5)	0(0.0)
Cleanness and comfort of waiting area and compound	220(55.3)	105(26.4)	39(9.8)	26(6.5)	8(2.0)
Confidentiality measures	272(68.3)	97(24.4)	27(6.8)	2(0.5)	0(0.0)
General Service satisfaction	244(61.3)	131(32.9)	20(5.0)	3(0.8)	0(0.0)

V.sat = very satisfied; Sat = satisfied; Neut. = neutral; dissat. = dissatisfied; V.dissat= Very dissatisfied
No. = Number of clients

4.1.5. Factors affecting the level of clients' Satisfaction:

Unadjusted chi-square test showed overall satisfaction of clients was associated with educational status ($p<0.01$), prescribed drugs availability ($p<0.01$), consultation time ($p<0.01$), waiting time ($p<0.01$), solution for psychosocial and economic problems ($p<0.001$), possibility to be seen without appointment ($p<0.025$), type of counseling ($p<0.01$) and working hours convenience ($p<0.05$).

However, when 95% CI for the adjusted odds ratios were calculated among these variables, significant associations were found between the overall satisfaction of the clients with their educational status, occupational status, waiting time to get the services, duration of consultation with the attending clinician, availability of prescribed drugs and whenever any efforts were done to mitigate their psychosocial and economic problems.

Those clients who attended secondary and above school were satisfied only 40% of satisfaction level of those who did not attend formal education; the same was true for elementary school attendees with 26% of the satisfaction level of none formal education attendees. Merchants & daily laborers were satisfied 2.3 times more than unemployed.

Those clients who had financial, psychosocial problems were less satisfied as compared to those who did not have any of such problems (AOR= 0.495; CI = 0.276 – 0.887).

Those clients, who waited more than 30 minutes to get the services, were 61.9% up to 75.5% less likely to be satisfied as compared to those who had less than 30 minutes waiting time. However, clients who stayed more than 30 minutes and 10 -20 minutes during examination and consultations were 6 times and more than 2 times more likely to be satisfied than those who had 10 minutes' consultations respectively. Clients who got all prescribed drugs in the facility were five times more satisfied than those with no

prescriptions and those who did not have the drugs were 100% dissatisfied as compared to those with no prescription. (Table 6 shows determinants of satisfaction).

Table 6: Strength of Association between Overall Satisfaction and Explanatory Variables in Public Hospitals of Addis Ababa; April 2008

Variables	Dependent variable		Crude odds ratio (95%CI)	Adjusted OR (95% CI)
	Satisfied (fre.)	Not satisfied (fre.)		
Gender				
Male	106	82	1	1
Female	110	100	1.175(0.791–1.745)	1.549(0.869 – 2.762)
AGE GROUP				
18 – 30	88	78	1	1
31 – 45	101	86	0.961(0.632 – 1.461)	1.297(0.732 – 2.299)
46 – 54	20	13	0.733(0.342 – 1.571)	0.737(0.258 – 2.102)
55 & above	7	5	0.806(0.246 – 2.642)	0.692(0.159 – 3.014)
Educational status				
No formal education	27	33	1	1
Elementary	63	29	0.377(0.192 – 0.738)*	0.257(0.109 – 0.607)*
Secondary & above	126	120	0.779(0.442– 1.373)	0.404(0.184 – 0.889)*
Religion				
Orthodox	152	120	1	1
Muslim	33	39	1.497(0.888 – 2.522)	1.839(0.921 – 3.673)
Protestant	31	23	0.940(0.521– 1.696)	0.928(0.439 – 1.961)
Occupation				
Unemployed	91	65	1	1
Govern. Employee	28	30	1.500(0.819 – 2.748)	1.844(0.782 – 4.345)
Private company & NGO employee	53	38	1.004(0.594 – 1.696)	1.190(0.582 – 2.430)
Daily laborer & small trade	35	36	1.440(0.819 – 2.530)	2.300(1.086 – 4.874)*
Others	9	13	2.022(0.816 – 5.012)	2.283(0.688 – 7.577)
Marital status				
Single	64	58	1	1
Married	76	81	1.176(0.732 – 1.888)	1.438(0.762 – 2.713)
Divorced	36	22	0.674(0.356 – 1.277)	0.696(0.297 – 1.628)
Widowed	40	21	0.579(0.307 – 1.095)	0.609(0.263 – 1.410)
Possibility to be seen With out appointment				
Yes	199	153	1	1
No	9	21	3.035(1.352 – 6.814)*	1.925(0.660 – 5.613)
Do not know	8	8	1.301(0.477 – 3.544)	0.938(0.276 – 3.188)
Food, shelter, financial & other Problems				
No problems	65	89	1	1
Have problems & got solutions	25	14	0.409(0.197 – 0.847)*	0.397(0.160 – 0.985)*
Have problems & no solutions	126	79	0.458(0.299 – 0.701)*	0.495(0.276 – 0.88 7)*
Waiting time				
< 30 minutes	93	40	1	1
30 – 60 minutes	61	55	0.477(0.284 – 0.802)*	0.381(0.201 – 0.720)*
1 – 2 hours	31	48	0.278(0.155 – 0.498)*	0.245(0.118 – 0.508)*
> 2 hours	31	39	0.342(0.188 – 0.623)*	0.351(0.161 – 0.768)*
Consultation time				
< 10 minutes	128	61	1	1
10 – 20 minutes	60	76	2.658(1.685 – 4.192)*	2.327(1.361 – 3.976)*
21 – 30 minutes	23	22	2.007(1.038 – 3.880)*	1.489(0.668 – 3.318)
> 30 minutes	5	23	9.652(3.501 – 26.609)*	6.050(1.745 – 20.977)*

Table 6: Continues

Prescribed drugs availability				
No drugs prescribed	8	21	1	1
Yes, all were available	193	119	4.257(1.827 – 9.918)*	5.095(1.811 – 14.331)*
Yes, some were available	15	29	1.358(0.487 – 3.786)	1.511(0.439 – 5.201)
None were available	0	13	0.000*	0.000*
Working hours				
Convenience				
Yes	200	157	1	1
No	16	25	0.502(0.259 – 0.973)*	2.045(0.894 – 4.674)
Type of counseling given				
General counseling	6	13	1	1
ARV counseling	10	12	0.554(0.154 – 1.993)	0.519(0.107 – 2.521)
Adherence counseling	17	10	0.271(0.078 – 0.941)*	0.534(0.110 – 2.592)
Combination of all	193	137	0.371(0.138 – 0.999) *	0.404(0.114 – 1.435)

Note: fre. means frequency; Reference categories are indicated by 1; Significant Associations are indicated by * and Adjustment was done for the socio demographic variables and with out appointment, socioeconomic problems, drugs availability, waiting time, consultation time, working hours convenience and type of counseling

4.2. RESULTS FOR THE FACILITY AUDIT:

Out of the nine hospitals five were central specialized/referral (Tikur Anbessa specialized referral hospital, ALERT hospital, Zewditu memorial hospital, St. Peters TB specialized hospital and St. Paul hospital) and the rest four were regional ones. Some these hospitals were known for their specialized services for the city and the whole country. The structural, functionality and resources of antiretroviral services of these sites were assessed using self administer questionnaire for the ART coordinators of the respective hospitals and structured observations.

4.2.1. Type of Antiretroviral Services:

All the nine hospitals provided ART services to adults, counseling related to ART and drugs supply. Out of the nine hospitals, seven have all laboratory services required minimum for ART; the rest two hospitals did not have CD4 machines. Five hospitals had non systematic community health care services and link those clients who need home based care, community care and social support.

Though all the hospitals provide drugs free of charge specifically ARVs and Cotrimoxazol tablets for ART clients; there was a shortage of the type and continuity of highly demanded OI drugs like fluconazol, acyclovir, miconazol, and cotrimoxazol suspension.

Regarding the opening hours of the antiretroviral clinics, six of the hospitals did not open outside of the working hours. Only three hospitals worked extra time abreast off their working hours and days. Hence, one has opened during weekends. In another hospital, ART services were given during lunch times and during evenings (after 5 Pm). The ART

services some times, have been given during evening after 5 Pm and holidays in another different hospital.

All the nine hospitals had regular appointment systems for the ART clients. Those clients, who came without appointments were seen on the same day always in three hospitals only. In six public hospitals, clients who were appearing without appointment would be requested to make other arrangements without communicating their attending physicians or occasionally seen on the same day depending on the severity of their illness.

All of the hospitals had clear signs of units, departments and areas of services. They posted room numbers, specific service given in the room and the name of responsible person at each door. Every ART clinic of the hospitals had pointing boards to locate the type of services for clients.

Referral and response forms for the internal with other departments in the facility and external with networked facilities were available in all of the hospitals. But, there was no any established referral systems for care and support functions to the community who need any psychosocial & financial support in four hospitals.

4.2.2. Resources:

All of the public hospitals of city had trained fulltime staffs on ART at least minimum to provide ART services. Health providers were easily identifiable to clients in most clinics. In five of them they wear gown and name tags whereas in rest four, they wear gown only.

All of the hospitals had HIV/AIDS multidisciplinary teams represented from each department. The team would discuss problems in service delivery processes of ART and

took appropriate solutions. The coordinators in the clinics are responsible for the leadership of the teams' functions. These teams meet every week in two hospitals. In four hospitals; the teams meet every two weeks. Where as, the meetings of MDT were done more than every two weeks in the rest three hospitals.

Regarding Guidelines, manuals, standards and other materials that aid providers in their day to day activities; seven hospitals had national ART guideline and rest two did not have it. Four of the hospitals had national or other brand guidelines for TB, STI, CPT, IP, VCT and OI; where as the five hospitals had some of these essentials guidelines.

All of the hospitals except one, had providers supporting pocket size books for medication dosaging, and side effects. However, these pocket size books for Opportunistic infections were available in only three hospitals. Wall mounted flow charts and algorithms for the support of providers about diagnosis, drug dosage and OIs treatment were found in eight hospitals. Six hospitals had IEC materials in ART clinic prepared in local languages like brochures, medication instructions for use to the clients.

All ART clinics patients' waiting areas were assessed for the cleanness and adequacy of seats for the clients; six of the hospitals had clean areas and adequate seats but three were not of adequate seats for the number of clients they had.

In the examination rooms, all had needed number of three chairs and a table; eight of the hospitals had necessary medical equipments.

4.3. FINDINGS OF QUALITATIVE PARTS:

To strengthen the findings of the client satisfaction on the ART services of the city of Addis Ababa, In-depth interviews of health care providers were conducted.

Seven full-time ART providers (2 ART physicians and 5 ART nurses) were included in the interview about their perspectives on the quality of ART services given in their respective hospitals. They had two to five years experience of work in the clinic. Age of respondents ranged from 27 years up to 45 years. Different relevant trainings were given to all of these providers working in the clinic; like Basic ART, VCT, PITC, and TB/HIV.

. Regarding to Capacity of the Facility:

Most providers tell that renovations of buildings for ART clinics have been done recently. The clinics are new, neat, have separate rooms for laboratory and pharmacy, and have better features than the previous. However, examination rooms in ART clinics are being cited as narrow and not ventilated. There is a shortage of examination room as compared to the number of clients need to be treated daily. One room and an examination coach can be shared for two providers in some instances. Even offices can be used as examination rooms. Triage rooms of the ART clinics are narrow and full of patient's cards. Data clerks work in one angle of the corridor due to absence of room.

One of the providers tells about this fact, "*professionals are not comfortable to examine coughers due to fear to acquire of air borne diseases like drug resistant TB in narrow and non ventilated rooms.*"

In some instances, the departments are widely dispersed. ART laboratory, pharmacy and data clerk room are separated and afar off from examination room and patients are always

confused and troubled to get the place even in the presence of information board for directions indicators.

The provider from this hospital told, *“There is no separate ART service in our facility and patients are mixed with general hospitals clients. This makes difficult to give health education for our clients.”*

The providers anonymously agreed that waiting areas are not adequate and comfortable. There have been congestions of standing clients in some typical days of the week; especially on Mondays and Fridays when there are heavy workloads. . It may even expose clients for sun and rains. There are no adequate chairs and IEC materials for the clients in the waiting areas. Telephone services in the ART clinics are very limited which are very mandatory for tracing lost follow up cases and create difficulty for communication with stakeholders. Providers can not use the telephone services when they are in need of it. Roads for the stretchers to move critical patients to wards are not suitable. It creates discomfort for the providers and delay to get emergency treatments for sick clients.

. Furniture and Medical Equipments

.All of the providers told that ART clinics have adequate furniture like chairs, tables, drawers, lockable cupboards. These clinics have been donated with furniture and additional medical equipments by Supporting NGOs. Most medical equipments are available for use at anytime whenever the providers are in need. All providers have necessary self equipments for use which are locked by them selves.

However, some medical equipment like BP cuffs, thermometers are not adequate for all of the providers in ART clinics. When the equipment is defective or broken, the providers have problems till replaced and repaired.

One ART nurse utters concerning this issue, *“We have all the necessary medical equipments and the important ones like thermometers, stethoscope and B/P cuffs are self and are locked in separate cupboards. But if these materials are lost or defective, we will be in a problem till replaced or repaired The Other equipments like otoscope, ophthalmoscope and reflex hammer needed by doctors are with head nurse. These will be available whenever a doctor needs them. Another concern we have is about the weighing scale; it is not automatic and taking weights and lengths of patients are long processes and make us physically close with patients. To take the weight of patients with cough has been a discomfort for us. We are always worried about contracting drug resistant TB especially in this narrow and congested room.”*

- **Comfort and Cleanness of the Facility:**

Generally providers claimed that latrine services are below their expectations. The latrines are afar off from the service areas for the providers which are locked usually, unsightly, have bad odor, breeding flies, and small number of seats for the users.

One of the providers tells, *“The latrine in our clinics is very busy, unsightly, and with bad odor. It is not in the state of not inviting to use it. The hospital management is always been informed about the situation; but no root solution given. A financial problem is the frequently mentioned as cause to solve these problems. For the clients there is a poorly functioning*

public latrine around the ART clinic even worse than latrine for the providers; which is a source of discomfort for clients around waiting area.”

• **Guidelines/Standards/ pocket books**

All providers informed that different up to date guidelines have been available on ART, STI, TB, VCT, PITC and OI. Pocketbooks for ARV, drugs side effects and contra indications and CPT are also available. There are also wall mounted flow charts and algorithms in accessible area that aid providers a lot. These are prepared in clear concise forms so as to use the tools easily.

However, the guidelines are not placed at distinct places and in organized fashions. The providers have problems where and how to get them for use. Some of these guidelines are lost. Besides, few providers use the pocketbooks consistently because of the workload and negligence of the providers sometimes force them to relay on their memory only.

One of ART physician told, *“Our clinic is considered as a model for other facilities. We have a lot of guidelines, standards, and pocket size books. JHU-THESHAJ supplies us every necessary reference in time. We also have all of them what are there at national level. Wall flow charts are also too abundant in number to make them accessible all in limited surfaces of the walls as our corridors are used for other purposes. But, many guidelines are not used because there is no separate place to use; or no responsible person. These materials are locked or they may be lost.”*

. **Drugs**

All providers told that there has been a constant supply of ARV drugs free of charge to all clients. All ARV drugs are available in good amount of stock. Cotrimoxazol tablets also are provided to clients for free and there is no problem in this regard. However; ART patients have pill burden and they highly prefer to use Cotrimoxazol suspension. But this preparation is not available usually in ART pharmacies.

The providers are frequently asked by many clients about fixed dose combinations of ARV. Clients have information about fixed dose combination ARV drugs from different sources. These preparations of ARV reduce pill burden on clients and will be started in the hospitals soon.

Concerning other OI drugs, providers said that there is a significant shortage. Some are expensive drugs; like fluconazole, acyclovir. The poor clients are really facing problems to buy them. Other drugs like fansidar, vitamin B6 and omeprazole are frequently prescribed for the ART patients and are scarce. Patients need to buy from private pharmacies. Some times, there is also shortage of necessary antibiotics.

One of the ART medical doctors says regarding this fact, *"Suspension of Cotrimoxazol is highly needed by ART clients because of pill burden they have but there is no supply of it. Fluconazol is also our constant problem in our clinic; it is an expensive drug. There are no mechanisms to get for any of these non-available drugs in our hospital's pharmacy. When there is shortage of drugs, it is a big problem for our patients especially poor ones and it also causes dissatisfaction for many of our providers. Providers in this clinic try to help these kinds of patients by contributing money from their limited income. For the future, the government or other NGOs should work to access the OI drugs. We have trained on*

TB/HIV recently and new recommendations have been given to provide IHN prophylaxis for some eligible cases. We have not yet started because there is no INH drug in our hospital for prophylaxis.”

. Information and Counseling

Concerning information and counseling, any new patient enrolled to ART clinic will be counseled appropriately before any base line laboratory tests conducted and initiation of treatment. The counseling and information includes general about the HIV infection, AIDS diseases and ARV drugs behavior. Providers emphasize the importance of full adherence to treatment for best outcome of the intervention; and how to keep adhered to the schedule of treatments. Triage nurses are responsible to provide information for the clients. However, ongoing counseling to all of the clients is not given adequately.

One provider tells, “We should treat a lot of patients in a day. Only few providers work in the clinic and we are obliged to cover other activities in this unit and in the hospital. Despite the workload, we try to address some of needed information according to clients’ questions. There is no ongoing counseling for our patients. We are not dealing with socio economic problems of clients; and how to solve these problems.”

The same provider also uttered, *“Some patients are bored with burden of pill and drug complications. Hence, they are puzzled with the option of taking holy water over ARV drugs. We would counsel a lot with kinds of patients. Most of them will keep adhered to ARVs. Others stopped their medications to take holy water. Few of these patients will return after a while with a lot of complications and development of tuberculosis. Others might die of opportunistic infections at their home. It is pity for us to see these situations.*

Especially adherence problem we will be discussed with clients and their relatives. Sometimes we link the clients with adherence problems to other organization working this area. Expert patients (PLWHA working on care, support and adherence for other clients) also helped us to improve the problem behavior and poor adherence status of clients. Most problems will be solved and clients develop positive attitude. Few clients may dissatisfy and develop poor adherence.”

. Regarding Clients Satisfaction and Behavior

Generally, providers claimed that clients are satisfied with the services they are getting from ART clinics. Clients have good relations with providers. They will be counseled with the necessary information in detail about the treatment at the beginning. They have frequent follow-ups in the clinics and have opportunity to discuss any thing with providers. These make relations smoother. After all, clients are getting ARV drugs, baseline laboratory investigations and some of available OI drugs for free. Majority of the providers claimed clients are pleased because of the miraculous effect of the treatment. Clients are healthier, happier and can do their job. They are happier these days due to the services and the effects of drugs to improve their lives.

However, many clients are dissatisfied with long waiting time to get the service. Clients are also disappointed with shortage of OI drugs; especially for very poor ones who can not afford. Besides, these kinds of clients are suffering from lack of food, clothes, shelter and money to buy drugs & for transportations. Providers can link only few of these poor clients to NGOs so as to the poor get care and support. This is due to the fact that the capacity and number of institutions working in care and support is very limited; hence all problems of

the clients are not addressed. The providers also have complaints from the clients with the prerequisite of ID cards to get help.

One of the providers emphasizes this fact, *“One client puts his medications in our clinic and comes every day to take his doses. He has no home and lives in the street. But, he is very diligent to manage this situation. These kinds of patients may not adhere well to the treatment despite their efforts. Care and support should be intensified for needy patients so that our efforts become effective.”*

Another provider told, *“Some dissatisfied clients complain, annoy and behave harsh to the providers because of long waiting time, queue process, perceived poor privacy and lack of confidentiality. We try to identify the reasons leading to such clients’ disappointments. We give time to discuss the problems, negotiate and try to reach understanding with our clients. We are always empathetic to our clients because these patients have many layered social, economic, psychological problems besides the ailment they have. Sometimes, we providers give feed back one another about how we manage our patients.”*

Concerning diagnostic facilities, one ART nurse told; *“there hasn’t been CD4 machine in our hospital for the clients who need the services. Previously, clients must wait up to three to four months to get their CD4 test results util done in the referral laboratory. Currently, they wait up to two weeks to get the results of CD4 test after frequent discussions and new agreement made with the referral laboratory. This is still long time for our clients. The permanent solution is to have the machine in our hospital. We have asked regional health*

bureau and NGOs about it many times but no solution is found. This problem creates disappointments for the clients and workload for us.”

. Providers Satisfaction and Motivation

Generally, providers of ART clinics satisfied with work they are doing and when they see improved health and quality of life of their patients. But, motivational aspects and incentives to these providers are not addressed.

One provider told, *“Even though I am happy with the work, working atmosphere and outcome of our services; our salary is not adequate and not satisfying. We do not have additional payment. We do not work duty time in the hospital, have no duty payment unlike those in other departments. Most of us are not motivated because there are no advantages to us, no top up or monetary incentives. We have heavy workload and handle very disturbing matters. Many of our colleagues have lost their job (burnt out). We are listening to many problems in our day to day activity; like family, economic, social in addition to the health problems. Recently, two of our ART physicians lost their work.”*

Another provider said, *“I am happy to help the poor and severely affected people. It is my delight to see my patients who come very ill and supported by attendants become healthy and work force of my country. But, many patients are very poor; can not afford for OI drugs which are not available in our hospital. They have no money to buy adequate food, to cover for their transportations. This is my great dissatisfaction reason to work in this department.”*

5. DISCUSSION

All of the hospitals have the necessary number of trained providers, furniture and medical equipments required minimum for ART services as per the guideline for ART service implementations in Ethiopia. However, providers in their in-depth interviews witnessed that heavy workload, staff turnover and relative shortage of staffs as compared to workload continued to be barriers for ART services in the city.

On top of these facts, motivational aspects of providers were not addressed. There were no any incentives or recognitions schemes implied in the clinics. It is well understood that change and improvements are unthinkable without providers' motivations. This could have been done with simple interventions like oral or written feedback, certificates, letter of recognitions, etc. Providers are also motivated by materials or money, personal and professional developments, through challenges or positive achievements (18).

According to the national ART implementation guideline, health care providers in hospitals giving ART services are responsible for adherence preparations and support, to provide psychosocial support, and ensure integration of HIV prevention into routine clinical services(2). All of the hospitals in this study provided ARVs and few OI drugs, and counseling related ART. However, only few requested laboratory tests were available or all tests were not available in the respective hospitals for one-fifth of the clients. In addition, two hospitals had no CD4 machines, and could not provide the entire recommended laboratory tests minimum to implement ART. These hospitals were networked with other facilities to conduct CD4 tests. Clients would get their results after waiting for long time. This is not in-line with the recommendation given by FHAPCO/MOH; every facility

accredited for ART should coordinate all HIV related services so patients will not experience difficulty of accessing them or enduring long waits (2, 6).

On top of these, laboratory services availability and comfort was one factor where 26.9% of clients were not satisfied with the service.

The hospitals have been counseling about the general HIV/AIDS, the ARV drugs and the need of complete adherence to the treatment for 82.9% of clients. This does not agree with a WHO's recommendation about the counseling ART patients, clients are entitled to get all contents of information and counseling related to ART. Adherence support, HIV care and prevention activities can not be achieved without proper counseling. It is documented in many literatures that providing patients with relevant and useful information about the procedures and services is linked with increased patient compliance and satisfaction (2, 14, 29, and 35). In-depth interviews with providers revealed that most of the counseling to ART patients was conducted at the early stage of treatment before initiation of the treatment. There was no routine follow up counseling for all patients due to large number of clients need to be treated daily.

The information provision in this study was not adequate for all clients. It is manifested with 18% clients perceived the requested laboratory tests were irrelevant. In addition, 40% perceived the clinical examinations done for them were irrelevant. These may be due to minimal information and explanations about the processes and procedures given to clients. Dissatisfaction due to information provision is also congruent with a report from a similar study conducted in Singapore hospitals where "Doctors should thoroughly explain medical conditions to patients" was rated first among the identified sources for the dissatisfaction of

the patients (32). A recent study, among 74 physicians and a sample of their patients compared the importance of information delivery as an indicator of the quality. Provision of information was ranked second in importance by patients but sixth by physicians (38).

Hospitals are expected to arrange strong referral linkages among departments, facilities and community services to ensure the effectiveness of the ART program. These services, besides direct service delivery, include adherence support, psychosocial support, home care, nutrition, etc (2, 6).

However, this study revealed that majority of the clients (61.3%) was in need of care and support for their nutrition, clothes, shelter, financial problems and psychosocial issues. But, only few (16%) of them were linked to get such care and supports services. Besides, 14% of the clients who had extra health needs/ problems like family planning, pregnancy, etc were not linked to get help. This finding is not consistent with the fact that HIV care should be comprehensive from preventive to palliative care. And there should also be a continuum of care referring to a spectrum of care starting from home to care/evaluation performed in any health facilities (2, 6, 11). Bruce's framework of quality suggests also that appropriate constellation of services one of the elements of good service quality (14).

Five ART clinics had limited, non systematic community health care services and link only few clients for home based care, community care and social support to the local NGOs working in these areas. These limited care and support activities of some organizations like world food program, had also entry and exit criteria for the support package. These criteria focused on severely affected and most food insecure families with out addressing the broad

poor PLWHA. This can be supported from the findings of in-depth interview of providers. Most clients in ART clinics are very poor and need multi-dimension support. They had no enough money to buy OI drugs for those not available in pharmacies; cannot even buy foods; there was limited linkage of poor clients to the community and supporting NGOs due to the fact that the number of institutions working in these areas are small in number and have limited capacity.

It was very good starting to see three ART clinics in public hospitals work extra times (lunch times, after 11 p.m., week ends and holidays). These types of work schedule are important to strengthen entry points for HIV care and ART in the facilities. This extra time schedule can be helpful to solve emergent problems whenever PLWHA faced and address continuous and the entire round the clock services in these clinics (2, 14, 17). Other hospitals should be encouraged to replicate such extra time work schedules for the benefits of the PLWHA.

In addition only in three ART clinics, patients were allowed to be seen when they come with out appointments. It is a gap for effectiveness of this program because clients coming with out appointment might have serious social, psychological concerns. They can have acute health problems or new ARV drugs complications.

Generally, clients in this study were highly satisfied for most of satisfaction indicators such as Providers' competence (95.7%), respect and courtesy (94.9%), confidentiality (92.7%) and privacy (91.4%). These are equivalent with findings of some studies done in A.A. to

assess satisfaction of clients with ART and VCT services, family planning services in Bardar town, out patient services in Tigray zonal hospitals (22, 23, 39, 24).

Besides, indirect service satisfactions indicators were found high; 94.2% of them were generally satisfied with ART service. About 90% claimed, there is convenient working hours and 79% of them would advise others to use the same facility. According to Bruce J, high proportion of indirect indicators can be considered as nearer-term outcome in quality of care as it may reflect clients' satisfaction by the service (14).

However, one may argue that high achievements for such satisfaction indicators can be due to introduction of social desirability biases by clients. Clients might not be ready to tell their dissatisfaction status freely since the interviews were carried out within the hospitals. Again, it should be remembered that, unless special precautions are taken, clients may be reluctant to reveal their opinions for fear of alienating their attendants (17).

One study of patient satisfaction emphasized the relationship of dependency which exists between patients and relatives on service providers. It was said that patients can simultaneously feel gratitude and dissatisfaction and that may be unwilling to express their dissatisfactions for fear of antagonizing service providers and experiencing even worse services in the future (33).

This study found out that two hundred twenty one (55.6%) of the clients were scoring below the median level of composite measures (overall satisfaction) for the services give in the antiretroviral clinics and the rest 177 (44.4%) scored 1.77 and above the median level.

Different studies conducted to assess users' satisfaction locally and in other countries showed comparable findings with this level of overall satisfaction (55.6%). A study done in Addis Ababa to assess the quality of ART service, 54.2% clients were satisfied with services (22). Other studies conducted in Jimma hospital and Mozambique hospitals reported 57.1% and 55% of users of out patient departments were satisfied respectively (27, 28).

It is well documented that improving clients' satisfaction is correlated with achieving the objectives of ART (e.g. improved adherence to treatment and quality of life) (22). High clients' satisfaction also increases the likelihood of the safety and effectiveness of the drugs; and decreases emergence of drug resistance through high compliance to treatment by clients. Accessibility and expansion of the services will be intensified via advocacy works of satisfied clients and other stakeholders (6, 14, 18). But, large number of lost to follow up cases and poor adherence to ART services is big challenges in Ethiopia. According to report of FHAPCO, more one quarter of ART clients were lost to their follow up through out the country. However, in this study, 44.4% were not satisfied with ART services. This is too a large figure to attain the objectives of ART.

However, the overall satisfaction of clients in this study area was found higher than 22%, 37.2%, 43.6 % of client satisfaction reported by out patients' services in Tigray zonal, Godar and Mekelle regional referral hospitals respectively (24, 29 and 30). The British social attitude survey in 1990 reported a lower 37.2% of satisfaction among out patient department service users (31). Another study conducted in Singapore hospitals revealed 40% of patients found the services were below their expectations (32).

The underlying justifications for higher clients' satisfaction with ART services than out patient services in other areas include multiple factors. ART services in Ethiopia are focus of attentions for government and many donors. Different interventions of monitoring, reporting including policies and implementation guidelines are functional for ART services. Many Donors are investing on the program large amount of resources and give technical supports. In addition, Clients are entitled to get the ART services for free. Clients are also most benefited from improved quality of life, decreased morbidities from these treatments. They might not have any other alternatives to get these expensive services due to economic constraints. Clients may consider the cost and benefit of the services; rather than seeing critically in to lack of parts of services. The clients might overlook to pinpoint drawbacks of ART services like lack of respect, confidentiality, privacy, and providers' competence and content of information imparted.

The major dissatisfaction factors for the clients in this study area were latrine cleanness and comfort (61.4%), latrine access and availability (55.7%), laboratory services availability (26.9%), waiting time (28.1%), waiting area and compound comfort (18.9%), information availability to get the services (15.5%) and availability of prescribed drugs (14.1%).

Dissatisfaction rate among clients for latrine service in this study was found higher than that of OPD services in Tigray's zonal hospitals, where latrine access and latrine cleanness were 34.6% and 45.7% respectively (24). Difference could be attributed to population density in Addis Ababa is higher than in Tigray zones and large number of users are found in A.A. hospitals. Detailed reasons for this low latrine service satisfaction were found during

in-depth interview of providers. It has been said that latrines were far away from the clinics, unsightly, had bad odors and breeding flies. The latrines had large users load. Efforts to clean them and to construct new were not successful due to budget constraints.

According to implementation guideline for ART in Ethiopia, Every facility is responsible to ensure uninterrupted supply of ARVs, OI drugs, laboratory reagents and test kits, etc (2).

However, there were significant problems of many types of highly demanded OI and other drugs except Cotrimoxazol tablets in this study area. About 14.4 % of clients did not get all prescribed drugs in the hospitals.

Providers during in-the depth interviews were able to give detail information about drugs availability. Unlike ARV drugs, most OI drugs were not available in the hospitals. These essential drugs were not given due attention by government or other supporting NGOs. These drugs were costing the clients high and the poor could not easily afford. Besides clients had pill burden and prefer to take suspension of Cotrimoxazol. They were even keen about fixed dose ARV combinations. ARVs are dispensed free of charge for eligible clients. The main reasons were found to be shortage of the prescribed OI drugs like suspension form of Cotrimoxazol, acyclovir, fluconazole, miconazole and others.

It was also evidenced from these providers that lack of drugs in hospitals' pharmacies for the poor patients also dissatisfy service providers. This is consistent with finding of study done in the Tororo district of Kenya; the availability of drugs in the rural health facilities brought satisfaction not only to the users, but also to the providers (37).

Fourteen percent of clients were not satisfied with availability of prescribed drugs. This is a comparable finding with 11% dissatisfaction rate of the respondents with availability of drugs in Addis Ababa ART quality study (22). However, This is low dissatisfaction rate as compared to studies done in OPD services of Tigray where 60.2 % of clients were dissatisfied for the fact that lack of prescribed drugs, in the hospitals of the Amhara region where about 1/3rd of the clients did not get the prescribed drugs; and in Jimma hospital where 63.7% of the clients lack prescribed drugs from the hospital pharmacies (24, 27 and 36).

Another study conducted in South Africa also revealed that access to drugs was one of the most suggested priorities for improvement of public health services (34). Studies in Ghana and Nigeria in the early 1990s also found that about 30% of public clinics lacked drugs. A quarter of rural clinics in Coted'Ivoire had no drugs (35).

The drug availability of OPDs in these areas is different from ART services. This could be due to hospitals for this study offer ARVs and other supplies for free and donor supported.

In this study, the proportion of clients who waited to get the service more than one hour was about 40%, which is comparable with the finding of studies in A.A. and in Tigray hospitals (22, 24). But it is different from VCT services in A.A. where only 7.3% of the clients were waiting more than one hour (23).

However, most of clients (81.7%) had duration of consultation less than 20 minutes which is higher than counseling duration of VCT service in A.A. where 62.5% clients had less than 30 minutes of counseling (23).

About twenty eight percents of the clients were not satisfied with waiting time. It can be considered equivalent with finding of a study done in Addis Ababa to assess quality of ART services and another study conducted in Jimma hospital where about 20% of the clients were not satisfied (22, 27). However, higher than this dissatisfaction rate with waiting time were found in Tigray zonal hospitals users (44.2%), in the public facilities of West Indies (47%). In another study of mother satisfactions' on the expanded program of immunization in Amhara region, 41.4% of the mothers claimed long waiting time as the main reason of dissatisfaction (24, 25, 39).

About eighty five percent of the clients were satisfied with the duration of consultation with their attending clinicians. This finding was found to be comparable with other studies result of the proportion of satisfied clients with VCT services (89.8%) and ART services (87.5%) in Addis Ababa (22, 23).

Clients in this study were more interested in shorter waiting time as compared to long consultation time they had with their treating clinicians. This was congruent with the finding of a study done in rural Bangladesh where clients were more satisfied by short waiting time as compared to prolongation of short consultation time (21).

About 20% of clients were not satisfied by the cleanness and comfort of compound and waiting area. The in depth interviews of providers depicted that waiting area was not adequate. There had been congestions of standing clients; no adequate chairs and IEC materials for the clients. Clients waited to get services feeling discomfort mixed with other services' users of the hospitals.

Analysis of overall satisfaction of clients showed that educational and occupational status of clients was significantly associated. Those clients who attend formal educations (above elementary school) were less likely to be satisfied as compared to below elementary school attendees. This is contrary to a study in Tigray zonal hospitals, where the respondents with a tertiary education were found to be more satisfied (24).

There was also significant association of overall satisfaction with support given to mitigate socioeconomic problems of the clients and their access to the drugs. It also was found that clients who had financial, psychosocial problems were less satisfied as compared to those who did not have any of such problems. Clients who got all prescribed drugs in the facility were five times more satisfied than those with no prescriptions.

Analysis of the overall satisfaction was associated significantly in this study with waiting time and consultations' duration. It is indicated that the risk of dissatisfaction increased when time to get the services increased and consultation duration shortened.

The Providers explained that clients might wait for long time to get the services and had short examination time because of heavy workload and relative shortage of staffs. This is in-line with the findings of study done in A.A. to assess the quality of ART services, where the risk of being dissatisfied and becoming non adherent is increasing as time spent to arrive in hospital and get service is increasing.

Accordingly health professionals claimed that some clients don't want to stay for long time in ART units not only because they are in hurry but also fearing of being noticed by others about their HIV status being ART client (22). It was also shown that service satisfaction was found to be negatively associated with longer duration of time to get test results in VCT clients of A.A. (23).

Strengths and limitations of the study

Strengths of the study

- This study used pre-tested, structured questionnaire adapted from report of WHO on standards for quality assessment & improvement; accreditation of HIV/ AIDS care.
- This study tried to assess many aspects of quality; it dealt with structures and amenities of the services. Views and satisfactions of clients; providers perspectives on the services and their motivations were also studied.
- Different methodologies for specific purposes in this study were applied. Both qualitative and quantitative were used.
- The study covered all of the public hospitals in city of Addis Ababa; to make them representative of the findings.
- Validity of the study was kept through randomization and multi - variate analysis.
- There were no adequate similar studies in the area.

Limitations of the study

- Results mostly depend on the responses of clients and providers. Clients of ART might give biased information since interview was conducted in the hospitals. ART coordinators self assessed and overestimate their clinics' functional aspects.
- The result might be confounded since clients might want to consider their better quality of life after ART initiations than actual services they were getting.
- Observation was limited to see availabilities of equipments, furniture and cleanness of the facilities. Observations were not possible for actual service delivery, provider – client interactions, competences of providers.

6. CONCLUSIONS AND RECOMMENDATIONS

Conclusions:

- The overall dissatisfaction level of clients with ART services was too large. This may effects negatively to attain the objectives of ART.
- Though, all sites had more than the minimum recommended number of trained staffs in national guideline for implementation of ART, significant workload, relative shortage of staffs, poor implied motivational schemes were challenges for ART sites. Hence, Low client satisfaction was observed with waiting time and duration of consultation.
- Shortage of OI drugs, weak linkages to the community for care and support interventions despite high demand were found.
- Many clients were not satisfied with comfort and availability of laboratory services.
- Some ART sites worked extra time and help clients who came with appointments.
- There were no adequate ongoing counseling and information provisions about the processes and procedures.
- There were no adequate telephone facilities for the providers; which is important tool for tracing lost follow up cases. Latrine services were the major dissatisfaction factor.

Recommendations:

- Efforts to make OI and other related drugs continuously available and affordable should be given due emphasis by all stakeholders. There should be proper use and stock management for these drugs in the hospitals. Subsidy and tax exemption should be considered to make these drugs available at private pharmacy level.
- Programs focusing on care and support of people living with HIV and AIDS should be strengthened through mobilization of resources from the community, international

supports and initiatives, and involvement of volunteers and expert patients for home based and community care.

- Enhance health education targeting the community for their involvement in care and support activities and to minimize the stigma against PLWHA.
- The number of patients need to be treated by a provider per day should be included as minimum recommended criteria for ART services.
- Decentralizations of ART services to existing health centers and task shifting should be strengthen as important steps to decrease the workload of ART sites and waiting times and to optimize consultation durations. Offering services extra time besides working days should be encouraged and replicated in the rest hospitals.
- Facilities, the RHB and MOH should design schemes to recruit, retain staffs. There should be viable mechanisms to address the motivations of providers.
- Facilities need to identify the preferences of the clients through different opportunities like suggestions boxes, involving clients during meetings and decisions. Considering their capacity and preferences of the users; facilities must increase their responsiveness.
- Orientation and proper feedback should be given to providers so that they would give critical information about the procedures and processes of care for better understanding of clients and improved outcome of the services.
- Capacity strengthening supports for ART sites should be continued to improve services of latrine, waiting areas, telephone, IEC materials and laboratory services.

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ANNEXES:

ANNEX I: SAMPLING FRAME

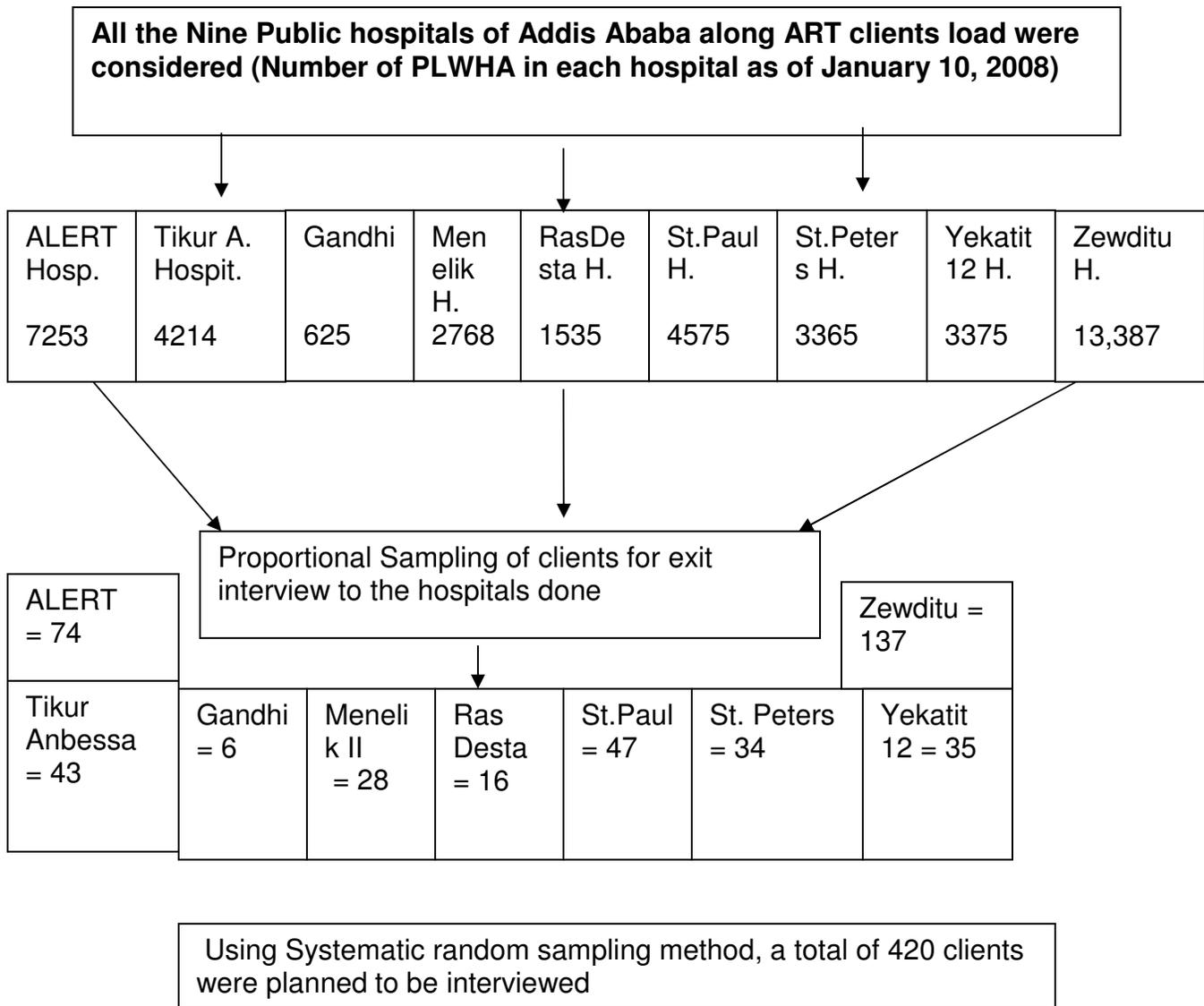


Figure 2: Sampling frame used for this study, Addis Ababa, June, 2008

ANNEX II

ENGLISH VERSION QUESTIONNAIRE

ADDIS ABABA UNIVERSITY

SCHOOL OF PUBLIC HEALTH

Questionnaire for data collection on the assessment of the level of clients` satisfaction with ART services in city of Addis Ababa

Identification: Type of Facility _____ Name the Facility _____
Address Kifle Ketama _____ Institution code _____
Kebele _____
Telephone _____

Verbal consent form:

Hello, how are you? My name is ----- . I am currently a student of Addis Ababa University, School of Public Health; going to conduct survey. I would like to interview you few questions about ante retro viral treatment service provision in this hospital. The objectives of the study are to assess the level of clients` satisfaction with ART services in the hospital and identify factors that affect satisfaction of clients in Addis Ababa hospitals, which will be important to improve health service delivery of the hospitals. Your cooperation and willingness for interview will be very helpful in identifying the problems related to the issue. Your name will not be written in the form and I assure you all the information you give will be kept strictly confidential. Your participation is voluntary and you are not obliged to answer any questions that you do not want to answer. If you are not comfortable with the interview, please feel free to stop it any time you like. Do I have your permission to continue?

If yes, continue to next page for the interview

If no, continue to next patient

Interviewer's Name _____ Signature _____

Date of interview _____ Time started _____ time finished _____

Supervisor's Name _____ Signature _____

I thank you for your cooperation

1. Socio demographic characteristics of the clients

NO.	Questions	Responses classifications	code
101.	Sex of the respondents	Male=1 Female=2	
102	How old are you in the last birth day?	Age in completed years _____ Do not know=99 No response =909	
103	What is your marital status?	Single =1 Married=2 Divorced=3 Widowed=4 Other specify=5 No response=909	
104	What is your ethnicity?	Oromo=1 Amhara=2 Tigray=3 Gurage=4 Other specify _____	
105	To which region are you belonging?	Orthodox=1 Muslim=2 Protestant=3 Other specifit-----	
106	Where is your place of residence?	Addis Ababa=1 Out side of Addis Ababa=2	
107	What is your last level of education?	Illiterate=1 Read and write =2 Grade 1-6=3 Grade 7-12or 10 ⁺ ² College =5 No response=909	
108	What is your current occupation?	Job less=1 Student=2 Government employee=3 Private enterprise employee=4 Daily laborer =5 Merchant=6 Housewife =7 Other specify _____	
109	How much in come you earn monthly?	----- Ethiopian Birr Do not know=99 No response=909	

2. ART services, health status of the clients and their satisfaction

NO.	Questions	Response classification	Codes
201.	When do you come to this clinic for the first time?	_____ months	
202.	What is the reason for coming?	Ill, self referred=1 Self referred with out ill=2 Ill and referred from other unit/provider/facility=3 Referred form other unit/facility/provider, without ill=4 Other specify _____	
203.	Why do you visit the clinic this time?	Referred=1 Appointment=2 New health problem arise=3 Self preference=4 Other specify _____	
204.	Is any information & counseling given?	Yes=1 No=2	
205.	What type of counseling services you have been given in the clinic?	Information & counseling general (epidemiology, mode of transmission, natural history, life style risk behaviors, assessment & reduction etc..) =1 Information & counseling about ARV=2 Information & counseling adherence=3	
206.	How satisfied are you with the completeness of the information and counseling given about your problem?	Very satisfied=1 Satisfied=2 Neutral=3 Dissatisfied=4 Very dissatisfied=5	
207.	Is any clinical evaluation in the unit done according to your complaints?	Yes=1 Partially=2 No=3	
208.	In your opinion, What are the components of History taken	Related to the compliant=1 Unrelated to the compliant=2 Both=3 Do not know=4	
209.	In your opinion, Complete physical examination is performed?	Yes=1 No=2	
210.	In your opinion, the laboratory requested for your complaints fit to problem?	Agree=1 Do not agree=2 No response =3 Other specify _____	
211.	Are there regular appointments for follow up arranged in the clinic?	Yes=1 No=2 Do not know=	

212.	Is it possible to be evaluated in the clinic when the patient feels/needs to be seen?	Yes=1 No=2 Do not know=	
213.	Are there any OIs diagnosed currently?	Yes=1 No=2	
214.	Do you have any other concurrent health problem/needs?	Yes=1 No =2	
215.	Is there any referral &/or solution given in the unit for this problems	Yes=1 No=2	
216.	Do you have any social problems?(money, food, psychological etc...)	Yes=1 No=2	
217.	Is there measures taken by the unit to solve your problems	Yes=1 No=2	
218.	Do you feel the clinic schedule/hours convenient for you?	Yes=1 No=2	
219.	How long do you wait to get the service in the waiting area?	<30 minutes=1 ½-1 hour=2 1-2hours=3 >2 hours=4	
220.	How much are you satisfied with information given to get the service (in locating rooms for registration, exam, laboratory, drugs..)	Very satisfied=1 Satisfied=2 Neutral=3 Dissatisfied=4 Very dissatisfied=5	
221.	How long do you wait to see the doctor?	<30 minutes=1 ½-1 hour=2 1-2hours=3 >2 hours=4	
222.	How much are you satisfied with time you spent with doctor?	Very satisfied=1 Satisfied=2 Neutral=3 Dissatisfied=4 Very dissatisfied=5	
223.	How satisfied are you with the courtesy/respect of the doctor /nurse during the visit?	Very satisfied=1 Satisfied=2 Neutral=3 Dissatisfied=4 Very dissatisfied=5	
224.	How satisfied are with way the doctor examined you	Very satisfied=1 Satisfied=2 Neutral=3 Dissatisfied=4 Very dissatisfied=5	
225.	How satisfied are you with measures taken to assure the privacy of the examination room? For (example: private	Very satisfied=1 Satisfied=2 Neutral=3 Dissatisfied=4	

	room, curtained, screened)	Very dissatisfied=5	
226.	Were there any lab. Requests, x-ray/ultrasound ordered for you?	Yes=1 No=2	
227.	If yes, did you get all the requests in this facility For the laboratory For the x-ray/ u/sound	Not ordred=0 Yes all=1 Yes some only=2 None =4 Not ordred=0 Yes all=1 Yes some only=2 None =4	
228.	If yes, how long you wait to the lab result?	No ordered=0 Less than 1 hour =1 1-2 hours=2 > 2 hours=3	
229.	If yes, how long you wait to the x-ray / ultra sound result?	No ordered=0 Less than 1 hour =1 1-2 hours=2 > 2 hours=3	
230.	How long do you wait to see the doctor after the investigations?	No ordered=0 Less than 1 hour =1 1-2 hours=2 > 2 hours=3	
231.	How satisfied are you with the access of toilet?	Very satisfied=1 Satisfied=2 Neutral=3 Dissatisfied=4 Very dissatisfied=5	
232.	How satisfied are you with the cleanness of toilet?	Very satisfied=1 Satisfied=2 Neutral=3 Dissatisfied=4 Very dissatisfied=5	
233.	Were drugs and supplies ordered for you?	Yes=1 No=2	
234.	If yes, were you able to get the drugs/supplies in the facility?	Yes=1 Yes, but some of them=2 No=3	
235.	How satisfied are you with availability of the drugs and supplies in facility	Very satisfied=1 Satisfied=2 Neutral=3 Dissatisfied=4 Very dissatisfied=5	
236.	How do you evaluate the over all cleanness, comfort of waiting area, exam. Room, the compound	Very satisfied=1 Satisfied=2 Neutral=3 Dissatisfied=4 Very dissatisfied=5	
237.	How satisfied are you with the completeness of the information	Very satisfied=1 Satisfied=2	

	given about your problem?	Neutral=3 Dissatisfied=4 Very dissatisfied=	
238.	How satisfied are you with measures taken to assure the confidentiality about you health problem?	Very satisfied=1 Satisfied=2 Neutral=3 Dissatisfied=4 Very dissatisfied=	
239.	Do recommend this facility /clinic for others?	Yes=1 No=2 Other _____	
240.	How do you rate the over all satisfaction of the service given in this facility?	Very satisfied=1 Satisfied=2 Neutral=3 Dissatisfied=4 Very dissatisfied	

ANNEX III: Self-Administer Questionnaire on structural aspects for Clinics' Coordinators

No.	Questions	Response classification	Code
301.	What type of facility is this hospital?	Referral =1 Zonal =2 District =3	
302.	Which type of services does ART clinic give in your facility?	Adult ART=1 Children ART(<15 yrs)=2 Laboratory services required minimum for ART=3 Counseling services=4 Drug supply=5 Other services_____	
303.	Are you open at any of the following times?(ART clinic)	During the evening time(after 5 pm) =1 During lunch times =2 During week ends =3 During holidays=4	
304.	Do you have an appointment system?	Yes=1 No=2 No answer=3	
305.	If yes, what happens if some onecomes without appointment?	Asked to make the future appointment =1 Always to seen on the same day=2 Usually to be seen on the same day?=3	
306.	Does the facility have the minimum staff to provide the ART service? (At least 1MD, 2nurses, 2pharmacy personnel, 2 lab. Personnel, 1 data clerk who are full time workers and trained on ART)	Yes=1 No=2 Other response_____	
307.	The facility staffs are easily identifiable to patients?	Wear appropriate gown, or lab. coat=1 Have name tag=2 Both gown &name tag =3 Neither gown or name tag =4	
308.	Does this facility have clear signs of units, areas of services? (Lab. Pharmacy, ART clinic, wards,...)	Yes =1 No=2 Some have=3	
309.	Does this facility have established internal referral system?(referral and response forms)	Yes=1 No=2	
310.	Does this facility have established referral system with other network facility?(referral and response forms are available in the clinic)	Yes=1 No=2	

311.	Does this facility have national/WHO ART guidelines, manuals, protocols	Yes =1 No=2	
312	Does this facility have national/WHO ART guidelines, manuals, protocols other than ART which used to standardize the ART services(VCT, IP, TB, CPT, OI)	Yes all =1 Yes some =2 No =3 Other response _____	

3. Observation check list

No.	Question	Yes	No	Remarks
401	Are the receptions and waiting areas for ART facility clean?			
402.	Is there is an adequate number of chairs for the number of patients present at waiting area?			
403.	Does examination room for ART clinic has adequate 3 chair and desk			
404.	Does examination room for ART clinic has adequate equipments, examination coach, instruments..			
405.	Does examination room for ART clinic has adequate 3 chair and desk			
406.	Does the laboratory have the necessary equipments and supplies to perform the minimum recommended laboratory Test according to its level			

Other _____

ANNEX IV

AMHARIC VERSION QUESTIONNAIRE
 ADDIS ABABA UNIVERSITY
 SCHOOL OF PUBLIC HEALTH

INFORMATION SHEET

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1. Socio demographic characteristics of the clients

101.?=1=2	
102?	----- = 99	

		<p>... .. = 909</p>	
103.	<p>..... ..</p> <p>.....?</p>	<p>...../.. = 1</p> <p>.. = 2</p> <p>...../.. = 3</p> <p>..... ?...../..=4</p> <p>.. .. = 5</p> <p>..... .. = 909</p>	
104.	<p>..... ..</p> <p>..... ../?</p>	<p>.....=1</p> <p>.....= 2</p> <p>.....= 3</p> <p>..... = 909</p> <p>..... ..-----</p>	
105.	<p>..... ..</p> <p>.. ..?</p>	<p>..... = 1</p> <p>..... .. = 2</p>	
106.	<p>..... ..</p> <p>.....?</p>	<p>...../..=1</p> <p>..... = 2</p> <p>1.-6. = 3</p> <p>7.-12./10+2 = 4</p> <p>...../.. = 5</p> <p>..... ..-----</p>	
107	<p>..... ..</p> <p>.....</p> <p>..... ..?</p>	<p>.. ..=1</p> <p>.....=2</p> <p>..... .. =3</p> <p>..... =4</p> <p>..... .. =5</p> <p>.....=6</p> <p>..... .. =7</p> <p>..... /-----</p> <p>-----</p>	
108	<p>..... ..</p> <p>..... ..?</p>	<p>----- ..</p> <p>.....=99</p> <p>..... ..=909</p>	

2. ART services, health status of the clients and their satisfaction

...
201.	<p>.....</p> <p>..?</p>	<p>.....</p> <p>...../.. ..</p>	
202.	<p>.....</p> <p>.. ..?</p>	<p>..... =1</p> <p>..... =2</p> <p>.....</p> <p>.....=3</p> <p>.....</p> <p>.....=4</p>	

		<p>.....-----</p> <p>--</p>	
203.	..... ?	<p>.....=1</p> <p>.....=2</p> <p>.....=3</p> <p>.....=4</p> <p>.....-----</p>	
204.	..... ..... ?	<p>.....=1</p> <p>.....=2</p>	<p>2</p> <p>208</p>
205.	<p>...../...../.....</p> <p>..... ?</p> <p>(.....)</p>	<p>...../.....</p> <p>(.....)</p> <p>/General counseling/=1</p> <p>...../.....</p> <p>..... (ARV counseling) =2</p> <p>...../.....</p> <p>.....</p> <p>/adherence counseling/ =3</p> <p>.....-----</p>	
206.	.....	<p>.....=1</p> <p>.....=2</p> <p>.....=3</p> <p>.....=4</p> <p>.....=5</p>	
207.	.....?	<p>.....=1</p> <p>.....=2</p> <p>.....=3</p>	
208.	..... ..... .....?	<p>.....=1</p> <p>.....=2</p> <p>.....=3</p> <p>.....-----</p> <p>-----</p>	
209.	..... .....?	<p>..... =1</p> <p>..... =2</p> <p>..... =3</p>	
210.	..... .....?	<p>.....=1</p> <p>..... =2</p> <p>..... =3</p> <p>.....=99</p> <p>.....=909</p> <p>.....-----</p> <p>-----</p>	
211.	..... ..... ?	<p>.....=1</p> <p>.....=2</p>	

		<p>.....=99 =909</p>	
212.	<p>.... ? ?</p>	<p>....=1 =2 =99 =909 </p>	
213.	<p>..... ?</p>	<p>..=1 ...=2 =99 =909</p>	
214.	<p>...../.... ? )</p>	<p>..=1 ...=2 =99 =909</p>	<p>2 217 ...</p>
215.	<p>.... .. /?</p>	<p>....=1 =2 =3 =99 =909</p>	
216.	<p>.... ? (.....)</p>	<p>..=1 ...=2--- =909</p>	<p>2 219 ...</p>
217.	<p>..... / ?</p>	<p>..=1 ...=2 =99 =909</p>	
218.	<p>.... .. / ?</p>	<p>..=1 ...=2 =99 =909</p>	
219.	<p>..... / ? (..... )</p>	<p>....=1 =2 =3 =4 =5</p>	
220.	<p>..... ?</p>	<p><30 .....=1 ½-1 .....=2 1-2 .....=3 >2 .....=4</p>	
221.	<p>..... ?</p>	<p>....=1 =2 =3 =4 =5</p>	

222.	..... .. .. .. .. ?	< 10= 1 10-20 .....=2 20-30 .....=3 > 30 .....=4	
223.	..... .. .. .. .. ..... .. .. .. ?	..... .. .. .. ..=1 ..... .. .. .. ..=2 ..... .. .. .. ..=3 ..... .. .. .. ..=4 ..... .. .. .. ..=5	
224.	..... .. .. .. .. / .. .. .. .. ..... .. .. .. .. ..... .. .. ?	..... .. .. .. ..=1 ..... .. .. .. ..=2 ..... .. .. .. ..=3 ..... .. .. .. ..=4=	
225.	..... .. .. .. .. ..... .. .. ?	..... .. .. .. ..=1 ..... .. .. .. ..=2 ..... .. .. .. ..=3 ..... .. .. .. ..=4=	
226.	..... .. .. .. .. ..... .. .. .. /privacy/ .. .. .. ..... .. .. .. ? (..... .. .. ..... .. .. .. .. ..... .. ..)	..... .. .. .. ..=1 ..... .. .. .. ..=2 ..... .. .. .. ..=3 ..... .. .. .. ..=4 ..... .. .. .. ..=5	
227.	..... .. .. .. .. ..... .. .. .. .. ?	.....=1 .....=2	2 234
228..	..... .. .. .. .. ..... .. .. .. ? ..... .. .. / .. .. .. .. ..... .. .. ?	..... .. .. .. =1 =2 =3 =1 =2 =3	
229	..... .. .. .. .. ..... .. ?	.1 =1 . 1-2 =2 . 2 =3	
230.	..... .. .. .. .. ..... .. .. .. .. ..... .. .. .. ?	..... .. .. .. ..=1 ..... .. .. .. ..=2 ..... .. .. .. ..=3 ..... .. .. .. ..=4 ..... .. .. .. ..=5	
231.	..... .. .. .. .. ..... .. .. ?	.1 =1 . 1-2 =2 . 2 =3	
232.	..... .. .. .. .. ..... .. .. .. .. ?	..... .. .. .. ..=1 ..... .. .. .. ..=2 ..... .. .. .. ..=3	

		.....=4 .....=5	
233.	.....?	.....=1 .....=2 .....=3 .....=4 .....=5	
234.=1=2	2 239 ...
235.?=1=2=3	
236.?=1=2=3=4=5	
237.=1=2=3=4=5	
238./confidentiality/?=1=2=3=4=5	
239.?=1=2----- -----	
240./?=1=2=3=4=5	

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Annex V

Guideline for in depth interview of providers:

501. Standards and guidelines

How the health care providers in this facility and in this clinic work? Are there standards and/or guidelines for health workers to provide health service for clients in ART clinic?

(At examination room ART, Consultation room)

502. drugs and reagents

Are ART drugs and reagents necessary for ART always available in the facility?

If no, what do you think the reason?

503. provision of information and counseling

Do you think health professionals in ART clinic provide clients adequate and relevant information about their problems, procedures and processes?

If no, what do you think the reasons?

504. health facility comfort and cleanness

Can you explain the cleanness and comfort of: Waiting areas, ART clinic, Toilets, Laboratory and Pharmacy?

505. problems related to the service

What are the major problems that you think contribute to the satisfaction of clients?

Please mention some reasons in the sequence of importance

506. clients satisfaction, behavior

How do you accommodate client's dissatisfaction?

507. measures and improvements

Can you tell about any measures taken to make the changes in the facility in the provision of ART services? If yes, what were the measures/ and any changes brought about?

In registration room (e.g. waiting time, respect, information....) In the waiting area (comfort, information, In the examination room /consultation room (privacy, confidentiality, time spent for consultations, technical competence....)

In the pharmacy: (availability of drugs and reagents, provision of information about drugs, adherence, side effects...)In the laboratory: (waiting time, availability of basic Lab. Tests...)

508. Providers' challenges and motivations

What do think should be done to improve the service quality of ART in this hospital?

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 and all sources of materials used for this thesis have been acknowledged.

Name: Daniel Dejene (Dr.)

Signature _____

Place _____

Date of submission _____

This thesis has been submitted with my approval as University advisor.

Name _____

Signature _____

Place _____

Date of submission _____

