

**FACTORS AND CHALLENGES ASSOCIATED WITH LOSS OF
FOLLOW UP VISITS AMONG HIV/AIDS CLIENTS
ATTENDING ANTIRETROVIRAL THERAPY IN ILALA
MUNICIPAL COUNCIL**

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FOLLOW UP VISITS AMONG HIV/AIDS CLIENTS
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MUNICIPAL COUNCIL**

**By
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**Evaluation Report Submitted to the School of Public Administration and
Management (SOPAM) in Partial Fulfillment for the Requirement for Masters
of Science in Health Monitoring and Evaluation (MSc. HM&E)**

2015

CERTIFICATION

The undersigned certify that we have read and hereby recommend for acceptance a dissertation entitled: **Factors and challenges which are associated with the loss of follow up visits among HIV positive adults who are attending Care and Treatment Centre in Ilala Municipal, Dar es Salaam** in partial fulfillment of the requirements for the award of a degree of Master of Science in Health Monitoring and Evaluation of Mzumbe University

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Accepted for the Board of

DEAN/DIRECTOR, FACULTY/DIRECTORATE/SCHOOL/BOARD

DECLARATION

I Judith Salema Philip do declare that this dissertation about **Factors and challenges associated with the loss of follow up visits among HIV positive adults who are attending Care and Treatment Centre for ARVs in Ilala Municipal Council** is my original work and all sources that I used have been indicated and acknowledged by the means of complete references. Also, this work has not been presented and will not be presented to any other University for a similar or any other degree award.

Signature.....

Date.....

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DEDICATION

I dedicate this thesis to my beloved husband Dr. Nelson Mabruki, my son Timothy Nelson and my daughters Tekla and Anna Nelson for the entire individual and financial sacrifices they have made to enable for me follow my studies.

LIST OF ABBREVIATIONS

AIDS	-	Acquired Immunodeficiency Syndrome
ART	-	Antiretroviral Therapy
ARV	-	Antiretroviral
CD4	-	Cluster of Differentiation 4
CTC	-	Care and Treatment Centre
CBO	-	Community Based Organization
HAART	-	Highly active antiretroviral treatment
HIV	-	Human Immunodeficiency Virus
LTFU	-	Loss of Follow Up
MMOH	-	Municipal Medical Officer of Health
MOHSW	-	Ministry of Health and Social Welfare
NACP	-	National Aids Control Program
NGO	-	Non-Governmental Organization
PLHIV	-	People Living with HIV
TACAIDS	-	Tanzania Commission for AIDS
UNAIDS	-	Joint United Nations program on HIV/AIDS
WHO	-	World Health Organization

ABSTRACT

Background: *The loss of follow up visits among HIV positive adults on antiretroviral therapy is a leading cause of morbidity and mortality in Tanzania. The loss of follow up visits brings a big challenge in Care and Treatment Centre (CTC) as many HIV clients are not attending clinics as scheduled*

Broad Objective: *To assess the factors and challenges associated with the loss of follow up visits among HIV positive adults attending CTC in Ilala Municipal Council*

Methods: *Cross sectional study design was conducted in Ilala Municipal Council involving HIV positive adults and health providers whereby data were extracted from CTC database and clients' files. Data were obtained through structured questionnaires and were entered into Microsoft Excel and analyzed by using Stata version 13. Analysis for predictors was done using univariate and multivariate logistic regression where p value of <0.05 was considered as statistically significant.*

Results: *240 people were recruited in the study. 190 were patients, 50 were health workers, and most of the patients were females with the age ranging from 18-35 years amounting to 102 (54%). Lack of fare 72(60%), Stigma, shift from one clinic to another and use of traditional medicine found to be the factors contributing to the loss of follow up visits. However, lack of space (92%), shortage of health providers (94%), stigma and discrimination (90%), low motivation (94%) and work load (94%) were the challenges facing health providers during provision of services to HIV patients.*

Conclusion and Recommendations

The study found that the recording system of the patients' information were poor, there were some clients who died, others were shifted to other clinics but the CTC term them as the loss of follow up visits therefore the data recording system should be strengthened.

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CHAPTER ONE

1.1 Introduction and Background

The loss of follow up visits among HIV positive adults and on antiretroviral therapy is a leading cause of morbidity and mortality in Tanzania. The loss of follow up visits brings a big challenge in Care and Treatment Centre (CTC) as many HIV clients are not attending clinics as scheduled.

Retention in an antiretroviral clinic has been recognized as an important element to HIV care. Without retention of the HIV patients in the clinics the loss of follow up visits rate will increase morbidity and mortality, and drug resistance among HIV/AIDS patients.

According to UNAIDS, Human Immunodeficiency Virus (HIV) has affected 34 million adults and 3.4 million children worldwide at the end of 2012. The Sub Sahara African remains severely affected and accounts for 69% of people living with HIV globally (UNAIDS 2012).

In most of the sub Saharan African countries the prevalence of HIV is estimated to range from 5-15% with Tanzania having an estimated prevalence of 5.1%. However, HIV prevalence varies by regions and within region, the estimated number of people living with HIV/AIDS in Tanzania by the end of 2012 was 1.6 million (TACAIDS report, 2012).

The decline in morbidity and mortality in HIV/AIDS patients coincides with the availability of highly active antiretroviral therapy (HA+ART). HAART has changed the natural progression of the disease caused by HIV/AIDS by reducing viral replication, increasing the number of CD4 lymphocytes and improving its function, re-establishing the defenses of the host and improving the chances of survival in an individual living with HIV/AIDS (Biadgilign S. Reda, A. A., & Digaffe T, 2012)

Tanzania is among resource-poor countries in the eastern part of Africa, it has been engaged in antiretroviral therapy (ART) scale-up for more than ten years. By the end of December 2012, a total of 1,135,390 People living with HIV (PLHIV) were enrolled in care and treatment services, 663,911 eligible adults and children were cumulatively put on ART and 432,338 clients are currently on ART countrywide. The cumulative number of children enrolled in care and treatment is 86,929 and a total of 50,980 children are on ART (TACAIDS report, 2013).

In Tanzania LTF (Loss of follow up visit) occur mainly in clinics with many patients over 5000 compared to clinics with few patients whereby the loss of follow up visits is between 30% and 40%. (Makunde W. H, Francis F, Mmbando P, Kamugisha M. L Rutta M. A Mandara C I Msangeni H .A, 2012)

In Ilala district of the Dar es Salaam region 49 facilities provide CTC services. Reports collected by the Management for Development Health (MDH) reveal that the loss of follow up visits was subsequently high ranging from 17.2% to 18.5% for clients who were on ARTs. It was much higher from 33.3% to 40% among the patients who were in care and monitoring (pre ART) (MDH, 2011).

The loss of follow up visits occurred in all initiation months that is at sixth, twelfth and twenty fourth months whereby the loss of follow up visit rates were ranging between 18%-36% respectively (Somi G. Keogh S. C. Todd J. Kilama B. Wringe A. van den Hombergh J. Malima, K Josiah R. Urassa M, Swai R & Zaba, 2012)

In Dar es Salaam region a total of 178,150 HIV positive patients were enrolled in care and treatment services and among them 117,986 are on ART (NACP report, 2012). In Ilala Municipal there are about 65,410 clients attending Care and Treatment Centre (CTC), among them 26,867 are currently enrolled for ART. A total of 4,475 clients who were on ART have shifted from first to second line drug treatment. As more people gain access to ART services, there is a need to find out additional mechanisms of retaining and scaling up more patients into program to achieve maximum drug

outcomes (IMC, 2013.) However, this has been a big challenge in most of the sub Saharan countries notably in Tanzania.

Despite new enrollment of clients in several CTCs, the number of previously enrolled clients has been observed to decrease with time due to unknown reasons. Mnazi Mmoja hospital is the regional centre of referral for patients who have failed from first line drugs to the second line treatment. The number of patients shifting to second line treatment has been observed to increase spontaneously. Since a significant proportional of PLHIV do not reach a high level of ART adherence, this may result in an epidemic of drug resistance. Partial adherence to ART can lead to the development of drug resistant strains of virus. Cross resistance can potentially interfere with future therapeutic regimen for HIV infected patients undergoing treatment and for those who subsequently become infected with resistant strains of HIV. This has resulted into shifting from one line of management and/or even treatment failure.

1.2 Statement of Problem

The loss of follow up visits among HIV positive adults is a leading cause of an increase of HIV morbidity and mortality, drug resistance, shift from first line to second line treatment in Tanzania. In the Sub Saharan African countries including Tanzania HIV positive clients who were the loss of follow up visits do increase the risk of opportunistic infections due to high viral load and low CD4 count hence cause death to people with HIV/AIDS.

Factors and challenges associated with the loss of follow up visits vary from regions and within the region depending on the availability of health facilities which provides CTC services and the economic situation of the people in the region. In this regard, even though Ilala Municipality has been the economic and business centre in the country, there is no study which has been done to find out factors and challenges associated with the loss of follow up visits among HIV positive adults who are attending CTC in Ilala Municipal Council.

However, apart from very little documented evidence about the loss of follow up visits among HIV positive adults, still more data and studies are needed so as to inform policy makers. The information which was obtained from this study is very important to policy makers, planners, researchers etc. Such information could be very useful in the designing of appropriate policy interventions.

Adherence to ART is associated with effects in reducing incidence rates of the loss of follow up visits and opportunistic infections. This has resulted into reduction in the number and duration of hospital stays associated with infectious events and mortality rates among people living with HIV/AIDS. As new HIV infections are still occurring and spreading, there is a great need to identify innovative strategies to prevent new infections and improve the quality of life to people who are infected with HIV, specifically on treatment adherence as one of the preventive strategy of new infections and the loss of follow up visits. Early deaths, high morbidity and chances of drug resistance can be minimized by retention of HIV/AIDS clients on ART. This study is therefore conducted to assess the factors and challenges associated with the loss of follow up visits among HIV/AIDS adult clients in Ilala Municipality.

1.3 Evaluation Questions

This study will be guided by the following main evaluation questions

1. What are the factors associated with the loss of follow up visits among HIV positive adults attending CTC in Ilala Municipal Council?
2. What are the challenges facing health providers during provision of care and treatment services to HIV/AIDS clients?

1.4 Objectives

1.4.1 Broad Objective

1. To assess factors and challenges associated with the loss of follow up among visits HIV positive adults attending CTC in Ilala Municipal council

1.4.2 Specific Objectives

1. To identify the factors associated with the loss of follow up visits among HIV positive adults in CTC
2. To identify challenges facing health providers during the provision of services to HIV positive adult clients?

1.5 Evaluation Significance

The findings of the evaluation will help the Ilala Municipal council and country at large to improve quality of provision of CTC services to clients in order to retain them into care and treatment. The evaluation will assist in identifying the difficulties facing the health providers during their daily implementation of CTC services. In addition, an evaluation will identify some possible solutions for improving the quality of services also the evaluation will help the to have a retention mechanism of customers. Furthermore, the evaluation will help to improve the quality of life to people in Ilala Municipal and Tanzania.

CHAPTER TWO

LITERATURE REVIEW

2.1 Theoretical Literature Review

2.1.1 Definition of terms

HIV- is a virus called human immunodeficiency virus that attacks the immune system of body. Your immune system protects you from germs that cause infections and make you sick. The virus tends to infect the cell of a living human in order to survive and do replicate. Without been in the cell of a living human the HIV will not be able to grow or to reproduce. Normally the human immune system finds and kills viruses very quickly, but HIV attacks the immune system itself. It belongs to the class of viruses called retroviruses in the subgroup of lentiviruses (Nielsen M, Pedersen F, Kjems J, 2005).

There are two HIV subtypes which are HIV-1 and HIV-2. In Tanzania HIV infection is caused by subtype HIV-1 which are A, C and D. No HIV-2 subtype has been reported (NACP, 2012)

AIDS is a condition caused by a virus called HIV. The virus attacks the immune system, the body's security control that fights off infections. When the immune system breaks down, you drop the protection and can develop many diseases like cancers, Pneumonias, Tuberculosis, bacterial infections, meningitis, encephalitis and others. These are called opportunistic infections. AIDS is the condition that lets the Opportunistic infections take place in a damaged immunity of the body (Nielsen M et al...2005)

CTC- Care and Treatment Clinic are clinics within health facilities which provide health care and treatment to HIV positive patients. Those services are ARVs, treatment of opportunistic infections, counseling about HIV transmission and prevention,

education and regular counseling on drug adherence, investigations and management of co-morbidities such as Tuberculosis, CD4 count and Viral load measurement (NACP, 2012).

The loss of follow up visits is defined as HIV/AIDS not taking an ART to refill for a period of 3 months or longer from the last attendance while patient is not yet classified as 'dead' or 'transferred-out'(Berheto T, Haile D,& Mohammed S, 2014)

2.1.2 The history of the HIV/AIDS

HIV/AIDS is a key health problem globally. The first case of AIDS was recognized in United States of America in 1980, when the U.S Centers for Disease Control and Prevention (CDC) reported an occurrence of *Pneumocystis jiroveci* pneumonia and Kaposi's sarcoma which were not responding by any drugs. The most affected were men who were practicing homosexuality. (Gottfredsson M & Bohjanen P, 1997)

The HIV/AIDS was recognized in Tanzania in 1983 whereby 3 cases were identified in Kagera region. After there the disease has spread rapidly to all regions and the communities in the country. It affected the all sectors of the society and it is recognized as a major health concern, socio-economic and developmental problem (NACP, 2012).

2.1.3 Mode of transmission

HIV/AIDS is transmitted mainly by having sexual intercourse with an infected person, by sharing sharp instruments which are contaminated with an infected blood and blood products, by receiving a contaminated blood (blood transfusion) and transmission from an infected mother to the child during pregnancy, delivery and breast feeding.(Gottfredsson M & Bohjanen P, 1997)

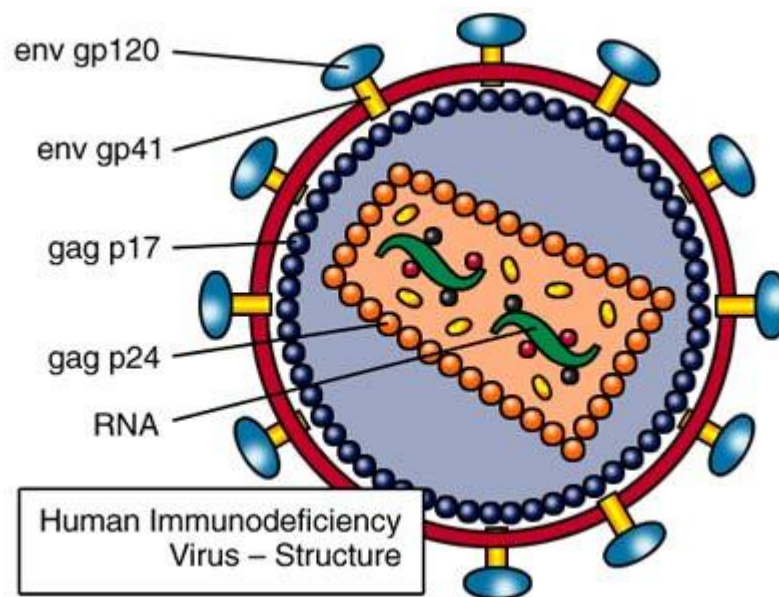
2.1.4 Structure and life cycle of HIV

HIV unlike bacteria, its particles are much too small to be seen by an ordinary microscope, and in this regard can be seen by using an electron microscope. An HIV

particle is around 100-150 billionths of a metre in diameter. The viral core is bullet-shaped and is made from the protein p24. Inside the core are three enzymes required for HIV replication called reverse transcriptase, integrase and protease. Also held within the core is HIV's genetic material, which consists of two identical strands of RNA. RNA has a very similar structure to DNA (Nielsen M et al, 2005)

When HIV enters the human cell it fuses into CD4 and started release its particles into the cell. After entering into the cell HIV uses the enzyme reverse transcriptase to convert the viral RNA into DNA. Then, this new DNA transported to the cell's nucleus and it is inserted into the human DNA. After the insertion the HIV DNA is known as provirus. The antiviral drugs which are used in Tanzania are haltered the functions of reverse transcriptase enzyme and protease enzyme hence haltered viral replication and prevent the decline of CD4+ T lymphocytes (NACP, 2012).

Figure 2.1 The structure of HIV Virus



The Structure of HIV is made up of a viral envelope and viral core.

Source: Nielsen M et al, (2005)

2.1.5 Care and Treatment Centre

Care and treatment centre (CTC) are the clinics where HIV positive patients go for ARVs refills and clinical monitoring of their health. This was developed in 2003 by the Health Sector HIV and AIDS Strategic Plan (HSHSP) 11 2008-2012, it calls for the provision of quality HIV and AIDS services at all health care facilities across the country. At the year 2010, a total of 220 CTC were providing services to HIV positive patients (MOHSW, 2012). Monitoring of the patients' attendance to the clinic is very important as it can be used as a sign for the ARV adherence in HIV/AIDS treatment centre.

2.1.6 Identifying people living with HIV/AIDS (PLHIV) as an entry point to Care and treatment Centre

All sectors of development partners including CBOs (Community Based Organization), NGOs (Non-Governmental Organization), the private sectors and government are supposed to identify people living with HIV /AIDS who need ARVs from the health services which exist in communities. The provision of CTC services can take place at any health facility as long as there is trained staff and the centre has been assessed and recognized by medical authorities (NACP, 2012)

In order to meet the goal of the HIV and AIDS Care and Treatment Strategy the CTC initiates the appointment registers which are filled in each visit. The aim of this register is to assess the attendance of each client if she/he has attended as scheduled or not. Also to know how many patients were expected to attend on each clinic day and how many attended as scheduled. Furthermore it helps to monitor patients who did not show up in their dates and give the room to trace them early before they become the loss of follow up visits (NACP, 2012)

The loss of follow up visits is a failure of HIV positive patients on antiretroviral therapy to attend the clinic for ARVs refill for more than 90 days from the last visit.

The standard definition of loss of follow up visits is when HIV positive patients on ARV miss the clinic for more than one eighty days (Chi, B, Yiannoutsos C Westfall A, Newman J, Zhou J, Cesar C & Martin J, 2011).

2.1.7 Why the loss of follow up visits is an issue in CTC

ARVs, medicines and medical supplies used by HIV positive patients are quite expensive and therefore they need proper management to ensure effective use. It is a lifelong treatment; therefore it is very important to use drugs rationally since irrational use may cause unwanted consequences to individual and population at large. Consequences include drug resistance leading to shift from first line to second line, treatment failure, an increase of drug toxicity, and increase treatment cost of a patient. (NACP 2012).

HIV positive patients need to use ARVs for life in order to boost up their immunity system so that they can prevent themselves to acquire opportunistic infections which cause death due to HIV/AIDS manifestations, to reduce transmission rate to their partners. The national HIV care and treatment programme is aiming at prolonging lives of HIV patients by providing them with ARVs but some of them did not attend clinics as scheduled (NACP, 2012)

2.2 Empirical Literature Review

Although many HIV positive patients have benefited with ARVs, still some patients did not continue with follow up visit fort treatment schedules. This has resulted the programme to fail to attain its goal of no death due to HIV/AIDS. It is important to know how and why HIV positive patients who are on treatment fail to continue with follow up visits for treatment programs, This is very important given that retention of HIV positive patients in treatment and ensuring adherence are vital determinants of winning long term positive outcomes.

In Sub Saharan countries different studies have identified reasons for loss of follow up visits among HIV positive adults who are on ART. The reasons are: stigma and discrimination, health facility factors, socioeconomic factors, beliefs, use of traditional medicines, wrong contact numbers, death, long waiting during services, distance from service area, shift from one clinic to another(Self referral), number of ARV pills taken, fear of losing job for employees, illiteracy and poverty.

In Uganda Public health facilities were related with factors associated with the loss of follow up visits among HIV positive patients. This was due to the fact that the health providers who work in CTC sites did not track missing patients, as the result the patients become the loss of follow up visits. This happen because health workers did not know the importance of attending the ARVs. Also death for those who were attending CTC were not recorded by health providers instead were termed as the loss of follow up visits this was revealed by study done by Brinkhof M et al, (2008)

The loss of follow up visits is a big challenge which brings a threat in ART adherence including resistant strains leading to difficulties in managing HIV (Mugusi et al, 2007). HIV does change its normal character and resist ARVs if the HIV positive patient did not take his/her ARVs drugs according to planned schedules. Apparently this resulted to failure of ARVs to function well in the patient's body ultimately causes death due to opportunistic infections.

A study of Pre-antiretroviral services in rural Ethiopia: Patient retention, factors associated with the loss of follow up visit, and reasons for discontinuation, revealed that fear of HIV positive patients to be discriminated by their relatives, friends, community members or health providers, high transportation cost to travel to the clinic and mistrust in the pre-ART service. Also, the HIV positive patients were not given health education on how to use ARVs, its advantages, its side effects, the duration of using clearly as a pre-ART service package and proper implementation of guideline were also identified as important factor related to the loss of follow up visits. (Zinash D Robi, 2013).

Another study “Mortality of Patients Lost to Follow-Up in Antiretroviral Treatment Programmes in Resource-Limited Settings: Systematic Review and Meta-Analysis revealed that the causes of the loss of follow up visits is due to the fact that some HIV positive patients transferred themselves without official permission from the earlier clinics of registration. In this regard at the initial CTC such patients were termed as loss for follow up visits. Another factor was due to financial problems that hindered patients to get the necessary needs for life like food and bus fare for attending clinic for drug pickup. Also such patient was considered to be loss of follow up visit among HIV positive patients. Other patients using ARVs stop using it after feeling better. Mistakably they stop using ARVs and to attend CTC, hence such patients were termed as the loss of follow up visits (Brinkhof M, Rodriguez M & Egger M, 2009).

In rural Kisesa in Tanzania a study attrition from antiretroviral revealed that the CTC sites are located far away from the patient’s home as the result hinder them to access treatment. Such a problem was compounded by the fact that people of Kisesa were facing the problem of severe poverty like other rural Tanzanian hence failure to get money for transport to the CTC. Also beliefs either faith or traditional were reported to be a major reason for defaulters of ART in rural Kisesa. Cost of ART and transport were provided for free to determine other significant factors which restrict an individual’s ability to comply with treatment (Roura, M., Busza, J., Wringe, A., Mbata, D., Urassa, M., & Zaba, 2009).

A study on “That is why I stopped the ART”: patients' and providers' perspectives on barriers to and enablers of HIV treatment adherence in a South African workplace programme revealed that many patients were engaging themselves into traditional medicine and as a result they stopped using ARVs. The reason for stopping was due to drug side effects. Other reasons were due to traveling and being away from home, language barrier among patients and health providers and long waiting time at clinic were the causes of lost to follow up (Dahab M, Charalambous S, Hamilton R, Fielding K, Churchyard G & Grant A, 2008)

A study on “Abandonment of antiretroviral therapy”: A potential barrier to scale-up in the sub-Saharan Africa revealed that lack of transport, lack of food for patients, long clinic waiting times may be due to the shortage of health providers and use of traditional medicines to be the causes of the loss of follow up visits among HIV positive patients who attending CTC (Mulenga R, Folk L, Tambatamba C & Chi H, 2008)

A study “The loss of follow up visits and clinical outcomes of HIV adult patients on antiretroviral therapy in care and treatment centre” in Tanga City showed that the causes of the loss of follow up visits were the lack of bus fare to the clinic, use of herb medicine and spiritual beliefs (Makunde et al, 2012)

In Malawi the loss of follow up visits was associated with death whereby HIV patients died and no information was given to the CTC from the relatives hence the patient was termed as the loss of follow up visits, high transport costs, sometimes the HIV patients were providing wrong contact number when they became the loss of follow up visits the trackers did not find them because of incorrect addresses or wrong phone numbers found in patients files, others were decided to stop taking of ARVs either due to improved health or deteriorating or after using traditional medicines (Yu J, Chen S, Wang K, Chang C, Makombe S, Schouten EJ, Harries D, 2007)

Miller and colleagues in South Africa on a systematic review of patients who initiated ART across sub Saharan Africa in 2007 revealed that, approximately 25% of the patients were no longer under care a year after initiation, after two years the proportion rose to 40%. The findings reflect that minority of these patients had died and the majority of them were classified as the loss of follow up visits (LTFU) (Miller, C. M., Kethlapile, M., Rybasack-Smith, H., & Rosen, S 2010). In 2008 similar findings regarding lost to follow up was reported in South Africa, among patient initiated ART 41% died, 7% were transferred to other facilities for care and treatment and 52% voluntarily discontinued with treatment (Dahab et al. 2008).

According to Kalembo & Zgambo (2012) in Malawi many children turn to the loss of follow up visits early before being diagnosed for HIV due to stigma and discrimination from the members of the family, failure of HIV infected mother to disclose their HIV status to their husband

A study “Barriers to ART adherence and follow ups among patients attending ART centres” in Maharashtra, India by N. Joglekar, R. Paranjape, R. Jain, G. Rahane, R. Potdar, K.S. Reddy & S. Sahay (2011) revealed that financial and socio cultural issue had been a major reason for the loss of follow up visits .Experience of stigma by relatives and community or fear of being stigmatized if they took medicine or went to ART centre was found as an individual related socio-cultural barrier among the patients.

Medication adverse side effects, long waiting times, distance from home to health facility, high pill burden, illiteracy, herbal medicines, transportation costs, stigmatization and lack of employment were associated with the loss of follow up visits among HIV/AIDS clients in South Africa.

In Tanzania LTF(Loss of follow up visit) occur mainly in clinics with many clients over 5000 compared to clinics with less clients (Makunde W. Francis F ,Mmbando P, Kamugisha M. Rutta A Mandara C & Msangeni H, 2012) whereby the loss of follow up visits is between 30% to 40%. This was observed by a research conducted on low mortality risk rate but high loss of follow up visits among patients in the Tanzania national HIV care and treatment programme.

A study “Retention of HIV persons in Antiretroviral Therapy Program in Post conflict Northern Uganda” revealed that the reasons for the loss-of-follow-up were: relocation of the patients to go to the area where ARVs were not provided or the area to be very far so the patient couldn't access CTC, death of the patients and no information given to CTC to update their data, lack of finances to meet transport costs and long distances from the health facility, stigma among HIV patients and relatives, other community

members, health providers and themselves. Also drug stock outs, shortage of food, ARVs side effects, failure of the HIV patients to disclose their status to partners, relatives, faith healing beliefs, myths misconceptions about the HIV/AIDS, its treatment and ARVs in general. Another factor was self transfer of the HIV patients to other CTC without informing the initiating clinic hence termed as the loss of follow up visits while they are continuing with the ART but in another CTC (Mugisha K, Ocerro A, Semafumu E, Ciccio L, Muwanika R, Otim J & Makumbi M, 2009)

Also another study conducted by TUNAJALI in Iringa, Dodoma and Morogoro observed the same rate of the loss of follow up. The loss of follow up visits brings challenges in care and treatment programme because failure to HIV patients who did not follow the regimen of taking ARVs died early due to opportunistic infections. The national HIV care and treatment programme is aiming at prolonging lives of HIV patients by providing them with ARVs but some of them due to several reasons did not attend clinics as scheduled. Loss of follow up occurred in all initiation months that is at sixth months, twelfth months and at twenty fourth months whereby the loss of follow up visits rate was ranging between 18%-36% respectively (Somi G. Keogh S. C. Todd J. Kilama B. Wringe A. van den Hombergh J. Malima, K Josiah R. Urassa M, Swai R & Zaba, 2012)

A study done in Ghana by Ohene et al, 2013, revealed that the reasons for the loss of follow up visits were financial/ economical difficulties concerning travelling out of town and forgetfulness, delayed laboratory results hence long waiting time which is not needed to HIV patients, family issues and mix up of clinic dates may be due to the poor documentation and management of data.

A study done in Tanga, Tanzania showed that the causes of the loss of follow up visits were the lack of bus fare to the clinic this could be due to the culture of the people living in Tanga with the belief that women are not supposed to work, so they depend on husband's income which is not enough. Use of herb medicine, spiritual believes and death (Makunde et al, 2012).

The main challenge in the CTC is how to retain their clients. Haiti, like other Sub Saharan countries is facing the same problem which is brought by stigma, lack of knowledge on HIV/AIDS and its treatment, long waiting time in CTC, lack of transport fare, workload in CTC, inadequate resources in health facilities hence poor retention of about 80% (Naslund, J. A., Dionne-Odom, J., Junior Destin , C., Jogerst, K. M., Renold S n charles, R., Jean Louis, M. & Wright F, 2014).

A study on “Challenges for Scaling up ART in a Resource-Limited Setting”: A Retrospective Study in Kibera, Kenya showed that the drop out from ARVs was 23% due to lack of transport cost (Unge C Bjo rn So derga rd, Ekstro m A, Carter J, Waweru M, Ilako F, Ragnarsson A& Thorson A, 2009)

Tanzania AIDS Control Program reported 18% of adults and 13% children who started ART in 2007 were loss of follow up visits a year later. It is possible that some loss of follow up visit clients were not truly “lost,” but had voluntarily transferred to other treatment sites and poor documentation of clients visit (UNAIDS, 2014)

A study “Cost of using a patient tracer to reduce loss to follow-up and ascertain patient status in a large antiretroviral therapy program” in Johannesburg, South Africa showed that some of the patients loss of follow up visits were due to the failure to disclose their HIV status either to their partners, relatives or close friends, the use of traditional medicines, beliefs and fear of missing employment (Rosen S & Ketlhpile M, 2010).

A study “Retention of HIV Positive Persons in Antiretroviral Therapy Programs in Post-Conflict Northern Uganda-Baseline Survey of 17 Health Units” done in South Africa by Miller et al, (2010) revealed that transport cost, disclosure of HIV status and stigma at work place, beliefs, living far from health facility, taking alcohol, patients self transfer to other clinics without documentation, misconception about ARVs and having wrong knowledge about ARVs to be the reasons for the loss of follow up visits for HIV patients.

In South Africa a study on the social and clinical characteristics of patients on antiretroviral therapy who are ‘lost to follow-up’ in KwaZulu-Natal, South Africa: a prospective study revealed that transfer out, stigma, patients general health, adverse effects of antiretroviral drugs, age, employment status, alcoholism, drug abuse, use of traditional medicines and depression being the causes of the loss of follow up visits among HIV positives adult (Peltzer K, Ramlagan S, Khan M, Gaede B, 2011).

A study “Characteristics and Outcomes of Adult Patients Lost to Follow-Up at an Antiretroviral Treatment Clinic in Johannesburg”, South Africa showed that many clients were a loss for follow up visits due to the transfer to other clinics without informing the initial clinic, transport costs, economic constraints for obtaining drugs and patients condition weather improving or deteriorating (Dalal et al, 2008).

A study on “Determinants of Mortality and Non death Losses from an Antiretroviral Treatment Service in South Africa”: Implications for Program Evaluation byLawn S, Myer L, Harling G, Orrell C, Bekker L, & Wood R, 2006 showed that the causes of the loss of follow up to be shift from initiation clinic to another without documentation and if the patient move from one place to another they look for the nearest clinic and start ARVs there without informing the initial clinic.

A study “True outcomes for patients on antiretroviral therapy who are “lost to follow-up” in Malawi by Yu J, Chen S, Wang K, Chang C, Makombe S, Schouten E & Harries A, 2007 revealed that the causes of the loss of follow up to be the death of patients 57%, failure of tracing patients because of wrong contacts numbers in the patients files 27%, self transfer to another clinic without following the normal referral system and lack of fare for transport 35%

A study done in Uganda on “ Transportation Costs Impede Sustained Adherence and Access to HAART in a Clinic Population in Southwestern Uganda”: A Qualitative Study revealed that the transport costs for the HIV positives who attended CTC was realized to be a very big problem to them, Ugandans like other Sub Saharan African

people have low economic status hence failure to carry on with the normal life needs and failure to go to clinic for ARVs collection hence termed as the loss for follow up visits (Tuller D, Bangsberg D, Senkungu J, Ware N, Emenyenu N& Weiser D (2009)

A study “Risk factors, barriers and facilitators for linkage to antiretroviral therapy care”: a systematic review revealed that the stigma among HIV positive patients, distance to the CTC, lack of fare, waiting services for long time during clinic, failure of the patients to disclose their HIV status to their partners, relatives or close friends, shortage of health providers drug side effects and being young to the causes of the loss of follow up visits among HIV patients who were attending CTC(Darshini G, Nathan F, Katharina K, 2012)

A study done in Zambia on revealed the causes of the loss for follow up visits to be death, transfer out from the initiated clinic, failure to trace some patients may be due to wrong contacts and the general condition of the patient whether deteriorated or becoming healthier (Brinkhof M et al 2009)

A study true outcome for patients on antiretroviral therapy who are lost to follow up in Malawi found that the reasons for the loss of follow up were transferred out from the initiated clinic, death (127) lack of fare for transport (13) to CTC and poor documentation of patients address in their CTC cards or files. The researchers failed to trace many people (68) due to the wrong contacts from the patients’ files. (Yu et al 2007)

A study “Impact of HIV-related stigma on treatment adherence: systematic review and meta-synthesis” revealed that the stigma among HIV positive patients who attending CTC is a problem to their attendance habit. Patients who stigmatized themselves they get psychological problem by fearing their relatives, friends, health providers and neighbors hence stopping to attend CTC for picking their ARVs (Kartz I, Ryu A, Onuegbu A, Psaros C, Weiser S Bangsberg D & Tsai A, 2013)

A study “Providing anti-retroviral therapy in the context of self-perceived stigma”: a mixed methods study from Tanzania revealed that many HIV positive patients who are using ARVs are stigmatized themselves hence they are afraid to take their ARVs as they were required. Some were afraid even to take their ARVs in the original carrier that is a special bottle where by the manufacturer save the drugs or sometimes they used to throw away the original box and put the drugs in another container which is not safe for caring or store those ARVs hence damage the drugs. Also by stigmatizing themselves they fear to go to the CTC because they can meet their friends, neighbors, or even health providers who knows them hence the loss of follow up visits (Tarimo E, George J, 2014)

A study “Sources of motivation and frustration among healthcare workers administering antiretroviral treatment for HIV” in rural Zimbabwe revealed that the lack of motivation and stock out of ARVs were the causes of the loss of follow up visits among HIV positive patients who were attending CTC for ART. If the HIV positive patients attending CTC came as they were supposed then they missed ARV for more than two times then they decided to go to other CTC or even to stop taking ARVs which is a problem for patient and the country (Campbell C, Scott K, Madenhire C, Nyamukapa C & Gregson S, 2010)

The loss of follow up visits occurred in all initiation months, that is at sixth months, twelfth months and at twenty fourth months whereby the loss of follow up visits rate was ranging between 18%-36% respectively (Somi G. Keogh S. C. Todd J. Kilama B. Wringe A. van den Hombergh J. Malima, K Josiah R. Urassa M, Swai R & Zaba, 2012)

However, if an HIV positive patient will have a good adherence then the risk of becoming a loss of follow up visit will not be there. Most of HIV positive patients experience the loss of follow up visits because of stigma among themselves, among the surrounding community or even to health providers.

By stigmatizing themselves HIV patients feel shy to attend CTC for the period of time hence they termed as the loss of follow up visits (Kinsler J, Wong M, Sayles J, Davis C & Cunningham W (2007)

Many reasons for the loss of follow up visits were obtained from HIV positive patients, treatment supporters, relative and close friends, most of them said that they were missing to attend clinic due to lack of fare, believing that the ARVs are not helpful, faith beliefs, family commitments, being very sick and self referral from the initiation clinic to another without documentation (Geng E, Bangsberg D Musinguzi N, Emenyonu N, Bwana M, Yiannoutsos C & Martin, J (2010).

A study “Barriers to Accessing Antiretroviral Therapy in Kisesa, Tanzania: A Qualitative Study of Early Rural Referrals to the National Program” revealed that many HIV positive patients thought that the use of ARV for life would be difficult for them due to low social economy, lack of money for transport, food and they had a negative attitude with health providers in referral hospitals. Also, the study found that some people were refusing transfer or referral to big CTC sites due to the stigma from their friends, neighbors, close relatives and other members of the community (Mshana G, Wmoyi J, Busza J, Zaba B, Chagalucha J, Kaluvya S & Urassa M, 2006)

In Mozambique a study on Loss of follow-up of adults in public HIV care systems in Mozambique: Identifying obstacles to treatment found that death and transfer out from the initiation clinic were the factors associated with the loss of follow up visits (Micek M et al, 2010)

A study “Loss to Follow up: A Major Challenge to Successful Implementation of Prevention of Mother-to-Child Transmission of HIV-1 Programs in Sub-Saharan Africa” found that the stigma and discrimination, long waiting for the services, lack of space, distance from health facility were the reasons for the loss of follow up visits (Kalembo & Zgambo, 2012)

A study “Strengthening The Quality Of HIV Data In Kenya: Tracing of Patients Lost To Follow Up and Reduction of Low Linkage” revealed that HIV positive patients in Kenya were facing the low economic status like in other sub Saharan people which led them to miss their appointments. Furthermore other thought that they were healed after using the ARV for some period of time, the HIV manifestation signs tend to come down after starting ARVs, due to poor knowledge on using of ARVs patients fail to adhere to treatment as per prescription , some were not been told that ARVs are to be used throughout of life. Living far from the clinic also was the reason for the loss of follow up visits in that study. Other patients were transferred outside the country. However being woman one is responsible for caring children at home, by so doing women were lost for follow up visits because they have nobody to take care for their children when they go to CTC. Another cause seen in the study was a stigma among HIV positive patients who did not want to be identified as HIV positive to their relatives, friends or other members of the community (Mwangi C, 2013)

A study “Time-Dependent Predictors of Loss to Follow-Up in a Large HIV Treatment Cohort in Nigeria” revealed that the lost to follow was associated with the health of the HIV patient according to WHO classifications which are: being very sick, the amount of virus in the blood of the patient and the immune status of the patient, being young also was associated with the loss of follow up visits, having low economic status, no job, lack of education and being single(Meloni S,Chang C,Chaplin C, Rawizza H, Jolayemi O, Banigbe B, Okonkwo P & Kanki 2014)

A study “Policy and practice, lost in transition: Reasons for high drop-out from pre-antiretroviral care in a resource-poor setting of eastern Uganda” found that lack of health education on ARVs, work load, beliefs, gender inequalities, transport costs, long waiting time during at services points were factors associated with the loss of follow up visits among HIV patients (Lubega et al, 2012)

A study “The social and clinical characteristics of patients on antiretroviral therapy who are ‘lost to follow-up’ in KwaZulu-Natal, South Africa”: a prospective study

revealed that HIV patients were moving to other ARVs clinics without referral letters, however being very sick or feeling better was associated with LTF among HIV patients who attending CTC, having poor economic status, drug abuse and alcohol, fear of missing employment, stigma and use of traditional medicines (Peltzer K, Ramlagan S, Khan M, Gaede B, 2012).

A study on the constraints of antiretroviral uptake in rural areas: the case of Thamaga and surrounding villages, Botswana revealed that the financial difficulties among ARVs users is the factor which hinder patients to attend CTC due to lack of bus fare, use of traditional medicines from local doctors, failure of the people to give their children health education about HIV, ARV use due to culture, lack of knowledge about HIV/AIDS and use of ARVs, the distance from the CTC, faith beliefs as some of religious institutions prohibit their people to use ARVs, also stigma and discrimination among HIV positive patients and the community(Bene M, Darkoh M, 2014)

A study “Loss of follow up from isoniazid preventive therapy among adults attending HIV voluntary counseling and testing sites” in Uganda found that being young, death of partner, separation from marriage and being divorced were the causes of the loss of follow up visits among HIV positive patient who were attending CTC for the ARVs (Namuwengea P, Mukonzoc J, Kiwanukaa N, Wanyenzea R, Byaruhangab R, Bissell K, & Zachariahe R, 2011)

A study “Wamepotea (They have become lost): Outcomes of HIV-positive and HIV-exposed children lost to follow-up from a large HIV treatment program” in western Kenya revealed that the reasons for the loss of follow up visits were disclosure, discrimination, lack of fare, use of traditional medicines, faith beliefs and transferring to other clinics. (Braitstein P, Songok J, Vreeman R, Wools-Kaloustian K, Koskei P, Walusuna L, Ayaya S, Nyandiko W and Yiannoutsos C, 2011).

A study “Toward an Understanding of Disengagement from HIV Treatment and Care in Sub-Saharan Africa”: A Qualitative Study revealed that HIV positive patients were

not attending at CTC due to the negative attitude of health providers to their clients, HIV positive patients thought that they were treated in discrimination and stigmatized approach. Other health providers had abusive language which discriminated and stigmatized the patients. Also caring of the HIV patients hinder the treatment supporter to go to the CTC to pick ARV for the patients. However, even going to the funeral was found to be the reasons for loss to follow up (Ware N, Wyatt M, Geng E, Kaaya S, Agbaji O, Muyindike W, Chalamilla G & Agaba P, 2013)

A study “Barriers to access to antiretroviral treatment in developing countries”: a review found that financial constrains to HIV positive patients hinder them to go to CTC, failure of health providers to give their clients the full information about how to use ARVs, their side effects, and it was lifelong treatment, and others were stigmatized by themselves as they were worried to be seen by other community members (Posse M., Meheus F, Van Asten H Van Der Ven, A & Baltussen R, 2008).

A study “Structural barriers to ART adherence in Southern Africa: Challenges and potential ways forward” revealed that the bad condition of roads, failure to save food, lack of social support to HIV positive patients, health facilities factors, moving from one area to another for HIV positive patients, gender inequality, lack of knowledge about HIV/AIDS, how to use ARVs, its side effects, its advantages to HIV patients, misconception and myths about ARVs and HIV/AIDS general to be the factors contributed to the loss of follow up visits among HIV positive patients who attending CTC.(KageeA , RemienR, BerkmanA, Hoffman S, CamposL & SwartzL, 2008)

A study “The Impact of Herbal Drug Use on Adverse Drug Reaction Profiles of Patients on Antiretroviral Therapy in Zimbabwe” revealed that many HIV positive patients are mixing ARVs and traditional medicines by thinking that traditional medicines are giving them better health, it boosts immune and it has no side effects compared to ARVs (Mudzviti T, Maponga C, Khoza S, Ma Q,& Morse G, 2012) By thinking so many HIV positive patients who are on ART tend to have poor adherence hence becoming the loss of follow up visit

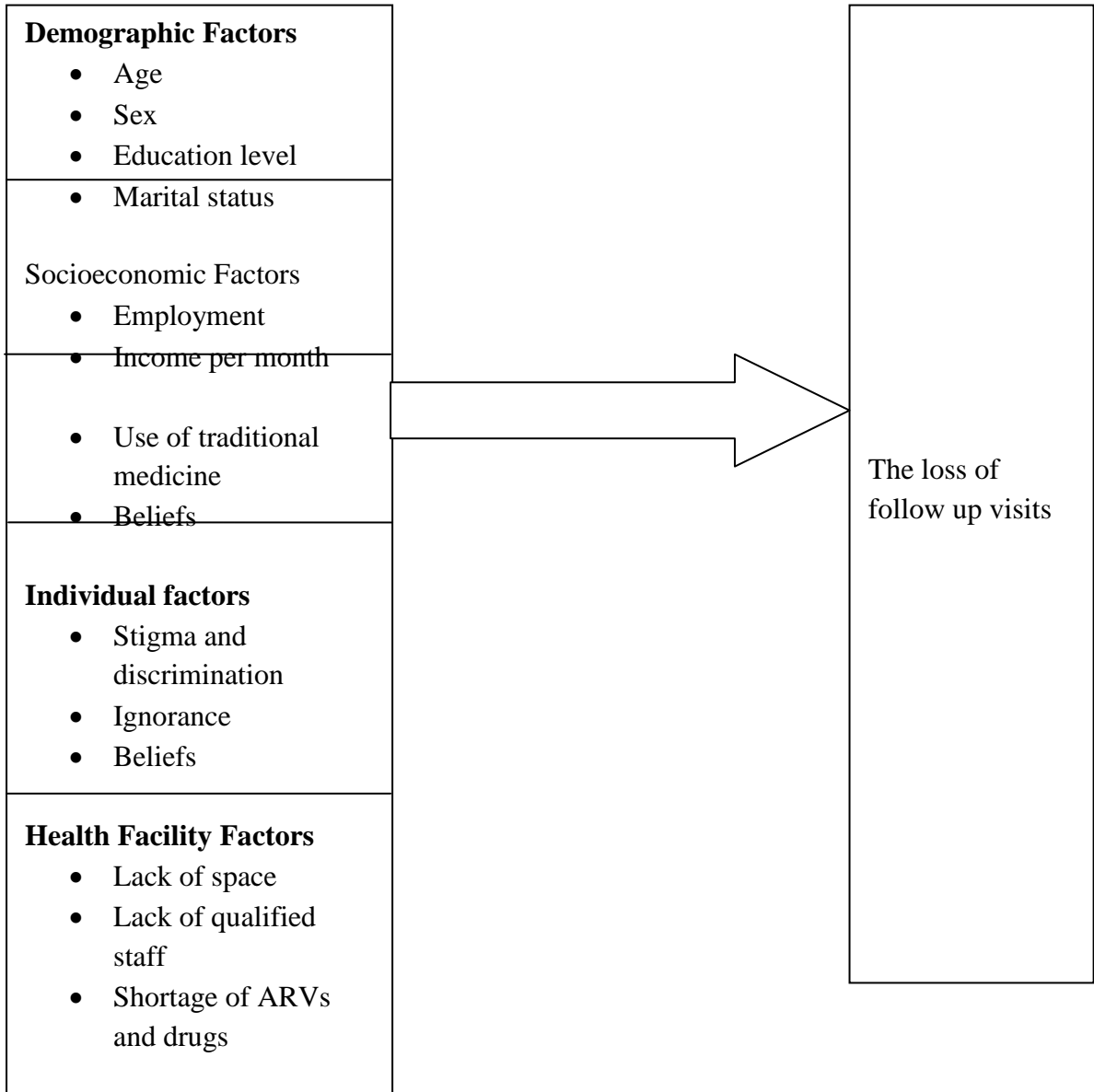
A study done in Zimbabwe on Patient Retention, Clinical Outcomes and Attrition-Associated Factors of HIV-Infected Patients Enrolled in Zimbabwe's National Antiretroviral Therapy Programme 2007–2010 revealed that the patient's condition was the reason for the loss of follow up visit, gender difference whereby men become the loss of follow up visits compared to females, Also, the difficulty in following treatment in referral hospitals (Apollo M, Shiraishi R, Takarinda K, Dzangare J, Mugurungi O, Murungu J, Abdul-Quader A & Woodfill C, 2014)

A study “Reasons for the loss of follow-up among mothers registered in a prevention-of-mother-to-child transmission program in rural Malawi” revealed that lack of health education on HIV, ARVs, stigma, discrimination, household conflict and even divorce on disclosure of HIV status, lack of support from family, cultural taboos, long waiting times at CTC, transport costs were the reasons for the loss of follow up visits .(Bwirire L, Fitzgerald M, Zachariah R, Chikafa V, Massaquoi M, Moens M, Kamoto K, Schouten E, 2008)

A study”Early loss to follow-up of recently diagnosed HIV-infected adults from routine pre-ART care in a rural district hospital” in Kenya: a cohort study revealed that marital status and distance from health facility (> 5 km) were the causes to the loss of follow up visits (Hassan A, Fielding K ThuoN, Nabwera H, Sanders E and Berkley J, 2011).

Figure 2.2 Theoretical Framework

Independent Variables Dependent Variable



Source: Researcher, 2015

CHAPTER THREE

EVALUATION METHODOLOGY

3.1 Introduction

This chapter describes how the study was designed and conducted. It explains the methodological approaches which were adopted in collecting and analyzing the relevant data. The main issue involved in this chapter includes the study area, evaluation period, evaluation approach, evaluation design, focus of evaluation and dimensions, indicator variables, population and sampling, target population, source population, study population, study units and sampling units, sample size sampling technique, data collection methods, data processing and analysis technique.

3.2 Evaluation approach

This was a formative evaluation as the program was already established and it is still working and evaluation did not end the program to continue with its activities. The evaluation report may be used by Mzumbe University for academic purposes, Management Development for Health (MDH) as an organization and Ilala Municipal Council for their documentation.

3.3 Evaluation Design

The aim of the study was to assess factors and challenges associated with the loss of follow up among visits HIV positive adults attending CTC in Ilala Municipal council. A retrospective observational hospital based study using a cross-sectional study design was employed in this study. Furthermore, questionnaires were used for acquiring information from the respondents.

3.4 Evaluation period

The data collection using structured questionnaires was undertaken from May- June 2015

3.5 Study Area

Ilala Municipal Council is one of the three Municipalities in Dar es Salaam City. The Municipality covers an area of 210 km² with an estimated population of 1,799,000 with an annual increase rate of 4.6% as projected from Population projection 2012 census IMC (2013).

The council is bordered by the Indian Ocean on the East, the Coast Region on the West, Kinondoni Municipality on the North and Temeke Municipality to the South. Administratively, it is divided into 3 Divisions, 22 Wards with 101 sub streets. It has a sandy beach, loamy and gently rising flat lands of Pugu hills that reach the altitude of 900 ft. above the sea level and low level of Msimbazi river valley with hot and humid atmosphere, temperatures ranges between 24⁰C – 28⁰C in June to October and 29⁰C – 35⁰C during November to May (IMC, 2013).

The Ilala Municipal Council experiences two periods of rainy season. A short rainy period from October to December with an average of 75 – 100mm of rain per month and a long rainy period from March to June with an average between 150 – 300 mm of rain per month. During the rainy season, the Municipal council experiences frequent diarrhea diseases and cholera outbreaks as a result of water contamination as most of the areas lack proper drainage and sewage systems IMC(2013).

Economic activities conducted within the area are productive sectors such as fishing, industries natural resources and business activities including formal and informal ones such as market places, employment, and a wide range of business that attracts a larger population which creates high demands of food supplies and wastes generation that affect environmental sanitation IMC (2013).

3.6 Study population

The study population was HIV positive adults who initiated on ARTs at Amana and Mnazi mmoja CTC during the period of 1st Jan to 31st December 2012 and health workers in CTC. The HIV positive patients were used because they are the one who have information on ARV treatment and the situation which hinder them not to attend the clinic as scheduled. Health providers who are working in CTC were included because are the ones who meet the challenges from the patients.

3.6.1 Inclusion Criteria

The patients age groups of between 18 and 60 years attending CTC clinic for refilling their prescription, patients initiated on ART during the period 1st January 2012 to 31st December 2012 at Amana and Mnazi mmoja CTC patients who had missed the clinic for three month consecutively and patients who consented to participate in the study.

3.6.2 Exclusion Criteria

Patients below the age of 18 and above 60 years and patients with no history of the loss of follow up visits were excluded.

3.7 Units of analysis

Study unit was HIV positive adults who were attending CTC in Ilala Municipal Council and CTC health workers in Amana and Mnazi Mmoja CTC was selected purposively due to the high number of clients and provision of second line treatment.

3.8 Indicator variable

Dependent variable was the loss of follow up visits.

Independent variables include the following client's characteristics age, sex, address, occupation, marital status, income per month, lack of space, number of service

providers, and use of traditional medicines, beliefs, ignorance, stigma and discrimination, knowledge on ARVs

3.9 Sample size

The study used the following formula for the calculation of sample size for population in order to get potential respondents and valid findings this is according to Daniel (1999) for sample size calculation when the sample size is smaller than or equal to 5% of the population size ($n/N < 0.05$) (231/26867).

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

Where n=sample size

z= Z statistic for a level of confidence, set at 1.96 for 95% confidence interval

P= proportion in proportion of one; P=18.5% (MDH, 2011)

d=precision (in proportion of one if 5%, d=0.05)

N= 26867 (NACP Report, 2012)

$$n = \frac{(1.96)^2 0.185(1-0.185)}{0.05^2}$$

n=231

Therefore, the minimum estimated sample size for this study was 240 people after adding 4% of the non respondents.

Sample size used was 240 respondents who consented to participate in the study, 190 were patients this is because the patients were the ones who received ARVs and themselves were loss to follow up visits so the information were gathered from an individual who experienced drop out. Also, 50 respondents were health providers at Amana and Mnazi mmoja CTC because they were the ones who provided services to patients.

3.10 Sampling Procedure/techniques

The study was conducted in Ilala Municipal Council in Dar-es-Salaam City to assess the factors and challenges associated with the loss of follow up visits among HIV positive adults who were attending CTC. CTC Data Base was used to obtain identity numbers of loss of follow up visits patients. After there, simple random sampling technique was used for this study to obtain the study respondents by using lottery method whereby loss of follow up visit identity numbers were written on indistinguishable piece of papers whereby six blinded person then picked one piece of paper randomly, opened and read the identity numbers which appeared on the pieces of paper. The procedure was repeated until 240 were selected from 1001 identity numbers. After that the patients' files were obtained to extract patients or treatment supporters contact numbers. There after they were traced by cell phones.

3.11 Types and source of data

Primary data were obtained from HIV positive adult who were on ART and health workers in CTC who consented to participate in the study and secondary data were obtained from CTC Data Base and patients' files.

3.12 Data collection

Two hundred and forty respondents were recruited in the study, 190 were patients and 50 were health providers who consented to participate. Data collection was obtained through structured questionnaires which were given to respondents (patients) and health providers in CTC. Data was collected by following standard operation procedures to ensure that the quality of data was maintained. Six researcher assistants were recruited in data collection and before that they were oriented on evaluation objectives and ethical issues which were pertinent to the study before and during the data collection. Also Researchers assistants were oriented on how to use data collection tools. All completed data collection forms were examined for clarity and consistency.

3.13 Validity and reliability issues

In order to avoid biasness and to ensure that the data were correct and reliable, pilot study was conducted at Kitunda dispensary using ten clients who were on ART. This enabled the researcher to assess the validity of questionnaires and quality of data. Findings of the pilot study formed the basis for modified questions and improved clarity. Moreover, the pre-testing aimed at finding out how long it would take to administer the questionnaire, which questions that not well structured for respondents to understand the right use of language and the relevance of questions and coding.

3.14 Data management and analysis

Data analysis for this report was done by using STATA software version 13. Before analyzing the dataset were cleaned and evaluated for consistence before analysis.

Descriptive statistics were done and the results presented in numbers, percentages and proportions, fisher's method to test the difference in proportions and P-value was used. Also Univariate and multivariable analysis were used. Logistic regression analysis was used in Univariate analysis to investigate the influence of each variable on missing the clinic or not missing clinic and then to test for confounding effects of different variables. Logistic regression model was used because the loss of follow up visits is a binary outcome variable.

Likelihood ratio test was also carried out first to test whether the variable should be included in the model as a linear form or as a categorical form and then testing for the significance of each variable before deciding whether or not to include it in the final multivariable analysis model by using Hosmer Lemeshow test (i.e. whether the variable fit the model better). Any variable which became significant at the level p-value ≤ 0.10 in simple analysis was taken for further investigation in multivariable analysis model. In multivariable model, a factor was considered to have an association with the loss of follow up visits if it had p-value ≤ 0.05 and also confounding effect of different factors

was controlled using multivariable logistic regression model. Confounding effect was tested for in every variable and age, sex and marital status were used.

3.15 Ethical Issues

This evaluation was conducted after the submission of the proposal to Mzumbe University and approved by the research team, and then a letter from MU was obtained and sent to Ilala Municipal Medical Officer for permission to conduct the study in his area. The study took into consideration the following points: voluntary participation without force the respondents, informed consent to all respondents before being interviewed. Also, there was confidentiality and privacy to questionnaires so as to keep confidentiality of the information given by respondents

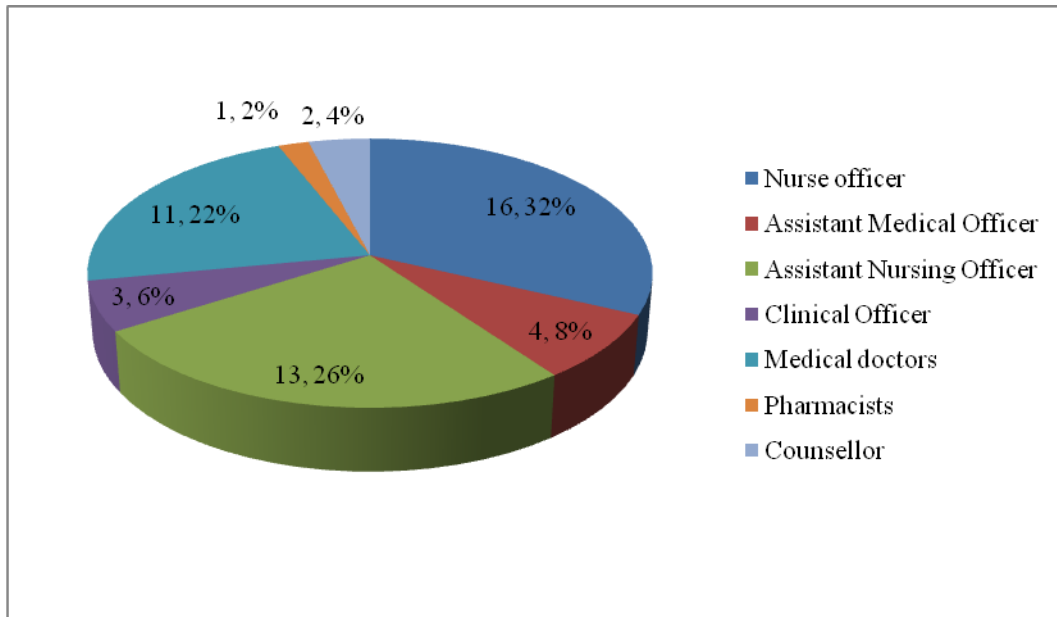
CHAPTER FOUR

PRESENTATION OF FINDINGS

4.1 Introduction

Two hundred and forty (240) participants were recruited in the study whereby 190 participants were patients while 50 participants were healthcare workers. For patients, the age group which had a high number of participants was that of 18-35yrs which had 102(54%) participants and most of them were female patients. Majority of health care workers who participated in this study were nurses 16(32%) while there was only 1(2%) pharmacist as indicated in fig 4.1

Figure 4.1: Percentage distribution of Respondents as a health care workers who participated in the study (N=50)

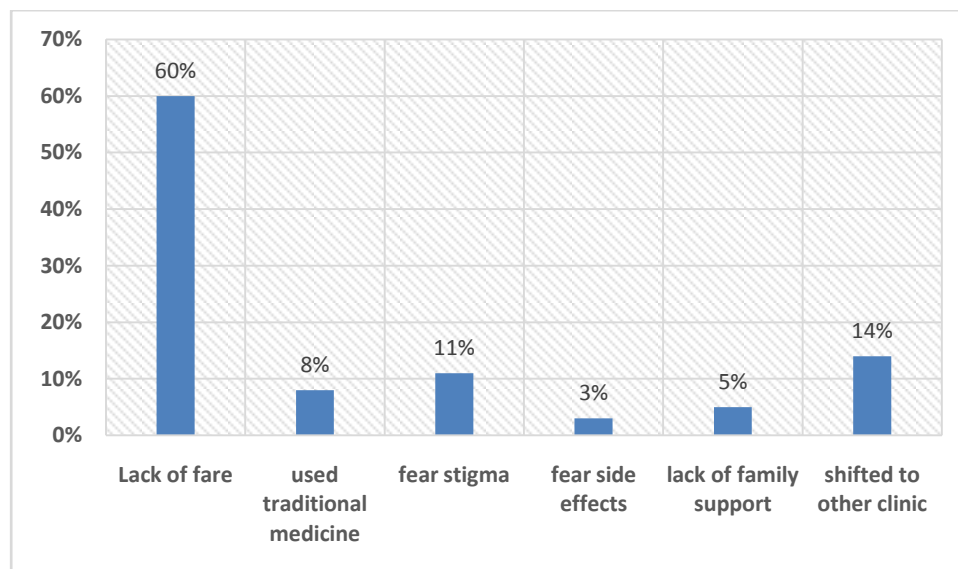


Source: Field data, 2015

4.2 Social Demographic factors associated with loss of follow up visits among patients.

In this study a total of 120(63%) out of 190 patients recruited reported to have ever missed ART clinic for any reason. When asked about reasons for missing from CTC clinic for getting services, most of the study population 72(60%) reported lack of fare for transport to clinics to be the main reason for not attending CTC clinics, see figure 4.2

Figure 4.2: Percentage distribution of Respondents by factors associated with the loss of follow up visits

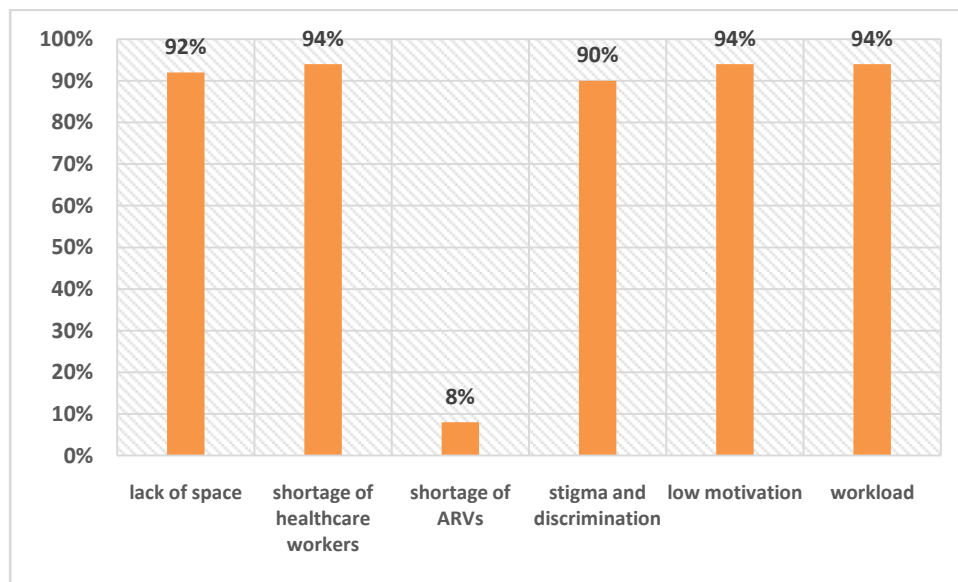


Source: Field data, 2015

Healthcare providers who participated in this study were asked the main challenges which they faced during their day to day service provision in health facilities. Over 90% from all 50 health care providers who were interviewed reported that the main challenges which were encountered in day to day services were lack of enough space for service provision, shortage of healthcare providers, stigma and discrimination

among workers, low motivation and high work load among health care providers as indicated in figure 4.3.

Fig 4.3: Percentage distribution of respondents with Challenges on provision of CTC services to HIV clients (N=50).



Source: Field data, 2015

Table 4.1 presents the results on the relationship between social demographic data among the study population and those missing to attend CTC clinics. There was no relationship between loss to follow-up and gender of the patient ($p=0.23$). Similarly, no relationship was found between loss to follow-up and the rest of demographic characteristics i.e. age, marital status, educational level, occupational level well as monthly income (p values >0.05)

Table 4.1: Percentage Distribution of respondents by social demographics factors associated with loss of follow up visits at CTC clinics

Variable	Total	Ever missed clinic	
		No (%)	Yes (%)
Sex			
▪ Female	129	43(63)	86(72)
▪ Male	59	25(37)	34(28)
Total	188	68	120
Age (yrs.)			
▪ 18	6	3(4)	3(3)
▪ 18- 35	102	38(55)	64(53)
▪ 36- 50	77	27(39)	50(42)
▪ More than 50	4	1(1)	3(3)
Total	189	69	120
Marital status			
▪ Single	62	28(42)	34(28)
▪ Married	92	31(46)	61(51)
▪ Divorce	16	4(6)	12(10)
▪ Widow	12	2(3)	10(8)
▪ Cohabiting	5	2(3)	3(3)
Total	187	67	120
Education level			
▪ None	5	2(3)	3(3)
▪ Primary	147	52(75)	95(80)
▪ Secondary	33	15(22)	18(15)
▪ College/university	3	0(0)	3(3)
Total	188	69	119
Occupation			
▪ Employed	22	7(10)	15(13)
▪ Self-employed	107	33(48)	74(62)
▪ Peasant	9	4(6)	5(4)
▪ No job/no formal job	51	25(36)	26(22)
Total	189	69	120
Monthly income (Tsh.)			
▪ Less than 100,000	109	43(62)	66(55)
▪ 100,000-300,000	66	20(29)	46(39)
▪ 300,001-500,000	7	2(3)	5(4)
▪ 500,001-700,000	2	1(1)	1(1)
▪ More than 700,000	4	3(4)	1(1)
Total	188	69	119

Source: Field data, 2015

Results from table 4.1 demonstrate the distribution of ever missing to attend CTC clinics with different explanatory variables taken at CTC clinic. There was high percent of percentage of females (72%) who missed the CTC clinic. There was also a high

proportion of respondents with percentage of loss to follow-up who aged (18-35) years. Furthermore, the results show that the amount of respondents who were married were high (51%). Also there is high proportion of patients (86%) who missed the clinic and reported to spend less than 5, 000 to reach the clinic. There was high percentage of respondents who had primary education and missed the CTC clinic. Similarly, a high proportion of respondents who missed the clinic were self-employed.

Table 4.2: Percentage distribution of the respondents by relationship between different explanatory variables with the loss of follow up visits at CTC clinics

Variables	Total	Ever missed clinic	
		No (%)	Yes (%)
Relatives/family/partner know HIV status			
▪ Yes	166	63(91)	103(87)
▪ No	22	6(9)	16(13)
Total	188	69	119
Reasons for not disclosing HIV status			
▪ Fear of stigma	21	6(100)	15(88)
▪ Fear divorce	1	0(0)	1(6)
▪ Fear to lose my job	1	0(0)	1(6)
Total	23	6	17
Whether given education on advantage and side effects of ARV			
▪ Yes	172	59(87)	113(97)
▪ No	12	9(13)	3(3)
Total	184	68	116
Time used to reach the clinic			
▪ Less than 30 minutes	48	17(26)	31(26)
▪ 1 hour	98	38(58)	60(51)
▪ 2 hours	34	10(15)	24(21)
▪ More than 3 hours	3	1(2)	2(2)
Total	183	66	117
Amount of fare spent to reach the clinic (Tsh.)			
▪ Less than 5000	156	50(74)	106(89)
▪ 5000-10,000	21	14(21)	7(6)
▪ 10,001- 20,000	2	1(1)	1(1)
▪ More than 30,000	8	3(4)	5(4)
Total	187	68	119
Time spent at clinic before getting the service			
▪ Less than 30 minutes	25	7(10)	18(15)
▪ 1 - 2 hours	135	54(79)	81(68)
▪ 2 - 3 hours	25	6(9)	19(16)
▪ More than 3 hours	2	1(1)	1(1)
Total	187	68	119

Source: Field data, 2015

The result from table 4.2 shows a percentage distribution of the respondents by relationship between different explanatory variables. There was a high proportion of

respondents (87%) who missed CTC clinic whom their family members know their HIV status. A high proportion of respondents (88%) missed the CTC clinic who had fear stigma as the reason for not disclosing their HIV status. Similarly, a high proportion of patients (51%) used 1 hour, yet missed the CTC clinic. Other proportion can be found on table 4.2 with their respective proportions.

Table 4.3: Percentage distribution of respondents shows the relationship between different explanatory variable with the loss of follow up visits at CTC clinics

Variables	Total	Ever missed clinic	
		No (%)	Yes (%)
Opinion on the time spent at the clinic before getting the services			
▪ Short time	21	14(21)	7(6)
▪ Moderate	131	44(66)	87(73)
▪ Long time	31	8(12)	23(19)
▪ Very long time	3	1(1)	2(2)
Total	186	67	119
Lack of fare for transport to the clinic			
▪ Yes	98	16(89)	82(98)
▪ No	4	2(11)	2(2)
Total	102	18	84
Using tradition medicine			
▪ Yes	9	5(100)	4(67)
▪ No	2	0(0)	2(33)
Total	11	5	6
Opinions on the attitude of health care providers			
▪ Good and satisfying attitude	99	46(68)	53(46)
▪ Moderate	73	19(28)	54(47)
▪ Stigmatize some patients	12	3(4)	9(8)
Total	184	68	116
Whether time for service at the clinic is enough			
▪ Yes	157	64(94)	93(79)
▪ No	28	4(6)	24(21)
Total	185	68	117
Ever missed ARV at the clinic			
▪ Yes	33	8(13)	25(22)
▪ No	146	55(87)	91(78)
Total	179	63	116
Type of ARV used			
▪ First line	61	14(100)	47(98)
▪ Second line	1	0(0)	1(2)
Total	62	14	48

Source: Field data, 2015

From table 4.3 it can be found that high proportion of respondents spent moderate time on getting services (73%) yet they missed the CTC clinic. Similarly 98% of the respondents missed the CTC clinic because they didn't have fare to go to the clinic. Also 67% of respondents missed the CTC clinic because they were using traditional medicine. 46% of the CTC clinic reported to have good and satisfying attitude from health care providers but yet they missed the clinic. Other explanatory variables can be found on table 4.3.

Table 4.4 shows the results univariate and multivariate analysis of the association between the loss of follow up visits and different variables. The result from univariate analysis indicates that education on ARV among participants had significant relationship with the loss of follow up visits among patients ($p=0.011$). This means that patients who reported and had no education on ARV were 83% less likely to loss of follow up visits compared to those who reported to have education on ARV ($OR = 0.17$). However, this variable was not statistically significant in multivariate model. Those who reported using 5,000-10,000 as fare for transport to CTC clinics were significantly 76% less likely to miss to the clinics compared to those who reported to spend less than Tsh 5, 000 ($OR = 0.24$; $P\text{-value} < 0.003$; $95\%CI [0.09-0.62]$). This variable remained statistically significant in multivariate analysis when adjusting for potential confounders such as sex and age of patients there is a relationship between patient reported using 5,000-10,000Tsh as fare for transport to CTC clinics. Results for other variables are as indicated in table 4.4

Table 4.4: Univariate and multivariate analysis of risk factors for the loss of follow up visits among patients attending CTC clinics

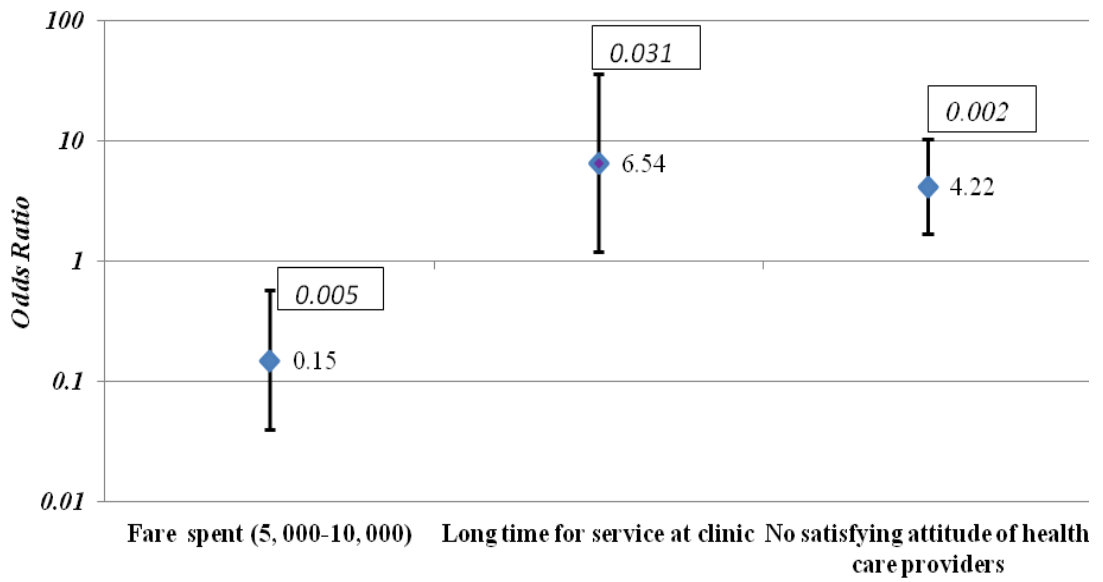
Risk factors for loss of follow up among patients on ARV				Risk factors for loss to follow up adjusted for age, sex and education level		
Variable	Crude OR	95% CI	P-value	Adjusted OR	95% CI	P-value
Education on ARV						
▪ Yes	1.00	[1.00,1.00]	.	1.00	[1.00,1.00]	.
▪ No	0.17	[0.05,0.67]	0.011	0.52	[0.10,2.70]	0.437
Fare spent to clinic (Tsh.)						
▪ Less than 5000	1.00	[1.00,1.00]	.	1.00	[1.00,1.00]	.
▪ 5000-10,000	0.24	[0.09,0.62]	0.003	0.15	[0.04,0.57]	0.005
▪ 10,001- 20,000	0.47	[0.03,7.70]	0.598	0.44	[0.00,54.68]	0.740
▪ More than 30,000	0.79	[0.18,3.42]	0.748	1.06	[0.15,7.56]	0.954
Time spent before services						
▪ Short time	1.00	[1.00,1.00]	.	1.00	[1.00,1.00]	.
▪ Moderate	3.95	[1.49,10.51]	0.006	2.44	[0.75,7.92]	0.139
▪ Long time	5.75	[1.71,19.33]	0.005	6.54	[1.19,36.00]	0.031
▪ Very long time	4.00	[0.31,52.06]	0.290	1.54	[0.06,40.44]	0.796
Attitude of health providers						
▪ Good and satisfying	1.00	[1.00,1.00]	.	1.00	[1.00,1.00]	.
▪ Moderate for some	2.47	[1.28,4.75]	0.007	4.22	[1.71,10.46]	0.002
▪ Stigmatize patients	2.60	[0.66,10.20]	0.169	1.84	[0.38,8.80]	0.445
Enough time for service in clinics						
▪ Yes	1.00	[1.00,1.00]	.	1.00	[1.00,1.00]	.
▪ No	4.13	[1.37,12.47]	0.012	2.43	[0.59,10.07]	0.220

Source: Field data, 2015

4.3 Independent risk factors for the loss of follow up visits

Fig 4.4 presents results on the independent predictor of the loss of follow up visits among patients attending CTC clinics. The results show that adjusting for potential confounders which were age, sex and the education levels of participants, variables like fare used to the clinics, patients perception on attitudes of health workers at the clinics and time spent at the clinics waiting before getting services were significantly associated with the loss of follow up visits among patients. Patients who were able to spend 5,000-10,000/= as fare to the clinics were significantly 85% less likely to have a loss of follow up visits compared to those who spent less than 5,000 (OR: 0.15; 95%CI [0.04-0.57]; p-value 0.005). Patients who reported that they thought to use long time at the clinics waiting for the services were significantly 6.54 times more likely to be the lost of follow up visits compared to those who reported to spend short time waiting before getting services (OR: 6.54; 95%CI [1.19-36.00]; p-value 0.03). If the patient reported to perceive health care provider's attitude at clinics as not satisfactory she/ he was 4 times more likely to be the loss of follow up visits compared to patients who reported to be satisfied with attitude of healthcare providers (OR: 4.22; 95%CI [1.71-10.46]; p-value 0.002), as indicated in the figure 4.4.

Fig 4.4: Independent risk factors for the loss of follow up visits among patients



Source: **Field data, 2015**

CHAPTER FIVE

DISCUSSION OF THE FINDINGS

5.1 Introduction

In order to assess the factors associated with the loss of follow up visits among HIV positive adults attending care and treatment at clinics in Ilala Municipality the study comes up with the following findings:

5.2 Factors associated with the loss of follow up visit

5.2.1 Lack of Bus Fare

It was found that 60% of 120 clients, who missed CTC, said that they didn't attend at ART clinic due to lack of bus fare and this shows that lack of bus fare for the majority of the ART users is a big problem to them, and these lead to a higher number of clients with the loss of follow up visits at Amana and Mnazi mmoja CTC centre in Ilala Municipality.

According to Makunde et al (2012) on the study of the loss of follow up visits , the results show that the majority of the clients using ART in Tanga Region failed to attend at care and treatment clinic due to lack of bus fare. Therefore lack of bus fare to majority of clients using ART, seem to be a big problem and ends in the loss of follow up visits in CTC centre at Ilala Municipality.

Furthermore, Ohene et al (2013) urged that many of the ART users failed to travel out of town because of financial/ economical constraints and as a result the majority of the clients ended in the loss of follow up visits.

This shows that many clients run away from the ART clinics not because of their will but because of failure to get money for transport and thus make them feel bad to stay at

home for months without taking ART which is not recommended for HIV management as well as it is harmful to their health.

Having a high number of the loss of follow up visits in the Municipality it costs much for Municipality to trace them back for treatment.

This also was evidenced by the study done in Johannesburg on the cost of using patient tracer to reduce the loss of follow up visits among clients attending at care and treatment centre (Rosen S and Ketlhapile 2010).

According to the study conducted by TACAIDS which revealed that about 18% of adults and 13% of children initiated ART in 2007 proved to be a loss of follow up visits a year later.

These try to magnify the problem how big it is in Tanzania particularly in Ilala Municipal, although the study does not state directly the cause whether it was lack of fare or/ and other related factors.

Majority of Tanzanian are living under poverty the line of less than 1\$, as a result most of them fail to access to the essential social services including medical services leading to chronicity, permanent disabilities and high numbers of death rate. ART users being among the poorest Tanzanians fail to attend for care and treatment at clinics therefore in to the resulted to resistance to ARVs, high viral load, highly risk to opportunistic infections and death.

In addition to that most of the ARV users do not only fail to get money for bus fare, but also for buying food and for nutrition improvement, thus leading to poor adherence to ARVs resulting to low cd4 count and high viral load, severe ill health and death.

It was supported by a study conducted in India on the Barriers to ART adherence and follow up visits among patients attending ART centre in Maharashtra which revealed that financial and socio cultural problems have been a major reason for the loss of

follow up visits (Joglekar R Paranjape R. Jain G Rahane R Potdar K S Reddy & S Sahay 2011).

5.2.2 Fear of Stigma as Factor associated with the loss of follow up visits

On the other hand eleven percent of the respondents reported that they missed ART clinic because of fear of stigma from relatives and the community at large. They further explained that at the ART clinics there are long queues and sometimes you meet with neighbors causing shyness embarrassment and no freedom to continue taking ARVs therefore as a result fails them to attend regularly to ART centres and eventually disappear from the clinics.

According to the study done by Rahane R, Potdar K.S. Reddy & Sahay S (2011) on the barrier to ART adherence and follow ups among client on ART, the results show that the majority of them experience of stigma by relatives and community or fear of being stigmatized if they took medicine.

This also was supported by the study done in Uganda on the retention of HIV persons in Antiretroviral Therapy Program in Post conflict which revealed that the reasons for the loss-of-follow-up visits were: stigma, death, lack of finances to meet transport costs and long distances from the health facility, shortage of food, non disclosure, faith healing beliefs, and self transfer by clients to other clinics (Mugisha K, Ocerro A, Semafumu E, Ciccio L, Muwanika R, Otim J & Makumbi M, 2009).This shows that stigma has a great negative impact to all patients on ART as the majority of them fails to attend at the centres as a result categorized as the loss of follow up visits clients.

Furthermore, a study conducted at Kwa zulu Natal in South Africa on the perceived stigma among patients receiving ART, the result revealed that stigma and discrimination are increasing thus most of the ART users lead to the loss of follow up visits (Peltzer K. Ramlaqan S. 2010).

The study also done by Edith A.M, Tarimo and John G (2014) who conducted a study on the provision of ART on context of self perceived stigma at Muhimbili University, it revealed that the majority of ART users hide their identification cards to prevent being recognized by relatives and the likes definitely they may end up by not attending to the clinic to collect their medicines thus traced as the loss of follow up visits. The study further stated that ART users rush to avoid family faces at ART centre which make them poor adherence to ART clinic and fortunately run into the loss of follow up visits.

Moreover, the study on the impact of HIV related stigma on treatment adherence found that HIV related stigma causes the participants poor adherence to ART (Kartz I et al 2011).Due to this the majority of the clients with stigma run into depression and end up in failure to attend clinics and lead to the loss of follow up visits.

5.2.3 The Use of Traditional Medicines as a Factor associated with the loss of follow up visits Among HIV Positive adult patients.

It was further revealed that 9(8.0%) of the HIV positive clients use traditional medicines as a treatment of the disease in line with antiretroviral therapy. Furthermore it shows that in the long run using traditional medicines reaches a time to stop antiretroviral therapy and continue using traditional medicines only believing that it increases cd4 count reduces viral load and improves their health. But in the real sense these local herbs do not work, it is those ART medicines which are taken in line with that are working. These beliefs will force those clients not to attend their respective ART clinics hence to be categorized as the loss of follow up visits.

According to Peltzer et al (2008) who assessed the use of traditional complementary and alternative medicines for HIV patients done in Kwazulu-Natal, the findings revealed that the majority of participants (51.3%) relied on traditional therapies. Also a study done in Kabarole Uganda by Longlois K. et al (2007) who observed among 137AIDS patients, studied individual with advanced AIDS attending at work place clinic providing ARTs and the study came up with the findings that most of the patients

(32%) were commonly using traditional medicines such as African potato and aloe vera.

On the other side, Mudzviti et al (2012) conducted a study on the impact of herbal drug use on adverse drug reaction to patients on ART in Zimbabwe and the results revealed that the majority of them about (98.2%) were using herbal medicines in line with antiretroviral therapies commonly the Musakavakadzi and Peltoforum African. The majority believed that these herbals reduce occurrence adverse drug events. Also it shows that the majority of the patients using traditional medicines they believe strongly that these medicines treat HIV, it has an ability to improve an overall wellbeing.

In addition to that most of the HIV positive clients fear to disclose their status to relatives for many reasons like either lack of support and clear understanding of the whole situation and as a result they maintain privacy and confidentiality. Due to these reasons the majority continued to use traditional medicines and end up by deterioration of health, the loss of follow up visit and sometimes traced back to health care centre when they are in critical condition and definitely died soon.

5.2.4 Shift to another CTC as a factor associated with the loss of follow up visits among HIV positive adult who were attending CTC

Fourteen percent of the respondents found to shift from their initial CTC without any document to the new CTC. These were termed as the loss of follow up visits patients in the initial CTC while they are not. The patients shifted to the new CTC either by finding themselves to be near their home, others found a more comfortable to be attended by a certain type of health providers and others were afraid to be stigmatized by the community who are living at particular CTC.

Dahab et al (2008) urged that 7% of the HIV positive patients had transferred to other facilities without documentation and termed as the loss of follow up visits. It shows how poor it is in documenting patients' information in CTC. Majority of HIV positive

patients did not want to disclose their HIV status hence hide themselves not being seen by the people they know so they decide to shift from one CTC to another if they think that there are people who know them in the CTC where they used to attend.

Furthermore, a study True outcomes for patients on antiretroviral therapy who are “lost to follow-up” in Malawi by Yu J, Chen S, Wang K, Chang C, Makombe S, Schouten E & Harries A (2007) found the same problem of HIV positive patients to shift from one CTC to another without any official written report from the initiating clinic and termed as the loss of follow up visits while they are still using ARVs

This was evidenced by a study Determinants of Mortality and Non death Losses from an Antiretroviral Treatment Service in South Africa: Implications for the Program Evaluation whereby HIV positive patients were shifting from the initiating clinic because they were looking for the nearest services (Lawn S, Myer L, Harling G, Orrell C, Bekker L, & Wood R, 2006)

Also a study on “Understanding reasons for and outcomes of patients lost to follow-up in antiretroviral therapy programs in Africa through a sampling-based approach” support on this, that self referral from the initiation clinic to another without documentation were the reasons for the loss of follow up visits among HIV positive patients who attended CTC (Geng E, Bangsberg D Musinguzi N, Emenyonu N, Bwana M, Yiannoutsos C & Martin J, 2010).

The HIV positive patients tend to shift from one CTC to another without written documents. This is supported by the study True outcomes for patients on antiretroviral therapy who are " lost to follow-up" in Malawi(Yu et al,2007) HIV positive patients who attend CTC are not ready to disclose their HIV status so they don't want to be seen by people they know when going to CTC or when they are picking their drugs so if they detect that in the CTC they are attending there is someone who knows them they shift to another CTC where they feel there may be nobody who knows them.

Also it is supported by the study that the social and clinical characteristics of patients on antiretroviral therapy who are lost to follow-up 'in KwaZulu-Natal, South Africa: a prospective study. The study found that the shift of the HIV positive patients who attending CTC at another clinic to be among the factors associated with the loss of follow up visits (Peltzer K, Ramlagan S, Khan M, Gaede B, 2011)

Furthermore most of the people living in Dar es salaam have no permanent residence thus tend to move from one ward to another or municipality to another which also drives them to shift from their original clinics to others without any information to the health care providers. So, having many clients with self referrals in different health facilities including Amana and Mnazi mmoja hospital is an indicator of poor or weak referral system in the respective work sites. This occurs either due to inadequate information provided to the clients about referral because of lack of qualified health care providers or the referral system itself is not functioning properly. This impact negatively affects the working system and definitely the loss of follow up visits is increasing from day to day.

5.2.5 Fear of side effects as a factor associated with loss of follow up visits among HIV positive Adult Clients who attending CTC

The study found that 3% of respondents were loss to follow up visits due to the fear of ARVs side effects. The ARVs dose contains combination of number of pills which brings side effects to some of patients like nausea, abdominal discomfort, vomiting, diarrhea and skin rashes consequently majority of patients left their doses and stopped attending to the clinic as scheduled hence termed as loss of follow up.

Posse M et al , 2008 on the study Barriers to access to antiretroviral treatment in developing countries revealed that the fear of side effects of ARVs were the factor associated with loss of follow up visit by (2/19) 10%. This means that the fear of side effects were much higher in that society compared to the people of Ilala Municipality.

Also this finding was supported by a study Retention of HIV Positive Persons in Antiretroviral Therapy Programs in Post-Conflict Northern Uganda-Baseline Survey by Mugisha K et al, 2009 which found that many HIV positive patients were dropped out from the ART due to the fear of ARVs side effects.

5.2.6 The lack of family support as a factor associated with loss of follow up visit among HIV positive patients who are attending CTC.

On the other hand the study revealed that 5% of respondents were loss to follow up due to the lack of support from the family. This may be husband, relatives or other members of the family. Many people have no knowledge about HIV they see it as a disease of shame, in so doing if their relatives get HIV they tend to isolate and stigmatized him/her hence failure to get support on treatment and other necessary needs hence loss of follow up visits.

Kagee A et al, 2008 on study “Structural barriers to ART adherence in Southern Africa: Challenges and potential ways forward” found that HIV positive patients were dropped out from ART because they were lacking support from the family and the community hence termed as loss of follow up visits

Bwirire et al, (2008)in a study “Reasons for the loss of follow-up among mothers registered in a prevention-of-mother-to-child transmission program” in rural Malawi observed that the lack of support from the family was the reason for loss of follow up visits among HIV positive patients.

Objective 2: The challenges of ARV provision

5.3 Challenges Which Face Health Providers during Provision of Services to HIV Positive Adult patients.

The researcher continued to investigate more on the challenges that health workers face when caring HIV positive adult clients. She therefore came up with the following challenges:

5.3.1 Shortage of Health Care Providers as a Challenge in Provision of Services to HIV Positive patients

It was found that forty seven participants (94%) stated that shortages of health care providers are the most common challenges in caring HIV positive clients.

This means that the services offered by these health workers are either provided below standard or they are provided in the required standard but the time taken is so long that client stay too long in queues which makes them disappointed and unwilling to come for a revisit. As a result most of the HIV clients disappear from the ART clinics and are countered as the loss follow up visits.

This is supported by a study on Risk factors, barriers and facilitators for linkage to antiretroviral therapy care: a systematic review revealed the shortage of health providers be among the factors that contributed to the loss of follow up visits among HIV patients who attend CTC. By having few staff in CTC it tends to force patients to stay for too long a time while waiting for the services, these patients fear to be seen by other people and by so doing they become angry hence not attending again at the clinic (Darshini G, Nathan F, Katharina K, 2012).

5.3.2 Inadequate Space as a Challenge in Service Provision to HIV Positive patients

The findings show that forty six (92%) of health care providers said inadequate space is a challenge which they are facing in rendering health care to the clients. Ilala Municipality is more highly populated than the other Municipalities in Dar es salaam this makes ART clinics in the Municipality to be more crowded. Due to this situation despite of renovation and decentralization of Care and Treatment Centre (CTC) they are still overcrowded. This means that more than one service is provided in one room hence more health workers and clients will be in that particular room and aspects of privacy and confidentiality of clients are hampered.

This causes some of HIV positive clients not to attend ART at clinic regularly and eventually not attending clinics at all then comes to be termed as the loss of follow up visits.

5.3.3 Low Motivation among Health Workers as a Challenge in Service Provision to HIV Positive Clients

In analysis the researcher revealed that 47 (94%) of health care providers stated that there was an inadequate motivation which is provided to them. Providing care to HIV positive clients is a bit difficult and challenging one with high risks. These health workers need to be encouraged and motivated by providing them with some incentives. In reality these health workers are provided with very minimal allowances which do not correspond to the actual work they are doing. These usually interfere with provision of quality care to the clients hence these clients find it is better not to attend at the ART clinics than going and receive low quality services elsewhere. These force them to default from the clinics and come to be the loss of follow up visits.

On the other side health workers become frustrated and loose morality to work due to shortage of resources at work facilities like reagents for doing CD4 test and others. All these are very essential for the determination of patients' progress and assist in decision making on which service and care to be given at a particular time.

According to Campbell et al (2011) on a study sources of motivation and frustration among health workers administering ART for HIV patients in rural Zimbabwe, he revealed that health workers are faced with the shortage of resources at their work places it hence impairs their performance in provision of quality services. Also the findings show that health care providers are being blamed for the issues which are out of their control.

Moreover Campbell et al argued that health workers become frustrated because of shortage of medicines and these make most clients not to attend effectively at their respective ART clinics, therefore come identified as the loss of follow up visits.

5.3.4 Workload among health providers in CTC as a challenge facing them during provision of CTC services.

A study found that 94% of respondents said that the workload was the challenge facing health providers during their daily activities in CTC. In CTC the patient were many compared to health providers and many CTC sites have three block of attending patients, you may find a big number in a block with few health providers.

5.3.4 Shortage of ARVs as the challenge facing health providers in provision of CTC services

A study found that 8% of respondents reported to miss clinic as scheduled because of shortage of ARVs. ARVs are expensive drugs, which are not manufactured in the country, so the government ordered it from abroad may be due to delay of purchasing and procurement procedures there is a time whereby the country run stock out of the drug and HIV patients missed some of drugs. Also in a peripheral CTC due to poor documentation may be the pharmacist did not ordered drugs early until they run stock out, moreover the lack of transport to go to the central store or to the store where drugs were stored can cause the problem to CTC hence the stock of drugs and this brings an impact to patients.

This was evidenced by a study Retention of HIV persons in Antiretroviral Therapy Program in Post conflict Northern Uganda whereby the study found the patients were going to the areas were ARV were not provided hence they stopped taking the drugs (Mugisha K et al, 2009). It means that the country has not yet manages to provide services to its people.

5.4 Evaluation Dissemination Plan

The evaluation findings which were obtained from the study will be disseminated as a written report to Mzumbe University, Ilala Municipal Council and MDH as an organization and this will help the organization to correct or find out the solution for the loss of follow up visits among HIV positive patients who attending CTC hence the achievement of an organizational goal.

CHAPTER SIX

SUMMARY, CONCLUSION AND IMPLICATIONS

6.1 Summary

Tanzania like other sub Saharan country is facing problem with the loss of follow up among HIV positive adult who attending CTC for ARVs hence failure of the program to attain its goal of preventing new HIV infection and reduce HIV/AIDS morbidity and mortality among its people. Loss to follow up is a problem in the CTC as many clients are missing their clinic as per scheduled.

The study found that the lack of bus fare to be the leading factor associated with the loss of follow up visit among HIV positive patients who attending CTC in Amana and Mnazi mmoja by 60%. 14% of patients who were the loss of follow visits were shifted from one CTC to another without referral letters or any document from the initiated CTC. 9% were using traditional medicine. However, the challenges which facing health providers were identified and shortage of health providers and low motivation for health workers who work in CTC were 94% these two were the leading challenges in CTC at Amana and Mnazi mmoja in Ilala Municipality. Lack of space 92% was another challenge faced by health providers in CTC.

6.2 Conclusion

Lack of bus fare, shifting from one CTC to another without documentation, stigma and discrimination, use of traditional medicine, long queuing duration have been found to be the factors associated with the loss of follow up visits among HIV positive adults who attend CTC in Ilala municipality. However, lack of space, lack of motivation, work load, shortage of health providers found to be the challenges which face the health providers during their daily activities.

6.3 Policy Implication

The policy implication on combating an error for the loss of follow up visits among HIV positive patients who are on ART, can change the management of HIV positive patients as well as to strengthen CTC sites by increasing space, increase number of health providers, can establish small activities for income generation so that HIV patients can get fare for those who need it. Also the establishment of policy on the loss of follow up visits can help the CTC to overcome stigma among HIV patients, health providers and the community as a whole.

6.4 Programmatic Implications and use of findings for strategic planning

The findings will help the program to set up objectives, targets and interventions to prevent the loss of follow up visits among HIV positive patients, helps to establish retention mechanism for the patients who are on ARTs and helps to know the areas for improvement and to find out the solutions.

6.5 Limitations

The study limitation were the lack of enough information on the study topic because in the country there is no study yet ever done. Another limitation is a financial constraint as the researcher has no sponsor.

6.6 Area for Further Research/ Evaluation

Further researches can be conducted on looking for the proportion rate of the loss of follow up visits among HIV positive adults who attend CTC for the refilling schedule?, What are the true the loss of follow up visits among HIV positive patients who attend CTC for ART refill?

2.7 Recommendations

The study recommends that the data recording system should be strengthened because it found that the recording system of the patients' information was poor. For example, there were some clients who were shifted to other clinics but the CTC term them as the loss of follow up visits. Together with the recording system, the CTC sites should strengthen access and immediate tracking of patients on ART in order to improve patient outcomes, detection and documenting deaths.

The researcher also recommends that the interventions for prevention of the loss of follow up visits among HIV positive patients who are using ART must be started before ART and continued for the all period of treatment. Similarly, HIV/AIDS programme should increase the number of health workers, provide an adequate spaces for provision of services and motivate health workers who attend HIV patients so that they will work in harmony.

Lastly, the researcher recommends that the Ministry of the Health and Social Welfare should establish the policy of loss to follow-up because it was found that there is no policy for the loss of follow up visits which bide the patients who are not adhering to clinics as scheduled hence increasing transmission rate to the community, brings drugs resistance and treatment failure and put the government in a big costs of treating patients.

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APPENDICES

QUESTIONNAIRE (SWAHILI VERSION) FOR PATIENTS

DODOSO LA UTAFITI

1. Tarehe ya usaili
2. Jina la kituo cha afya
3. Namba ya Utambulisho
4. Jinsia
 1. Ke
 2. Me
5. Umri
 1. miaka 18
 2. Miaka 18- 35
 3. Miaka 36- 50
 4. > miaka 50
6. Hali ya ndoa
 1. Sijaolewa/sijaowa
 2. Nimeowa/Nimeolewa
 3. Nimeachika
 4. Mjane
 5. Tunaishi pamoja
7. Kiwango cha elimu
 1. Sijawahi kusoma
 2. Shule ya msingi
 3. Sekondari
 4. Chuo/chuo kikuu
8. Unajishughulisha na kazi gani?
 1. Nimeajiriwa
 2. Nimejiajiri
 3. Mkulima mdogo

4. Sina ajira/kazi rasmi
9. Kwa wastani una kipato cha shilingi ngapi kwa mwezi?
 1. < 100,000
 2. 100,000 – 300,000
 3. 300,001 - 500000
 4. 500,001- 700,000
 5. > 700,000
 10. Je ndugu/mwenza/familia/ yako inafahamu kuwa unaishi na virusi vya ukimwi?
 1. Ndiyo
 2. Hapana
 11. Kama hapana, Je ni kwa nini?
 1. Naogopa kunyanyapaliwa
 2. Naogopa kuachwa na mwenza wangu
 3. Naogopa kufukuzwa kazi
 4. Nyingine (eleza)

.....
 12. Ulipoanza kutumia dawa ulipewa elimu ya afya juu ya utumiaji dawa za ARV na faida na madhara ambayo mtumiaji anaweza kuyapata?
 1. Ndiyo
 2. Hapana
 13. Kwa wastani unapokwenda kliniki unatumia muda gani kufika?
 1. < dakika 30
 2. Saa moja
 3. Masaa mawili
 4. > Masaa matatu
 14. Unatumia shilingi ngapi kwa nauli mpaka ufike kiliniki?
 1. < 5000
 2. 5000-10,000
 3. 10,001- 20,000

4. > 30,00
15. Unachukua muda gani mpaka umalize kuhudumiwa hapa kiliniki?
 1. < dakika 30
 2. Saa 1 – 2
 3. Masaa 2 - 3
 4. > Masaa 3
16. Nini maoni yako kuhusu muda unaotumia kupata huduma hapa kliniki?
 1. Mfupi
 2. Wastani
 3. Mrefu
 4. Mrefu sana
17. Ulishawahi kutokwenda kliniki kupata huduma kwa sababu yoyote?
 1. Ndiyo
 2. Hapana
18. Kama ndiyo mara ngapi?
 1. Mara moja
 2. Mara mbili
 3. Mara tatu
 4. Zaidi ya mara tatu
19. Ni kwa kipindi gani ambacho ulikaa pasipo kuhudhuria kliniki/kutumia dawa za kupunguza makali ya virusi vinavyosababisha ukimwi?
 1. < miezi 3
 2. Miezi 3
 3. Miezi 6 – 12
 4. > Miezi 12
20. Je ni sababu gani ulishindwa kuhudhuria kliniki kuchukua dawa?
 1. Nilikuwa sina nauli ya kwenda kiliniki
 2. Nilikuwa natumia dawa za asili/kienyeji
 3. Niliogopa kunyanyapaliwa

4. Nilipata/nilihofu kupata madhara ya dawa
 5. Nilikosa ushirikiano katika familia yangu
 6. Siridhishwi na huduma katika kituo husika
 7. Niliamua kuhamia kituo kingine
21. Unaonaje tabia na mwenendo wa wahudumu wa afya wanaokuhudumia unapohudhuria kliniki?
1. Ni nzuri na wakuridhisha
 2. Wastani kutegemea na muhudumu
 3. Wananyanyapaa baadhi ya wagonjwa
 4. Nyingine (eleza).....
22. Unafikiri muda uliopangwa kupata huduma kwa wagonjwa unatosha?
1. Ndiyo
 2. Hapana
23. Kama jibu ni hapana elezea
-
24. Ulishawahi kukosa dawa za kupunguza makali ya virusi wakati ulipohudhuria kliniki kwa ajili ya huduma?
1. Ndiyo
 2. Hapana
25. Unatumia aina gani ya dawa za kupunguza makali ya virusi vya ukimwi
1. First line
 2. Second line

QUESTIONNAIRE (English Version)

DODOSO LA UTAFITI

1. Number of questionnaire.....
2. Date
3. Name of health facility
4. Sex
 1. Fe
 2. Me
5. Age
 1. 18 years
 2. 18- 35 years
 3. 36- 50 years
 4. > 50 years
6. Marrital status
 1. Single
 2. Married
 3. Divorced
 4. Widow
 5. Cohabit

7. Educational level

1. None
2. Primary
3. Secondary
4. College/ University

8. What is your occupation?

1. Un employed
2. Employed
3. Self employment
4. Small peasant

9. What is your income per month?

1. < 100,000 Sh.
2. 100,000 – 300,000 Sh.
3. 300,001 – 50000 Sh.
4. 500,001- 700,000 Sh.
5. > 700,000 Sh.

10. Is your spouse/Relatives know that you are HIV positive?

1. Yes
2. No

11. If Not why?

1. I m afraid to be stigmatized and discriminated
2. I m afraid to be divorced
3. I m afraid to lose my job
4. Others (Specify)

12. Did you given health education about any side effects or effects that anybody may get during treatment by using ARVs?

1. Yes
2. No

13. How many hours do you take to reach CTC?

1. < 30 mins
2. One hour
3. Two hours
4. > Three hours

14. How much did you spend for transport to CTC?

1. < 5000 Sh.
2. 5000-10,000 Sh.
3. 10,001- 20,000 Sh.
4. > 30,000 Sh.

15. It takes you how many hours to be attended in CTC?

1. < 30 Mins.
2. 1 – 2 Hours
3. 2 – 3 Hours
4. > 3 Hours

16. How do you comment on time you spend in CTC?

1. Short
2. Average
3. Long
4. Too long

17. Have you ever missed clinic for any reason?

1. Yes
2. No

18. How many times?

1. Once
2. Twice
3. Thrice
4. > Thrice

19. How long did you stop to use ARVs?

1. < 3 Months
2. 3 Months
3. 6 – 12 Months
4. > 12 Months

20. What were the reasons which hinder you to attend CTC?

1. Lack of transport fare
2. I was using traditional medicine
3. I was afraid to be stigmatized
4. I was afraid of side effects
5. I failed to get support from my family
6. I was not happy with services in this clinic
7. I decided to shift to another CTC

21. What is the perception of health workers in CTC?

1. Good
2. Is average depends with health worker
3. They stigmatize other clients
4. Others (specify).....

22. Do you think the time for the CTC services is enough?

3. Yes

4. No

23. If No specify.....

24. Have you ever missed ARVs when you visit CTC for your routine clinic?

3. Yes

4. No

25. What type of ARVs you are using?

3. First line

4. Second line

QUESTIONNAIRE FOR HEALTH PROVIDER

Participant no.....

- 1 Age of health provider in yrs.....
- 2 Cadre of health provider.....
- 3 Have you ever attended any workshop concerning CTC services?
 - 1) Yes
 - 2) No
- 4 Do you think that the working hours in CTC are reasonable?
 - 1) Yes
 - 2) No
- 5 What are the challenges on provision of CTC services to HIV clients?
 - 1) Lack of space
 - 2) Shortage of health providers
 - 3) Shortage of ARVs and other drugs
 - 4) Stigma and discrimination among care givers
 - 5) Low motivation
 - 6) Workload
- 6 How many rooms in your clinic are used for CTC services?
 - 1) One room
 - 2) Two rooms
 - 3) Three rooms
 - 4) Four rooms
- 7 Do you think that the number of health providers in this CTC is enough?
 - 1) YES
 - 2) NO

QUESTIONNAIRE FOR HEALTH PROVIDER (Swahili version)

**DODOSO LA UTAFITI KWA MTOA HUDUMA KATIKA KILINIKI YA
WANAOSHI NA VIRUSI VYA UKIMWI**

Namba ya dodoso.....

1. Umri wa mtoa huduma kwa miaka.....
2. Cheo cha mtoa huduma.....
3. Ulishawahi kuhudhuria mafunzo yoyote juu ya kuhudumia wateja wanaoishi na virusi vya ukimwi kwenye kiliniki ya dawa?
 - 1) Ndiyo
 - 2) Hapana
4. Unafikiri muda wa kuwahudumia wateja wanaokuja kiliniki unatosheleza?
 - 1) Ndiyo
 - 2) Hapana
5. Ni changamoto gani unakutana nazo katika kuwahudumia wateja wa dawa za kupunguza makali ya virusi hapa kliniki?
 - 1)Uhaba wa nafasi
 - 2)Uhaba wa watoa huduma
 - 3) Upungufu wa dawa za virusi
 - 4) Unyanyapaa kati ya wateja wenyewe na ndugu zao
 - 5)Motisha ndogo
 - 6) Kazi nyingi
6. Kuna vyumba vingapi vya kutolea huduma hapa kliniki?
 - 1) Kimoja
 - 2) Viwili

3) Vitatu

4) Vinne

7. Unafikiri idadi ya watoa huduma katika kliniki inatosheleza?

1) Ndiyo

2) Hapana

I: Informed consent form

i) English version

Study title: Factors and challengers associated with the loss for follow up visits among HIV Positive adults attending Care and Treatment Clinics for Antiretroviral Drugs in Ilala Municipal, Dar es Salaam

I (full name)

After being explained and understanding the objective , methods by which the study will be conducted, risks and benefits of this study to my knowledge and clarification from the researcher after asking questions, I do agree to participate and I am willing to be enrolled in this study.

I will provide all the basic information as required by the researcher.

I may withdraw from the study if the researcher goes against our agreement without further information.

Signature

Date

I: Informed consent form

ii) Swahili version

Tafiti: Sababu na changamoto zinazoambatana na kushindwa kuhudhuria kliniki kwa wagonjwa watu wazima wanaotumia dawa za kupunguza makali ya virusi vya ukimwi katika Halmashauri ya Manispaa ya Ilala, Dar es Salaam

Mimi (Jina kamili)

Baada ya kuelezwa/kusoma na kuelewa madhumuni, umuhimu na njia zitakazotumika katika utafiti huu, manufaa na madhara ya utafiti huu kama yatatokea, nimekubali kushiriki katika utafiti huu. Nitatoa taarifa zote kama mtafiti atakavyohitaji.

Nina uhuru wa kujiondoa kushiriki utafiti huu endapo nitabaini kukiukwa kwamakubaliano yetu pasipo kutolewa maelezo ya ziada.

Sahihi

Tarehe