INFLUENCE OF COMMUNITY HEALTH WORKERS ON UPTAKE OF ANTI-RETROVIRAL THERAPY AMONG PEOPLE LIVING WITH HIV AND AIDS IN KAWANGWARE, NAIROBI PROVINCE. A CASE OF LIVERPOOL VCT CARE AND TREAMENT, KENYA

BY

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2011

DECLARATION

This Research Project Report is my original work and has not been presented for any award in any other University.

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I dedicate this Research Project Report to my three daughters, Sandra, Barbara and Laura.

DEDICATION

I dedicate this Research Project Report to my three daughters, Sandra, Barbara and Laura.

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LIST OF ABBREVIATIONS AND ACRONYMS

AIDS	Acquired Immune Deficiency Syndrome
ART	Antiretroviral Therapy
ARVs	Anti retro viral drugs
CACC	Constituency AIDS Control Committee
CBS	Central Bureau of Statistics
CCC	Comprehensive Care Centers
CD4	Cluster of Cell Differentiation 4
CDC	Centers for Disease Prevention and Control
CHWs	Community Health Workers
CTX	Cotrimoxazole (Septrin)
DASCO	District AIDS and STI Coordinator
DMOH	District Medical Officer of Health
DTC	Diagnostic Testing and Counseling
GOK	Government of Kenya
HBC	Home Based Care
HCWs	Health Care Workers
HIV	Human Immunodeficiency Virus
HTC	HIV testing and counseling
KAIS	Kenya AIDS Indicator Survey
KDHS	Kenya Demographic Health Survey
LVCT	Liverpool VCT, Care and Treatment
MOH	Ministry of Health

NACC	National AIDS Control Council
NASCOP	National AIDS and STIs Control Program
NGOs	Non Governmental Organizations
PASCO	Provincial AIDS and STIs Coordinator
PHC	Public Health Care
PLWA	People Living With AIDS
PLWH	People Living with HIV
PMTCT	Prevention of Mother To Child Transmission
STIs	Sexually Transmitted Infections
TB	Tuberculosis
UNAIDS	United Nations AIDS Agency
VCT	Voluntary Counseling and Testing
WHO	World Health Organization

ABSTRACT

The involvement of community health Workers (CHWs), in history has been in existence for the past 50years. In Thailand and the U.S, participation of trained workers was documented since 1950's and countries including Indonesia, India, Gambia and Kenya followed suit in engaging the CHWs, which has proven to be very effective especially in reaching out underserved population. One of the greatest challenges within the African health sector is the critical shortage of human resources, the average doctor to patient ratio across Africa is 1:2000 and therefore CHWs became very critical in bridging the gap in terms of uptake of ART. The purpose of this study was to examine the influence of Community Health Workers on uptake of anti-retroviral therapy among people living with HIV and AIDS in Kawangware Location, Nairobi Province. The study was guided by the following objectives: To establish the demographic characteristics of CHWs and uptake of ART, To investigate the level of training received by CHWs and uptake of ART, To determine how frequency of follow up of CHWs influence uptake of ART and finally To examine the extent to which activity reports influence the uptake of ART in the implementation of the Liverpool VCT project in Kawangware Location. Purposive sampling method was used in study. The study used questionnaire to collect data through face to face interview. Data was entered using SPSS for windows version 9.1 to generate frequencies and percentages. The study found that demographic characteristics of the CHWs such as gender, level of education and age influenced uptake of ART among PLWHA, the study also discovered that activity reporting by CHWs, level of training undergone by the CHWs and frequency of follow-ups done by the community health workers influenced uptake of ART among People Living with HIV and AIDS. The study therefore concluded that the CHWs had an impact on the uptake of ARTs among persons living with HIV and AIDS. The study recommends that CHWs model be given much attention in ART program for PLWHA. From the research findings, it was clear that CHWs influenced the uptake of ART especially when CHWs had adequate training and therefore were able to follow up clients and document their activities. The study revealed that adequate training, frequent follow-ups and documentation are very crucial in the implementation of LVCT project. Recommendations from the study revealed the need for a comparative study to look at CHWs working in other organizations to see whether different results can be generated. An in depth study to be carried out would suffice in order to get the perception of various groups including: People Living with HIV and AIDS and other stakeholders in the medical field. The study suggests that future researchers should do the same study in other areas such as in the rural areas, or in the Peri-urban areas for the purpose of comparison with the findings of the study. The study also recommends that future research should be done by organizations such as Millennium Villages Project in Siaya District for comparison purposes.

CHAPTER ONE

INTRODUCTION

1.1 Background of Study

All over the world, health systems are made up of people who are natural helpers whom Community members turn to for social support and advice. Throughout history of Organized health services, community health workers have played an important role in complementing and supporting the services provided by health professionals. The importance of primary health care was recognized by World Health Organization (WHO) in 1978 when it was declared in Alma Ata conference the role of primary health care (PHC) internationally. The declaration also defined the generic title that is used all over the world today. More so, the declaration envisaged that CHWs contribute a lot towards the achievement of 'health for all', this they do by creating awareness of health services (Barcelona *et al*, 1990).

The concept of using community members to render certain basic health services has been in existence for the past 50 years. The Chinese barefoot doctor program is the best known of the early programs, although Thailand, for example, has also made use of village health volunteers and communicators since early 1950s (Barcelona *et al*,1990).

Bare foot doctors were health auxiliaries who began to emerge from the mid – 1950s and became a nationwide program from the mid 1960s, ensuring basic health care. Partly in response to the inability of conventional allopathic health services to deliver basic health care, a number of countries subsequently began to experiment with the village health worker concept. The role of the CHW was not only a health care provider but also an advocate for the community and an agent of social change, functioning as a community mouth piece to fight against inequalities and advocate community rights and needs to government structures. In David Warmer's famous words, the health worker as 'liberator' rather than the

'messenger'. This view is reflected in the Alma Ata Declaration, which identified CHWs as one the cornerstones of comprehensive primary health care.

The history of community health Workers is rooted in early self – preservation and self reliance strategies by communities all over the world. However, in the U.S, CHW activities are found mostly after the mid-1960s. For this study, selected lists of critical events marking the evolution of the CHW workforce have been grouped into four periods. During the early documentary period(1966-72) attempts to engage CHWs in low income communities were experimented responses to the persistent problems of the poor and related more to antipoverty strategies than to specific models of CHWs interventions for disease prevention and health care(CHW workforce study,2007)

The next period (1973-1989) was characterized by special projects funded by short term public and private grants, often linked to research in the universities, and produced a substantial increase in published studies documenting CHWs potential interventions aimed at health promotion and access to health services.

The third period was by the state and federal initiatives (1990 – 1998) during this period, standardized training for CHWs received greater recognition and there was a surge of community among CHW initiatives across categorical funding programs. Many bills were passed in support of CHW activities were introduced at national and state levels, but none passed (CHW workforce study, 2007)

The latest period included significant public policy (1999-2006) actions. Legislation specifically addressing CHWs, their use and their certification was passed in several states as and a patient navigator bill was signed into law as a major mouth piece of legislation at the federal addressing CHWs activities. In 2003, Institute of Medicine report on reducing health disparities made recommendation regarding CHW roles.

As primary health care became widely established, during the 1980s, large scale training programs for community health workers were implemented in many countries. The CHWs

were incorporated into both government health system and those provided by non-governmental organization. During this decade, and subsequently, the initial enthusiasm for CHWs sometimes did not live up to possibly unrealistic expectations. A study valuable review of the situation at the end of 1980s is given in "Community health worker , the initial enthusiasm for CHWs became tempered in the light of experience, achievements sometimes did not live up to possibly unrealistic expectations. A very valuable review of the situation at the end of the 1980s is given in a "community health workers in the national program. Just another pair of hands"

In the United States, formal participation of the trained workers in this role has been documented since the 1950s (Barffour, 2006). The federal Migrant Health Act of 1962 and the Economic Opportunity Act of 1962 and the Economic Opportunity Act 1964 mandated such outreach which included employment of community-based service aides in many neighborhoods and migrant workers camps. The Centre for Disease Control and Prevention has provided leadership in documenting and acknowledging the role the CHWs, establishing the first national database in 1993. It includes; CHW programs, training Centers and journal articles on models, research and practice information. The combined health information Database (CHID) has documented more than 200 programs representing about 10,000 CHWs. These estimates are known to be low because the data base has not been consistently maintained (council, 2004).

In India, the largest system to formally use the skills of community Health worker was established in 1968, when the India Health services adopted the fledging community Health Representative from the office of Economic Opportunity. The program was designed to bridge the gap between people and resources and to integrate basic medical knowledge about disease prevention and care with local knowledge. Currently, about 1;400 community representatives work with tribally managed or Indian Health services program in more than 560 federally recognized American Indian Alaska native nations.

Indonesia restructured its health system in 1982, with a focus on district health development. Village health volunteers, selected and paid local community, became part of health posts set up with each nutrition support , immunization and treatment, participants of diarrheal diseases, initial reports, showed remarkable results. Yahya reports that the dramatic increase in village health posts led to significant health status achievements; infant mortality dropped by 30% within seven years and immunization coverage increased many-fold (Rowe, 2000).

In Bangladesh, the government has provided a few essential services and encouraged NGOs to work with communities through a large array of approaches to provide responsive health and development initiated. Hence, there is not one standard model of communities health programs forced by the government but rather a proliferation of efforts by Non – governmental organization most with a firm base in community. (Sarkar *et al*,2006)

Africa accounts for 24% of the global disease burden, but only 3% of the global health workforce. The reasons for this are well documented and include inadequate salaries and poor work conditions leading to staff attrition insufficiency of medical schools and the brain drain of health staff to resource rich countries(Cockery *et al*, 1977), hence this has made the African countries to adopt the CHW model to help curb the gap.

Thousands of doctors are leaving Africa, but the continent will need a million extra health care workers to meet the millennium development goals. Not only is the health crisis in Sub-Saharan Africa intensified by health professional leaving the countries to work elsewhere, but the mounting burden of disease in this region further exacerbates the crisis. Moreover, the health system in these countries are underdeveloped to start with, which poses a further challenge (Molima et al.1996)

Significant health care workforce shortages are present in 57 countries, including countries in Sub-Saharan Africa, Bangladesh, India and Indonesia. Figures for the number of physician 100,000 people range from 2 in Malawi to 591 in Cuba, the number in the US is

256 while in Kenya, the ratio is 1:2000. These figures show represent overall physician proportions, the proportion of primary care physician is far lower worldwide (De Castro et al, 2008) these poses a very big challenge in delivery health care services.

The AIDS epidemic in developing countries that already face a critical shortage of professional health care workers has been strengthened the need to make greater use of community health workers. Task shifting allows CHWs to take on jobs that were previously performed by nurses, this phenomenon holds promise for rapidly filling the health care deficit. One advantage of employing CHWs is the relatively short amount of time they need, ranging from hours to weeks. This quick turnaround in training allows CHWs to be ready to provide services years before nurses or doctors can complete their own training. Ultimately, the hope is that task shifting will improve access to primary care, and thus, serve to strengthen health care systems around the world (Brown, *et al,* 2006)

The role of CHW in the Sub Saharan Africa has evolved over time and place in response to m changing health care priority disease burden, and shortages of human resources for health. Despite their sometimes desperate roles, CHW have some core responsibility as health care providers. This includes health promotions, disease preventions, basic curative care and referrals, monitoring of health indicators and creating vital linkages between communities and formal health systems.

Evident on CHWs from Zambia, South Africa, Tanzania, Gambia, Madagascar and Ghana suggests that CHWs are not only cost effective but they also enhance the performance of community level health programs. For example CHWs with minimal additional training can deliver treatment for important diseases such malaria HIV and tuberculosis (TB),

In Ghana, the MOH introduced substantial number of community of village health workers in the late 1970s as part substantial review and reorganization of MOH activities aimed at implementing PHC strategies (Morrow, 1983), the initiative was driven by the MOH

and integrated into the national health services structure with the MOH providing training, technical supervision and necessary supplies..

In Niger, CHW programs evolved from the work of the volunteer health whose work started in the late 1960s in the primarily Marabi department, along the Nigerian frontier, with a population of 730,000 people (Banisaye,1984). Since 1963, Niger had a rural extension services, which promoted community development schemes, characterized by voluntary participation. In the MOH, a ten year old plan from 1965 to 1974 set out the principles governing the training of village health workers and TBAs while emphasizing community ownership and participation, all these projects were initiated and driven by central government.

Prevention of mother-to-child transmission services in partnership with UNAIDS, an initiative is underway to make all Millennium Village sites 'MTCT free zones' – where vertical transmission of HIV is largely eliminated. Efforts have been made in all sites to ensure HIV testing is routine during pregnancy. Among pregnant women testing HIV positive, combination antiretroviral therapy can reduce transmission rates from a mother to her unborn child from 33% to under 5%. Introducing these services at the primary care level has become a cornerstone of the PMTCT program in high HIV prevalence settings.

Access to combination antiretroviral therapy for those with advanced stage HIV is highly recommended. These medications have been shown to be safe and effective in Africa, leading to fewer hospitalizations and a longer life for those living with the disease. Adherence to ARV is a community effort. In the context of the MVP, ARV treatment starts in sub-district hospitals. Follow-up is carried out at the local clinic and compliance is checked at the household level by the Village Community Health Workers. However, more work needs to be done to ensure all adults know their HIV status, and that eligible HIV positive adults are accessing ARV treatment.

Access to healthcare in rural Sub-Saharan Africa is severely limited by the lack of trained healthcare workers. Achieving the Millennium Development Goals for health by 2015 will remain out of reach until sufficient human resources can be integrated into national health systems. By investing in national community health workers (CHW) programs, donors and countries have the opportunity to strengthen the provision of primary preventative and curative services while actively building sustainable, community-oriented health systems. The Millennium Villages Project is the focal point of demonstrating how effective community health workers can be when an integrated program is implemented in close communication with local and national institutions. The CHW programs in MVP sites are currently being revitalized to ensure optimal management, supervision and mobilization of available resources. The program uses a core model that can be easily adapted to meet local conditions, also known as adaptive implementation.

Table 1.1

Regional Antiretroviral Therapy Coverage

Region (Lower and middle income countries	Antiretroviral therapy coverage	Estimated number of people receiving antiretroviral therapy	Estimated number of people needing Antiretroviral therapy
Sub-Saharan Africa	37%	3,911,000	10,600,000
Eastern & Southern Africa	41%	3,202,000	7,700,000
Western and Central Africa	25%	709, 000	2,900,
Latin America and the Caribbean	51%	425,000	840,000
The Caribbean	48%	52,400	110,000
East South and south and Southern	31%	739,000	2.4
Europe and Central Asia	19%	114,000	19%
North Africa and the middle East	11%	12,000	100,000
TOTAL	**36%**	**5,254,000**	**14,600,000**

Source: WHO/UNAIDS/UNICEF (2010) 'Towards Universal Access: Scaling up priority HIV/AIDS Interventions in the Health Sector'

Sub-Saharan Africa, accounts for 72 percent of antiretroviral therapy need in low and middle-income countries, treatment coverage increased by 10 percent from 2008-2009. However, coverage within this region varies widely; in the most highly affected areas of Eastern and

1.2 Statement of the problem

International organizations including UNAIDS, Global Fund, PEPFAR, WHO and other multinational companies are working together with various governments to make progress in making anti-retroviral therapy available in most middle and low income countries which are also greatly affected by HIV and AIDS. The estimated coverage of Anti-retroviral therapy in the region (lower and medium income countries) is at 36% and specifically in Eastern and southern Africa is at 41%. This is still below the expected. Currently, 5,254,000 clients are estimated to be receiving anti-retroviral therapy in lower and medium income countries and still an estimated number of people needing antiretroviral therapy are at 14. 600,000. This indicates that the coverage is still low yet the drugs are available in most of the government hospitals and private for those who can afford. In the absence of a cure for HIV, Anti-retroviral therapy is the way to go.

An estimated 392,000 HIV infected adults need antiretroviral therapy or ART. The 2007 KAIS shows that only 35% of those in need of ART were on treatment by Sept 2007. Currently over 212,000 (54%) are on ART as at the end of June 2008.

Availability of drugs is one thing and uptake is another. The low uptake can be attributed to several factors including; fear of stigma, Low perception of risks, negative reaction to disclosure, distance to testing facilities and number of service providers in the hospitals. The latter has been one of the greatest challenges. The number of Health providers and that of clients do not match and therefore what this translates to is that the health Care providers are not able to influence uptake of ART one because even if they initiated a client on ART hardly do they make follow up to establish if the client is taking medication or not or even when clients do not show up on appointment dates do they make phone calls or visit at home. Though some form of counseling and education goes on in the health facilities, this is not enough to initiate a client on ART or monitor those already on ART due to the number of health personnel available. It is also crucial to note that being initiated on ART is voluntary

and not that simple as it may look and therefore there is need for support and follow up from one who understands the process well.

The government of Kenya has not put in place any follow up mechanisms for clients to be started or already on Anti-retroviral therapy. Due to shortage of staff it has been a challenge for the health workers to monitor the progress of HIV positive clients therefore involvement of CHWs can go a long way in addressing those critical issues that may not be addressed by the facility personnel. It is in this light that the study looked at whether the involvement of community health workers can influence uptake of ART among people living with HIV and AIDS, as one of the projects of Liverpool VCT care & Treatment in Kawangware, Nairobi.

1.3 Purpose of the study

The purpose of this study was to investigate the influence of community health workers on uptake of Anti-retroviral therapy among people living with HIV and AIDS in Kawangware location,Nairobi Province. A case of Liverpool VCT Care and Treatment, Kenya.

1.4 Objectives of the study

The study sought to achieve the following objectives:

1. To establish the extent to which demographic characteristics of CHW influences the uptake of ART among PLWHA in Kawangware Location, Dagoretti District.
2. To investigate the level at which training received by CHWs in handling clients influence the uptake of ART among PLWHA in Kawangware Location, Dagoretti District.
3. To determine how frequency of follow up on clients by CHWs influences the uptake of ART among PLWHA in Kawangware Location, Dagoretti District,

4. To examine the extent at which activity reports by the CHW influences the uptake of ART among PLWHA in Kawangware Location, Dagoretti District.

1.5 Research questions

The study sought to answer the following research questions:

1. To what extent does the demographic characteristics of CHW influences the uptake of ART among PLWHA in Kawangware Location, Nairobi Province?

2. To what extent does the level of training in handling clients of CHW influence the uptake of ART among PLWHA in Kawangware Location, Dagoretti District?

3. How does frequency of follow up of clients by the CHW influence the uptake of ART among PLWHA in Kawangware Location, Dagoretti District?

4. To what extent does the level of training of CHW influences the uptake of ART among PLWHA in Kawangware Location, Dagoretti District?

1.6 Significance of the study

The Ministry of health has been charged with the task of overseeing health related issues in this country. The findings of this study, clearly states that it is useful to involve community health workers who can solve some of the challenges of inadequate personnel since the study has came at the right time when several clients are either dying of ignorance or fear of taking up this vital service.

This study will add knowledge to the existing literature on the influence of CHW on uptake of ART among PLWHA. It is hoped that the study will add impetus for further research by forming a basis upon which other related studies can be anchored.

1.7 Basic Assumptions of the study

For purposes of this study, the following assumptions were made;

That CHWs influence the uptake of ART among persons living with HIV and AIDS. The respondents in this study were truthful and gave accurate information required to make the study successful. That the instruments used for the study appropriately measured perceived levels of CHWs. Finally, the sample chosen for the study was a fair representation of the entire targeted population.

1.8 Limitations of the Study

This study was only conducted in one district and therefore it is my hope that other studies would be conducted in all the districts in Kenya to improve its external validity. However, this is not possible due to the vastness of the country. For this reason, the findings cannot be used for generalization in all the districts in Kenya. Instead the findings can only be relevant in Dagoretti District, Nairobi Province. Analysis of CHWs depended on the responses from the respondents.

1.9 Delimitation of the study

The study was exclusively delimited to Community health workers attached to Liverpool VCT Care and treatment and LVCT project staff working in Kawangware Home Based Testing and Counseling Project. Those interviewed for the study were Community health workers attached to LVCT and LVCT project staff in Kawangware Location. The study did not interview persons living with HIV and AIDS and Ministry of health officials as the former were not only beneficiaries but the latter had divergent priorities and policies.

1.10 Definition of significant terms used in the study

Community health Worker: A member of the community who has been selected by fellow Community members to spearhead health related issues on HIV and AIDS.

Uptake: utilization of care and treatment services

Persons living With HIV and AIDS: These are clients who have been tested HIV positive And are either in asymptomatic or symptomatic stage of HIV progression.

Anti retro-viral Therapy: These are clients who have been tested for HIV and are on pre-Antiretroviral Therapy or on Anti- retroviral therapy whose CD4 Count is 350 or below (WHO, 2010)

Client: refers to a person living with HIV or AIDS

1.11 Organization of the study

The study was organized into five chapters; chapter one basically gave the introduction and described the background of the study, statement of the problem, purpose of the study, objectives of the study, research question, significance of the study, basic assumptions of the study, limitations of the study, delimitations of the study, definition of significant terms used in the study and organization of the study. Chapter two provided a review of literature related to the study thematically as the research objectives, the theoretical framework, the conceptual as well as the summary of literature reviewed. Chapter three focused on the research methodology discussed under the following sub-headings. Research design, target population, sample size, sample selection, research instruments, pilot testing of the instruments, reliability of research instruments, data collection procedures, data analysis technique and ethical issues in research.

Chapter four looked at questionnaire response rate, results on demographic characteristic of CHWs and uptake of ART, level of training of CHWs and uptake of ART, frequency of follow up and uptake of ART and report writing and uptake of ART. The chapter looked at how demographic characteristics, training, follow up and report writing influence uptake of anti-retroviral therapy among people living with HIV and AIDS in Kawangware Location in Dagoreti District, a case of Liverpool VCT Care and Treatment organization.

Chapter five looked at summary of findings, conclusions, recommendations, contributions of the study to the body of knowledge and suggestions for further research emanating from the research study.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This section explores; Characteristics of CHWs and uptake of anti-retroviral therapy among people living with HIV and AIDS, level of training of CHWs and uptake of anti-retroviral therapy among people living with HIV and AIDS, frequency of follow up and uptake of anti-retroviral therapy among people living with HIV and AIDS and report writing and uptake of anti-retroviral therapy.

2.2 Demographic characteristics and uptake of ART among PLWHA

Community health workers are broadly defined as those who carry out functions related to healthcare delivery, have no formal professional designation and have a relationship with the community they serve. They are very important advocates who can bridge cultural and social gaps between providers of health and social services and the community members they seek to serve. CHWs provide culturally relevant and appropriate education, counseling and social support and they may provide clinical services such as measuring blood pressure. They can facilitate access to care, promote continuity of care (http://www.science direct.com/science/journal/07493797)

The concept of using community members to render certain basic health services to the communities from which they come has at least a 50 year history. The Chinese barefoot doctor program is the best known of the early programs, although Thailand, for instance, has also made use of the village health volunteers and communicators since the early 1950's (Brownstein,1998). Barefoot doctors were health auxiliaries who began to emerge from the mid-1950's and became a nationwide program from the mid-1960's, ensuring basic health care. Partly in response to the successes of this movement and partly in response to the

inability of conventional health services to deliver basic health care, a number of countries subsequently began to experiment with the village health worker concept.

Community Health Workers represent a vital emerging force in public health. In a recent assessment of health disparities, the Institute of Medicine's Unequal Treatment reported that the incorporation of CHWs into health care system (Castro,1995).

The Centers For Disease Control (CDC) Division of Diabetes Translation and Division Of Adult and Community Health noted that, in CDC- funded programs, " a common thread is community members serving as or acting in the role of CHWs" An evidentiary study funded by the Centers For Medicare and Medicaid Services on approaches to cancer prevention among elders of color found that CHWS were the "primary mechanism for cultural tailoring" Community Health Workers Workforce study,(2007). In 2007, the Health and Human resources Administration released the community Health Worker National Workforce Study (http://bhpr.hrsa.gov/healthworkforce/chw/default.htm#preface). These reports reflect a growing recognition of the important role community health Workers play in ensuring the delivery of quality and culturally competent medical care and health promotion services.

Community health workers are used to reach hard to reach populations, such as low income women and children, ethnic minorities, and high risk groups. This review indicated that there is little support in the literature of CHW effectiveness in screening, outreach and advocacy and generally in project implementation. There is support for CHWs functioning in health education and modified case management, particularly with hard to reach populations. A survey of community health workers by University of Arizona found out that they advocate at local level, state and federal political levels as well as within health and social service agencies and business. Characteristics significantly associated with advocacy include employment in not for profit organization, previous leadership training, and a work environment that allows flexible work hours and the autonomy to start new projects at work. Intrinsic characteristics of CHWs associated with advocacy include their belief that they can

influence community decisions, self perception that they are leaders in the community, and knowledge of who to talk to in their community to make change (journal of Health Care, 2006)

The demographic characteristics of CHW which include; sex, gender, education, age and socio economics play a vital role in influencing uptake of ART among PLWHA. Being male or female is an important phenomenon in that people tend to relate better when it comes to confidential issues like HIV and AIDS. This can be attributed to the fact that people feel that the person would understand them better. Women tend to have aspects of caring and therefore are likely to be approached with such intricate issues. The society also expects women to take up such roles including taking care of the sick, less fortunate in the society as compared to men.

Looking at the ratio of female CHW to men, the female are more this has been established in most studies. Most people in the community from observation who test, consult and later access treatment are usually people from middle or low class. Most CHWs too are mostly not from high social status but are respected members of the community and are relied upon for varied services. Level of education for most CHWs range from no formal education to form four or above depending on one country to the country and the policies in place.

Level of education would be important especially when it comes to record keeping and tracking of clients. Most formal trainings are done in English and therefore this can be a challenge to many who cannot read or write. Apparently, CHWs with little or sometimes no training have done very well as uptake is about the attitude, basic skills in communication and counseling, trust and being able to keep confidential materials of clients they take care of. This helps convince

influence community decisions, self perception that they are leaders in the community, and knowledge of who to talk to in their community to make change (journal of Health Care, 2006)

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2.3 Level of training in handling clients and uptake of ART among PLWHA

Community health workers play an important role in helping people access health care services, embrace positive health behaviors, and navigate complicated treatment regimens for conditions such as cancer, diabetes, asthma and HIV and AIDS. Community health workers provide invaluable guidance, support and empathy in a culturally and socially appropriate way. The community health Workers model has also been found particularly effective in health promotion initiatives and in programs that seek to create positive change in health seeking behaviors among vulnerable and under-served populations. As community members, community health workers are able to integrate health information about prevention of disease and the health system into the community's culture, language and value systems. Therefore they reduce cultural, linguistic, social and financial barriers to health care. As the CHW model gains recognition, CHWs are finding themselves in numerous new and emerging roles such as patient navigators and natural researchers (Sergio,2007). Much has been focused on training of CHWs in the health-specific topics of these public health interventions. The lack of policy and practice directives for training CHWs has led to fragmented and localized training efforts with no clear common goals. The core competencies that have come to describe the practice of CHWs are acquired through training and experiences.

According to the work of Community Health Worker National Education Collaborative (CHW-NEC), the importance of work of CHWs has become very high on the national agenda of health and human resources in the U.S. There is now wide agreement regarding the unique competence and contribution that these workers bring to the health and human services team. Community health workers are culturally and linguistically competent members of the nation's public health care delivery work force. They are particularly effective in reaching culturally and linguistically distinct communities. They are also well known for reaching out socioeconomically disadvantaged populations in resource poor neighborhoods, where they are helping communities to develop their assets and helping the nation to address health

disparities in both rural and urban settings.

As reported by the ongoing work of Boston Public Health Commission and the Massachusetts Department of public health, in order for community health workers to do their work effectively and to grow personally and professionally through their work, they should posses certain core skills. The following are core skills and applied knowledge necessary for CHWs to work well in a variety of settings. These competencies are not ranked in any order of reference but rather are the set of overlapping and mutually reinforcing skills and knowledge essential for effective community Health work and advancement in the field, so it was emphasized that the skills and knowledge of the CHWs must be reinforced through training.

A literature on community health workers initiative of Boston mentioned above , emphasized the competencies required for a CHW: outreach methods and strategies, Client and community assessment, effective communication, culturally based communication and care , health education for behavior change , support, advocate and coordinate care for clients, Public health concepts and approaches, community capacity building, Writing and Technical communication skills and special Topics in community health.

It is widely acknowledged and emphasized that the success of CHW programs hinges on regular and reliable support and supervision, Bhattacharyya, et al, (2001). It is also equally acknowledged, however that supervision is often among the weakest links in CHW programs Shortage of qualified human resource is a chronic ailment of SSA health systems, and is consistently listed as a major challenge of 2010 UNGASS report of SSA counties. The shortage hinders the delivery of all HIV care. To overcome the challenge the use of CHW, the lay people who provide basic health care but received less training than professionals and CHW are likely to increase if care services were to be expanded. CHWs have demonstrated their capability in programs like distribution of TB drugs, ART and vitamin A. They are also integral in delivering counseling, HBC and community wide HIV education programs.

The quality of CHW training has direct impact on the success of any program. Lack of

support, refresher training, supervision and payment or other extrinsic motivators lead to excellent performance, lower job satisfaction and attrition. Health professionals display resistance to task shifting. Despite the job's difficulty and its importance, According to Ethiopian experience, at community level, PLWHA, CHWs should be trained in adherence, supportive counseling and ART literacy preparedness to help curb the gap between the health facility and the PLWHA. The short term strategy during the ART scale up would be to provide in service training to a large number of health professionals. Integrating training into pre-service education, as it is has proven more cost effective, does not compete with the service providers, maximizes task shifting and sharing of responsibilities among providers and in addition increases the pool of trained providers. Although refresher training is required to maintain skills, it is not mentioned in CHW guidelines of many SSA countries. Existing CHW programs suggest that guidelines on refresher training should be written. Supervision from qualified health professionals and full support from health system are urgently needed so that CHW are better connected with ART clinics.

2.4 Frequency of follow up and uptake of ART among PLWHA

It is widely acknowledged and emphasized that the success of CHW programs hinges on regular support and follow up, Bhattacharyya, et al, (2001). It is equally acknowledged, however, that follow up is often among the weakest links in ART programs. Small scale programs are often successful because they manage to establish effective support and follow up mechanisms for CHWs, often including a significant amount of supervision and oversight by the community and the government. National programs for instance ART are rarely able to achieve this consistently, as has been shown in the Zimbabwe experience, for example (De Francisco, 1994). Many evaluations have documented the weakness of follow up in National programs, which are often irregular or nonexistent (WHO,2007) In most cases, clients are left hanging with very little emotional support

There are a number of reasons for the lack or poor quality of follow up. Daniel's et al, (2005) pointed out that " the cost of follow up has, in particular, been overlooked, although the frequent contact required to support CHWs effectively can generate follow up costs that represent 40% of the cost of one client. But not only has the cost been overlooked often the need for follow up has been either overlooked or underestimated, or not adequately planned for . Also, who to make the follow up and what their tasks are is often ill-defined. Curtale, et al, (1995) mentions cases in which community participation in follow up was successfully implemented. This however remains the exception of: follow up is often left to project staff. They may not understand their role and therefore may even resent the additional work yet this is very important.

The importance of community participation for success of ART programs however, there is less clarity about the exact meaning of community participation which he defined as the mobilization of community resources (people, money, materials) to carry out health programs on one hand and community participation as increasing " people's control over the social , political, economic and environmental factors determining their health" on the other hand.

The outcomes from the U.S. has emerged that follow up of clients is a good strategy to improve the effectiveness of CHWs. From the literature, it is clear that the CHWs model is very effective, however, the study seeks to see whether this can be achieved in Kawangware. (http://www.ahrq.gov/clinic/tp/comhyworktp.htm,2009). Studies have shown that ongoing social support given to CHWs have a positive effect on motivating clients to adhere to healthy lifestyles and treatment regimes. While trained lay people cannot perform in the same capacity as professional nurses and Doctors, with appropriate training and follow up, they can successfully contribute to the care of community members with hypertension. (http://www.sciencedirect.com/science/journal)

India has a long history of small and large Community health workers program. A large national CHW scheme was established in the late 1970's that aimed "to provide one CHW for

every 1000 population in order to provide adequate health care to rural people and to educate them in matters of preventive and promotive health care" From the Indian experience, it is pointed out that training and follow up is a strategy to improve the effectiveness of CHW. This is however what this study will determine in Kawangware.

Retention of PLWHA under comprehensive HIV care is a vital strategy for the overall management of PLWHA (UNAIDS, 2010). Unfortunately many PLWHA are lost to follow up during HIV care especially during Pre- ARV (Long 2008, Losina *et al.*, 2010, Larson *et al.*, 2010). In Uganda, maintenance of care and retention of clients under comprehensive HIV care is still very low or minimal since follow up is still very low except where there are network support (MOH, 2010).

The Millennium Village Project (MVP) in Kenya has used CHW to follow up clients at the household level to carry out health related activities including start up dozes for malaria among the under fives. CHWs act as referral points within the community are given phones and assigned households and they work with facilitators who link the project and the field. They are employed at a salary of Kenya shillings 6,000 per month. The CHW LVCT works with are given lunch and transport of 200 per day worked.

2.5 Activity report and uptake of ART among PLWHA

An important part of the CHW's job is to keep activity reports on what they do each day which includes how many clients one sees and what services are rendered to the client. These records act as evidence to show others what one has done, help make improvements in one's work. It also shows that change can really happen. CHWs have a responsibility to give reports to their supervisor who then combines a monthly report to share with the organization and the various government officials. The reports used by the CHWs include, names and location of the client, the sex and age of the clients, the number of children and care taker the client has, the health status of each client, services provided to each client, during a home visit, the training given to the care taker, Referrals made and when to follow up, revisit schedule and

what needs to be done during the next visit, number and types of community events or meetings conducted, whether the client is new or repeat client. To undertake these activity reports, the CHWs have used diaries, daily summary sheets to help them add up totals at the end of the month and also look at the key issues coming from the activities. This also includes community meetings and mobilization activities conducted. Record keeping enhances keeping track of referrals for easy follow up of clients by specifically knowing who was referred, where and for what reason the client was referred (Gilson *et al.,* 1989)

These records help to track down how many clients are on ART, how many are adhering to the prescription, what challenges the clients are facing and what support the clients require. It is therefore the supervisor to compile the monthly reports from the CHWs an share with the other stakeholders for any concern or lessons learned from the activity (WHO,2006)

2.6 Theoretical Framework

HIV and AIDS is a condition characterised by stigma, self-denial, discrimination and a great need for family and community social support. Furthermore, the condition requires behavioural change for the PLWHA to access prevention, care and support services. To adhere to the continuum of comprehensive HIV care, PLWHA requires physical, spiritual, moral, logistical, financial and material support from their intimate partners, immediate family, close relatives, employers and other social networks to enable them overcome barriers or challenges to seeking or accessing appropriate care. In addition, there must be enabling policies and guidelines to address the socio-contextual aspects of HIV care and support to positively influence the desired behaviour change (UAC, 2007, URCS., 2008, Population-Council., 2010, Avert, 2010, IFRCRCS, 2010, UNAIDS, 2001, Feucht *et al.*, 2007, Birbeck *et al.*, 2009, Lieber *et al.*, 2006).

Research has shown that individuals' choices are influenced by many factors acting at different levels, ranging from the intrapersonal and interpersonal to the community and

society in general (Fleury and Lee, 2006, Facoine and Facoine , 2007). Any successful intervention in care and support for PLHIV must therefore take into consideration the interrelated levels of influence which go beyond the individual PLHIV, but also the health care delivery system and their environment (DiClemente *et al.,* 2004, DiClemente *et al.,* 2005, Campbell et al., 2007, Sallis and Owen, 2002, CARE, 2010). All these concepts, which are vital to this study, are well defined by the socio ecological model (SEM), which we used to define and discuss client and system determinants for pre-ARV care and ART initiation.

The socio ecological model (SEM) is based on the intertwined relationship between the individual and the environment (Sallis JF and Owen N, 2002, Moore, 2001). The model caters for the multiple levels of influence for behaviour change and actions including intrapersonal (biological, psychological), interpersonal (social, cultural, attitudinal), organisational, community, physical environmental and policy outlines or guidelines. It therefore offers an explicit direction guiding the development of more comprehensive population-wide interventions. The model also recognises that behaviour change is expected to be maximised when environments and policies support healthful choices, when social norms and social support for healthful choices are support healthful choices, when social norms and social support for healthful choices are strong and when individuals are motivated and educated to make those choices (McMurray, 2006). More importantly, the model can be used to develop comprehensive intervention approaches that systematically target mechanisms of change at each level of influence (Stokols *et al.,* 1996, Fleury and Lee, 2006, McLeroy *et al.,* 1988, Moore, 2001).

This study used the socio ecological method to explore reasons for loss of poor uptake of PLHIV from pre-ARV care and very late initiation of ART with regard to the policy, the views of CHWs and the LVCT staff.

2.7 Conceptual Framework

This section described the perceived conceptual framework used to guide the study.

Figure 2.1: Perceived Conceptual framework showing relationships between the variables.

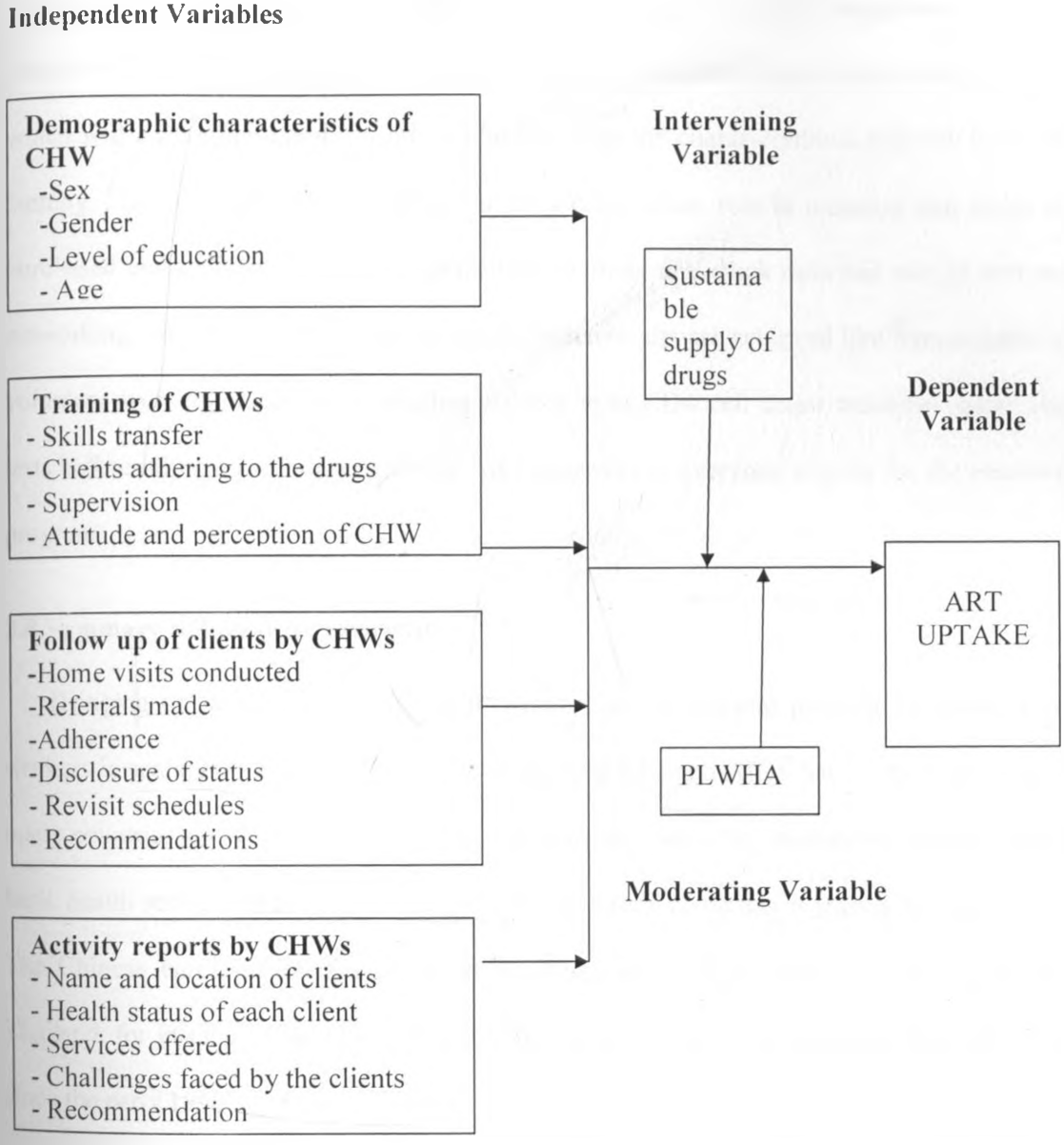

Figure 2.1 Conceptual framework

In the schematic diagram figure 2.2 on page 25, the independent variable is the Community Health Worker. Bringing on board the Community health worker plays a vital role in bridging the gap between the health facilities and the client at the community level. Ensuring that

adequate training, follow up through supervision, right selection of CHWs and record keeping can influence the utilization of ART among people living with HIV and AIDS. Ensuring proper linkage between the CHW, health facility and the client enhances utilization of ART services. In order for the ART program to succeed, various pertinent issues must be put in place. Among the issues include; modalities of buying sustainable drugs (intervening variable) which will ensure that the drugs are available to help the clients continue with the treatment therapy. The government (moderating variable) plays a key role in ensuring that drugs are purchased and delivered to the health facilities without any stock outs and also to embrace networking with other stakeholders to ensure better results are achieved like remuneration of volunteer workers, supervision, availing various tests CD4 cell count machines other vital tests before initiation and decentralizing ART programs to everyone eligible for the treatment program.

2.8 Summary of literature reviewed

Bringing on board community health workers to complement professional health Care workers in scaling up ART among people living with HIV and AIDS has worked very well in many countries across the world. The concept of using community members to render certain basic health services to the communities from which they come has at least a 50 year history. The Chinese barefoot doctor program is the best known of the early programs, although Thailand, for instance, has also made use of the village health volunteers and communicators since the early 1950's (Brownstein,1998).

Barefoot doctors were health auxiliaries who began to emerge from the mid-1950's and became a nationwide program from the mid-1960's, ensuring basic health care. Partly in response to the successes of this movement and partly in response to the inability of conventional health services to deliver basic health care, a number of countries subsequently began to experiment with the village health worker concept.

Community Health Workers represent a vital emerging force in public health. In a recent assessment of health disparities, the Institute of Medicine's Unequal Treatment reported that the incorporation of CHWs into health care system (Castro,1995). Involvement of community health workers across the world has had Community health workers play an important role in helping people access health care services, embrace positive health behaviors, and navigate complicated treatment regimens for conditions such as cancer, diabetes, asthma and HIV and AIDS.

Community health workers provide invaluable guidance, support and empathy in a culturally and socially appropriate way. The community health Workers model has also been found particularly effective in health promotion initiatives and in programs that seek to create positive change in health seeking behaviors among vulnerable and under-served populations. As community members, community health workers are able to integrate health information about prevention of disease and the health system into the community's culture, language and value systems. Therefore they reduce cultural, linguistic, social and financial barriers to health care. As the CHW model gains recognition, CHWs are finding themselves in numerous new and emerging roles such as patient navigators and natural researchers (Sergio,2007). Much has been focused on training of CHWs in the health-specific topics of these public health interventions. The lack of policy and practice directives for training CHWs has led to fragmented and localized training efforts with no clear common goals. The core competencies that have come to describe the practice of CHWs are acquired through training and experiences.

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CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter provided a detailed description of how the requisite data was obtained and analyzed to provide comprehensive report on the study. The sub themes included Research Design, Target Population, Sample size and Sampling Procedures, Research instruments, Pilot testing of Research instruments, Validity and Reliability of instruments, Data Collection Procedures, Data Analysis techniques and Ethical considerations in research. .

3.2 Research Design

The study used descriptive survey design with both quantitative and qualitative approaches. Descriptive design is a method of collecting information by interviewing or administering questionnaires to a sample of individuals hence suitable for extensive research. It is an excellent vehicle for the measurement of characteristics of large population (Orodho,2003). It maintains a large level of confidentiality, it is convenient and nables data to be collected faster, enables questions to be asked personally in an interview r impersonal through a questionnaire about things which cannot be observed easily. It also ves the study an opportunity to get accurate view of the response to issues as well as test ories on social relationship at both the individual and group level (Kothari,2003). scriptive design found appropriate for the study because it enabled the collection and lysis of both qualitative and quantitative data. On the quantitative approach, the study closed ended sections of the questionnaire to collect data on the influence of nunity health workers on uptake of ART among PLWHA from the LVCT staff and unity health workers. On the qualitative side, the study employed interviews and

open ended sections of the questionnaire to collect data on the same parameters including how CHWs influence uptake of ART.

3.3 Target population

The study was conducted in Dagoretti District in Nairobi, Province. Dagoreti has two administrative divisions namely Kawangware and Riruta: The target population consisted of all the 80 Community health workers and 20 Liverpool VCT care and Treatment staff. This brought a total of 100 Target population.

3.4 Sample Size and Sample Selection

This section describes the sample size and sample selection that was used in the study.

3.4.1: Sample size

Following the theory Mugenda and Mugenda (1990), the researcher used all the sample this was based on the few numbers involved. Liverpool VCT Care and treatment is currently working with a total of 80 CHWs and 20 LVCT staff (Coordinators, Project officer and HIV Testing and Counseling Providers) in Kawangware. Mugenda and Mugenda , (1999), recommends that a sample size of more than 30 and less than 500 is appropriate for any social research

3.4.2 Sampling procedure

Following the theory of Muganda M, 1990 in his recommendation that a sample size of 30 – 100, based on this number, the researcher used all the numbers. 80 CHWs and 20 LVCT staff consisting of coordinators, project officer and HIV Testing and Counseling providers working in the Home Based Testing and counseling project in Kawangware Location, Dagorreti District in Nairobi.

3.5 Research Instruments

Data was collected from respondents using closed questionnaires to measure the relationship between the community health workers and uptake of ART among people living with HIV and AIDS. Questionnaires are commonly used to obtain information from a given population and each item from the questionnaire was developed with closed ended questions to address specific objectives and research questions. One questionnaire targeted the LVCT staff and the other CHWs. The questionnaires was organized into different sections, each section sought information related to a specific objective. The LVCT staff questionnaire was divided into 2 sections. Section 1 dealt with demographic characteristics of the respondents while section 2 dealt with collecting information pertaining to the extent to which the level of training, follow up mechanisms and activity reports of CHW influence uptake of ART among Persons living with HIV and AIDS. The same approach was used for the Questionnaire for the CHWs. The advantage of the questionnaire is that the researcher managed to collect a lot of focused information within a short time.

3.5.1 Pilot testing

The purpose for pre-testing was to assess clarity of the instruments, validity and reliability of each of the items in the questionnaire and suitability of language used in the instrument (Mugenda & Mugenda 2003). Pilot testing of the research instruments was conducted in Kibera which is in different division within the same district in order to avoid threats to reliability, revealing vague questions. The questionnaire was explained to the respondents by the field assistants who took the respondents through their tasks to make them understand how to respond to the questionnaire. The respondents were then given free hand to respond to the questionnaire. Thereafter blank spaces, inaccurate responses, inconsistencies and other weaknesses detected in items were reviewed after piloting. Data collected from pilot study, was analyzed and results used for appropriate amendment of instruments. There after, the researcher made sure that the instruments were looked at again

to ensure that there were no blank spaces and the vague questions were reconstructed.

3.5.2 Validity of research Instruments

The term validity as used in research refers to the accuracy and meaningfulness of inferences based on the results of the research. According to Muganda and Muganda (1999), an instrument is validated by proving that its items are representative of skills and characteristics that it is purposed to measure. To test the validity of instruments, the researcher used simple language and side notes to guide the respondents, after which, the ambiguous and vague questions were identified and adjusted accordingly. The community members from Kibera and LVCT staff from other projects also gave important comments and suggestions on how best the research efficiently can be improved. In this study, content validity was determined by consulting the judgment of the research supervisors within the university. The University supervisors reviewed the instrument, recommended corrections and verified whether the instruments would be able to address the objectives of the study.

3.5.3 Reliability of research instruments

According to Mugenda and Mugenda (2003), reliability is a measure of the degree to which research instruments yields constant results or data on repeated trials. A measuring instrument is reliable if it provides consistent results over a period of time. Test re-test method was used to assess the reliability of the data. This involved administering the same questions twice to the CHWs, LVCT staff and correlating their responses independently. After administering the questionnaires, a correlation co-efficient was calculated to indicate the relationship between the two sets of scores. Product

conclusion was drawn that the two sets of scores by both the LVCT staff and the CHWs are related (Mugenda and Mugenda, 1999).

The questionnaires were administered to the CHWs in a different community selected

by the pilot survey. The items were then divided into 2 comparable

3.6 Data collection procedures

The researcher obtained an introductory letter from the University and this was used to get a permit from the National Council for Science and Technology (NCST). This was presented at the Provincial Director of medical services, Nairobi province, the Provincial Director of Education, Nairobi and the Provincial Commissioner, Nairobi Province to authorize the study. The investigator eventually visited the DASCO, Dagoretti and LVCT project coordinators to give briefs on the intended study, using this chance to create rapport. Dates were scheduled by the investigator to administer questionnaire concurrently.

The researcher assisted by two research assistants had a pre-test for the 2 questionnaires in the same district to make the instruments clearer for the actual data collection. After pilot testing, preliminary results were analyzed after which a rough idea of how the field would look like was obtained. Training session was conducted for proper insight on what the questionnaires were intended for.

The investigator and the two research assistants administered the questionnaires on the indicated day. This was done in one day since the organization organizes for one day meeting for the CHWs and LVCT project staff. The questionnaires were filled as the investigator and the assistants waited, clearing any misconceptions and misunderstandings. All the questionnaires were filled. After collection of the instruments, they were examined for completeness, comprehensiveness, consistency and reliability.

Editing to assure accuracy and reliability of the information contained in transcripts, was helpful in raising accuracy of information and what is intended to be captured as per research questions (Kombo and Tromp 2003).

3.7 Data Analysis Techniques

Quantitative data analysis involved descriptive statistics. Data was analyzed to assess the influence of community health workers on uptake of anti-retroviral therapy among people living with HIV and AIDS in Kawangware location. Data was subjected to vigorous quantitative analysis using Ms Excel through frequency distribution. Data was presented using frequency and percentage tables. The study also checked the relationship between demographic characteristics, trainings of the CHWs, follow ups done by the CHWs and activity reporting on the uptake of ARTs by the PLWHA using cross tabulations. These analyses were done with the aid of statistical Package for Social Scientists (SPSS).

3.8 Ethical Issues in research.

The researcher first obtained Data Collection Authorization from the National Council of Science and Technology. Permission was then sought from the Ministry of Education Science and Technology to carry out research in Dagoretti District. A copy of MOEST permission letter was forwarded to the DMOH Dagoretti District. Potential interviews were presented with consent forms. The researcher sought the respondent's permission to participate in the study while making it clear that their participation was voluntary. The respondents were not required to provide their names or any specific form of identification on the research instruments. All the research participants were assured of confidentiality and the information they provided was only used for research purposes only.

CHAPTER FOUR

4.0 DATA ANALYSIS, PRESENTATIONS, INTERPRETATION AND DISCUSSION

4.1 Introduction

This Chapter presents research findings of the study which have been discussed under thematic sub-sections in line with the study objectives. The thematic areas include: questionnaire return rate, Demographic characteristics of the respondents, demographic characteristics of community health workers, level of training, frequency of follow up and report writing as an aspect of community health worker.

4.2 Questionnaire return rate

A total of 102 questionnaires were sent to the field to be administered and 100 were returned for analysis yielding a response rate of 98.3%. According to Mugenda and Mugenda, (2003), a response rate of 50% is adequate for analysis and reporting a response of 60% is good and that of 70% and above is very good. This therefore meant that the questionnaire return rate of 98.3% was appropriate for the study. The questionnaire return rate was high because of the monthly meetings organized by LVCT for feedback and mentorship sessions for the project staff and the community health workers therefore this made it easy to reach out to them and those who were not present were followed wherever they were for the exercise. The questionnaires were then administered and collected on the same day by the researcher. Two types of respondents were identified namely, community health workers and LVCT staff.

4.3 Demographic characteristics of respondents

return rate of 98.3% was appropriate for the study. The questionnaire return rate was high

This section presents the demographic characteristics of the respondents involved in the study. The demographic characteristics included respondents' gender, age, level of

education and marital status of community health workers and Liverpool VCT Care and Treatment staff.

4.3.1 Distribution of Respondents by Gender

The researcher found it very important to understand the gender distribution of respondents which included; CHWs and the LVCT staff. This was because it could provide background for the analysis of community health worker's influence of uptake on anti-retroviral therapy among people living with HIV and AIDS. For this purpose, the respondents were asked to state their gender and the results were presented in table 4.1.

Table 4.1: Distribution of CHWs & LVCT staff by Gender

	C HWs		LVCT	
Gender	**F**	**(%)**	**F**	**%**
Male	19	23.75	7	35
Female	61	76.25	13	65
Total	**80**	**100**	**20**	**100**

Table 4.1 shows that 19 (23.75%) of the CHWs who responded to the study's questionnaire were males while 7 (35%) of LVCT who responded were also males. 61(76.25%) of CHWs were females while 13 (65%) LVCT who responded were also female. From the response, it implies that in both the responses there are more females working with people living with HIV and AIDS as compared to males in this project. These investigations indicate that females are more tolerant to work within the community as opposed to the males. This conforms to the study conducted by Opole (2009), who looked at the effectiveness of

community health workers on the implementation of CDC project activities in Karemo division in Siaya district whose study revealed that there are more female CHWs than males. This can be attributed to the fact that most women tend to engage in helping professions such as counseling, taking care of the sick, the less privileged members of society as they form the backbone of communities. Majority of females are expected by the society to be sympathetic given the various roles they play within their households and the entire community. Based on the observation, this may explain the reasons as to why there are more female community health workers compared to males.

4.3.2 Distribution of Respondents by Age

The researcher found it very necessary to understand the age distribution of the respondents. This was because it could provide background for analysis of the influence of CHWs on uptake of Anti-retroviral therapy among people living with HIV and AIDS. For this purpose, the respondents were asked to state their ages and the results were presented in table 4.2

Table 4.2: Distribution of CHWs & LVCT staff by Age

Age bracket of	CHWs		LVCT Staff	
Respondents	Frequency	Percentage	Frequency	Percent
18-28	14	17.5	3	15
29-39	0	0.0	13	65
40- 50	53	66.25	4	20
51+	13	16.25	0	0
Total	**80**	**100**	**20**	**100**

Table 4.2 shows that out of the 80 CHWs who participated in the study, 53(66.25%) were between age bracket 40-50, 14(17.5%) were between age bracket 18-28 while 13(16.25%) were of age bracket 51 and above. For the LVCT staff, out of the 20 interviewed, majority fell within ages 29-39 years (65%) while 4(20%) were between 40-50 years and 3(15%) fell between ages18-28. From these findings, In terms of ages for both the respondents, there is a relationship between the CHWs and the LVCT staff. In both the respondents, maturity is featuring prominently. This depicts that most CHWs and the LVCT staff working in the field are of mature age. Maturity is associated with respect, confidentiality, experience and therefore most people are likely to confide in this age group especially when talking about HIV and AIDS which is still stigmatized.

4.3.3 Distribution of Respondents by Level of Education

The study sought to know the level of education of the respondents. This is because, it could provide background for analysis of the influence of community health workers on uptake of Anti-retroviral therapy among people living with HIV and AIDS. The respondents were asked to state their level of education and the results were presented in table 4.3.

Table 4.3: Distribution of LVCT staff and CHWs by level of Education

	CHWs		LVCT Staff	
Educational Level	**F**	**%**	**F**	**%**
Primary	16	20	0	0.0
Secondary	63	78.75	1	5.0
Diploma	1	1.25	4	20
Higher Diploma	0	0	1	5
Undergraduate	0	0	3	15
Other Specify(VCT)	0	0	11	55
Total	**80**	**100**	**20**	**100**

Table 4.3 shows that out of the 20 LVCT staff interviewed 11(55%) had certificate training in VCT. 4(20%) had diploma.1(5%) of the staff had higher diploma. 3(15%) had Bachelor's Degree. For the CHWs, out of the 80 interviewed, none had masters or bachelor's level of education and only 1(5%) had a diploma level of education. 63(78.75%) of the CHWs had completed their secondary school. From these findings, the CHWs generally attained basic level of education as majority had completed their secondary education. Academically from where Kenya is coming from, form four level of education is considered basic and based on this, the CHWs have basic education which can allow them to attend further trainings age. For the LVCT staff, majority are trained in Counseling which forms the basis for this project and based on their training, they can offer supervision to the CHWs. The 3 coordinators all have degrees which also gives opportunity to provide oversight to the project. Community members tend to respect those who are knowledgeable and are able to assist especially on issues to deal with HIV infection and others.

4.3.4 Distribution of Respondents by Marital Status

The researcher found it very important to understand the marital status of the respondents. This was because it could provide background for the analysis of the influence of community health workers and uptake of anti-retroviral therapy among people living with HIV and AIDS. The respondents were asked to state their marital status and the responses were presented in table 4.4

Table 4.4: Distribution of CHWs and LVCT Staff by Marital status

	CHW		LVCT Staff	
Marital status	**Frequency**	**Percentage**	**Frequency**	**Percentage**
Single	17	21.25	7	35
Married	34	42.5	12	60
Widow/Widower	29	36.25	1	5
Separated	0	0.0	0	0
Total	**80**	**100.0**	**20**	**100.0**

Table 4.4 stipulates that among the CHWs interviewed, 17(21.25%) were single, 34(42.5%) were married, 29 (36.3%) were either widows or widowers and none had separated. For the LVCT staff, 7(35%) were single, 12 (60%) were married, 1(5%) was in the category of widow hood and none had separated. There is a relationship between these respondents. In both CHW and LVCT staff interviewed, it came out that most of the people carrying out community work are married. Marriage within a community is a source of respect and the society expects that when one obtains a certain age then it is expected that the person should be married or marry and if this is not the case, then people raise a lot of questions. This finding is in line with the findings of Opole, (2009) in his study that looked at

the effectiveness of CHWs in Karemo, Siaya District. In relation to the study, married people have influence of other community members since they are respected. Objective of the study was to establish the extent to which demographic characteristics of CHWs influence the uptake of ART among People living with HIV and AIDS.

4.3.5 Frequency of how clients take their medication

This formed the core question since it is the frequency of taking of drugs that matters in the uptake of Anti-retroviral therapy. The researcher found it necessary to understand levels of how clients took the drugs as it formed a critical basis for adherence to the therapy. For this purpose, the respondents were asked to state the frequency of how their clients took medication and the results were presented in table 4.5

Table 4.5: Frequency of how clients take their medication

Responses	Frequency	Percentage
Very frequent	48	60.0
Frequent	32	40.0
Rarely	0	0.0
None	0	0.0
Total	**80**	**100.0**

Table 4.5, states that 48 (60%) of CHWs responded that their clients took their medication very frequently meaning that these clients took their medication as expected while 32 (40%) were frequent meaning that there was still room for improvement. Another interesting thing to note is that none of the clients took their medication rarely or did not take at all. From these findings therefore, community health workers play a critical role in

ensuring that the clients take their medication which can also be attributed to the skills they have acquired over a period of time. This shows that there a relationship between frequency of taking of drugs and gender, age, level of training and frequency of follow up.

4.3.6. Current position in the organization

20 staffs of LVCT who work directly with the Home Based Testing and Counseling project (HBTC) were interviewed to find out their current positions. The study sought to establish the current position of the staff. To answer this, a question on their current position was asked and the responses are in table 4.6

Table 4.6: Current position of the LVCT staff

Responses	Frequency	Percentage
Coordinator	3	15
Project Officer	1	5
HTC Provider	16	80
Total	**20**	**100**

Table 4.6 shows that out of the 20 LVCT staff interviewed 16(80%) were HIV testing and counselors (HTC) while 3(15%) were coordinators and 1(5%) project officer. Majority are service providers conducting the actual testing and counseling and reaching out for clients at their door step as one of the innovative approaches to target more people with the services and ensuring the 80% coverage is met by 2010 though this was not realized due to the fact that majority of Kenyans have not learnt their status. This has been confirmed by the country reports by UNAIDS, 2010.

4.4 Demographic characteristics of CHWs and Uptake of ART among Clients.

The first objective of the study investigated the influence of demographic characteristics of the CHWs on the uptake of ART among people living with HIV and AIDS. The researcher found this important to understand whether the characteristics such as; gender, age, marital status and level of education of the CHWs had an influence on uptake of ART.

4.4.1 Gender of CHWs and Uptake of ART among Clients.

The researcher found this very important to find out if there is any influence of gender of the CHW on the uptake of ART among people living with HIV and AIDS. For this purpose, respondents were asked to respond on their level of education and this was cross tabulated with the response on influence on ART the results as shown in table 4.7.

Table 4.7: Gender of CHWs and Uptake of ART among Clients

Gender	Uptake of ARTs				Total	
	Very frequently		Frequently			
	F	(%)	F	(%)	F	(%)
Male	3	3.75	16	20	19	23.75
Female	45	56.25	16	20	61	76.25
Total	48	60	32	40	80	100

Table 4.7 shows that, a total of 19(23.75%) CHWs were males, while 61(76.25%) were females. Among the male CHWs 3 (3.75%) reported that their clients took ARTs very frequently while 16 (20%) said that their clients took ART frequently. Among the female CHWs, 45 (56.25%) said that their clients took ARTs very frequently while 16 (20%) said that their clients took ARTs frequently. In summary, majority of clients of female CHWs

took their medication more frequently than their male counterparts. This can be attributed to the fact that most of the helping professions are associated to females.

4.4.2 Age of CHWs and uptake of ART

The study sought to understand the extent to which age of the Community health worker have any influence on uptake of ART among HIV positive clients. To answer this question the respondents were asked to rate the frequency of Uptake of ARTs and these responses were cross tabulated with their responses on age as shown in table 4.8.

Table 4.8 Influence of age of Community health workers on uptake of ART of clients

Age	Uptake of ARTs				Total	
	Very frequently		Frequently			
	F	(%)	F	(%)	F	(%)
18-28	4	5.0	10	12.50	14	17.5
29-39	0	0	0	0	0	0
40- 50	34	42.5	19	23.75	53	66.5
51+	10	12.50	3	3.75	13	16.25
Total	**48**	**60**	**32**	**40**	**80**	**100**

Table 4.8 presents the results of the relationship between the age of the CHWs and the uptake of ARTs by the clients. Out of 80 sampled CHWs, 14(17.5%) who fell within the age category of 18-28 years, 4(5%) took ARTs very frequently whereas 10(12.5%) took ART frequently. None of the CHWs within the age category of 29-39 took ARTs either very frequently or frequently. In the age category of 40-50 years, 34(42.5%) took ARTs very frequently while 19(23.75%) took ARTs frequently. Lastly within the age category of 51

years and above 10(12,5%) took ARTs very frequently as comprised to 3(3.75%) who took their ARTS frequently. From the table, it can be seen vividly that CHWs who fell within the age category of 40-50 influenced more clients 34(32.5%) than any other age bracket. This can be attributed to the fact that CHW work requires elaborate experience which comes with age.

4.4.3 Level of Education of CHWs and uptake of ART

The study sought to understand the extent to which level of education of CHWs influenced uptake of ART. To answer this question, the CHWs were asked to rate the frequency of how their clients took their medication. The responses were cross tabulated with their responses on whether level of education ART among people living with HIV and AIDS influence Uptake as shown in table 4.13

Table 4.9 Influence of level of education of the community health worker on uptake of ART

Level of education	Uptake of ARTs				Total	
	Very frequently		frequently			
	F	%	F	%	F	%
Primary	16	20	14	17.5	15	18.75
Secondary	63	78.75	18	22.5	15	78.75
Diploma	1	1.25	0	0	1	1.25
Degree	0	0	0	0	0	0
Total	**80**	**100**	**32**	**40**	**80**	

Table 4.9 shows that out of the 80 sampled community health workers, 16 had primary level of education, 63 had Secondary education and 1 had diploma. A break down in table 4.9

shows that among the community health workers who had secondary education, 63 (78.75%) had clients who took ART very frequently and 14 (17.5%) had clients who took ART frequently. Those CHWs with secondary education had more clients taking ARVs very frequently. There is indication that education influences uptake level.

4.4.4 Marital status of CHWs and uptake of ART among Clients

The study sought to understand the extent to which marital status of the CHW influences uptake of ART among people living with HIV and AIDS. For this purpose, respondents were asked to respond on their marital status and the responses were cross tabulated against the frequency at which clients took medication and the results were as stated in table 4.10.

Table 4.10: Marital status of CHW and uptake of ART among Clients.

Marital Status	**Uptake of ARTs**				**Total**	
	Very frequently		**Frequently**			
	F	%	F	%	F	%
Single	17	21.25	17	21.25	34	42.50
Widow/Widower	9	11.25	8	10.0	17	21.25
Married	22	27.5	7	8.75	29	36.25
Total	**48**	**60**	**32**	**40**	**80**	**100**

Table 4.10, out of 80 CHWs sampled, 17(21.25%) single CHWs influenced their clients both very frequently and frequently on Uptake of ART. 9 (11.25%) widowed CHWs influenced their clients very frequently whereas 8(10.0%) influenced their clients frequently on uptake of ART. Lastly, 22(27.5) married CHWs influenced their clients very frequently while

7(7.755) influenced their clients frequently on uptake of ART. From the table it can be seen that married CHWs influenced more clients to take their medication very frequently or frequently. This can be attributed to the fact that the society respects married CHWs as compared to the other categories.

4.5 Training of CHWs and Uptake of ART among Clients.

The second objective investigated the influence of trainings on CHWs on the uptake of the ART among the clients served by them. Training of Community Health Workers is very critical especially when it comes to whether clients take up medication or not. This is important in that before embarking on any project, it is important that the CHWs are trained or given orientation on what the project entails and what is expected of them. This was further discussed based on the following sub themes;

4.5.1 Training before implementation of LVCT Project.

The study sought to understand the extent to which training was received before implementation of the project. To answer this question, LVCT staffs were asked to state at what point the community health workers received training and their responses were recorded in table 4.11

Table 4.11: Training before the implementation of LVCT project

Responses	Frequency	Percentage
Yes	80	100.0
No	0	0.0
Total	**80**	**100.0**

Table 4.11 Shows that all the CHWs (100%) underwent training before the implementation of the project. This shows that they were all equipped with skills and

techniques on how to deal with clients who tested HIV positive. From the findings, it came out clearly that all the CHWs received training which equipped them with knowledge on how to handle the clients. Training in any project is critical as it forms the backbone in which implementation occurs, this is in conformity with what the Ministry of public health and sanitation expects, it also explains the fact that these CHWs had the capacity to help the clients take their medication as required and prescribed by the clinicians. There is therefore a relationship between the training the CHWs received and uptake of ART. It is through the training the CHWs receive that enables them to make adequate follow up.

4.5.2. Duration of training offered by LVCT

The study sought to understand how long the community health workers were trained by Liverpool VCT Care and Treatment (LVCT). To answer the question, respondents were asked to state how long their training took and the responses is shown in table 4.12

Table 4.12: Duration of the training

Responses	Frequency	Percentage
Less than one week	0	0.0
One week	0	0.0
Two weeks	47	58.8
One month	33	41.3
Total	**80**	**100.0**

Table 4.12 shows how long the training took and the responses which were stated by the Community Health Workers. 47(58.8%) responded that the training lasted for two weeks and 47(58.8%) lasted for one month. From these findings, it came out clearly that no CHW received training which lasted for one or less than one week while this is in conformity with what the Ministry of public health and sanitation expects, (MOH,2008) it can also explain the

fact that these CHWs have the capacity to help the clients take their medication as required and prescribed by the clinicians. There is therefore a relationship between the training the CHWs received and uptake of ART. It is through the training the CHWs receive that enabled them to make adequate follow up.

4.5.3 Usefulness of the training

The study sought to understand to what extent the training was useful to the community health workers. To answer the question, the respondent was asked to rate the usefulness of the training and the responses were shown in table 4.13

Table 4.13: Usefulness of the training

Responses	Frequency	Percentage (%
Very useful	52	65.0
Useful	28	35.0
Not useful	0	0.0
Don't Know	0	0.0
Total	**80**	**100.0**

On rating how useful the training was, table 4.13, shows that out of the 80 respondents interviewed, 52(65%) reported that the training was very useful while 28(52%) stated that the training was useful to them meaning that none responded as being not useful or did not know at all! This is quite informative in the sense that the respondents viewed the aspect of being trained as very useful in doing their work of supporting positive clients. This is in line with previous studies by Sergio, (2007) where it was established that CHWs though were competent to do their work, it was however established that they needed training to make them more competent.

4.5.4. Influence of training of CHW on uptake of ART

The study sought to understand the extent to which training received by the community health workers influence uptake of ART among people living with HIV. To answer this question, the CHWs were asked to rate the frequency of how their clients took their medication and the results were cross tabulated with the response on level of training as shown in table 4.14

Table 4.14 Influence of training of CHW on uptake of ART

Training	Uptake of ART				Total	
	Very frequently		Frequently			
	F	%	F	%	F	%
Very useful	39	48.75	13	16.25	52	65
Useful	9	11.25	19	23.25	28	35
Total	**48**	**60**	**32**	**40**	**80**	**100**

Table 4.14 shows that out of 80 community health workers interviewed, 39(48.75%) reported that the trainings they received was very useful and assisted their clients to take their medication very frequently while 13(16.25%) who acknowledged the fact that the training they received was very useful assisted their clients frequently. 9(11.255) who appreciated the fact that the training they received was useful, assisted their clients very frequently. On the other hand, 19(23.25%) who embraced the fact that the training they received was useful assisted their clients. The highest number of CHWs who appreciated the fact that training was very useful confirmed the modern trend where emphasis is laid on training and manpower development for sustainable delivery of services.

4.5.5. Opinion of CHW on adequacy of training received by CHWs

The study sought to understand the extent to which the trainings the Community health workers received were adequate. To answer this question, the LVCT staff were asked to rate the adequacy of the trainings received by the CHWs and their responses were shown on table 4.15

Table 4.15 Opinion of LVCT staff on adequacy of the training of the CHWs

Responses	Frequency	Percentage (%)
Yes	13	65
No	7	35
Don't Know	0	0
Total	**20**	**100**

Table 4.15 shows that out of 20 LVCT staff interviewed, 13(65%) felt that the CHWs received adequate training while 7(35%) felt that they were not adequately trained. None of the respondents did not know what was being discussed. From these findings, it is clear that the training was adequate based on the work the CHWs perform. It also stipulates that all the project staff were in touch with the happenings of the project.

4.5.6 Point at which CHWs receive training

The study sought to understand at what point the community health workers received their training. To answer the question, LVCT staffs were asked to mention at what point the Community health workers received training and the responses are shown in table 4.16

received adequate training while 7(35%) felt that they were not adequately trained. None of

Table 4.16 Opinion at what point the CHWs receive training

Responses	Frequency	Percentage
On job training	12	60
At the time of engagement	8	40
Don't Know	0	0
Other (Specify)	0	0
Total	**20**	**100**

Out of the 20 staff interviewed, 12(60%) responded that the CHWs received training while on job while 8(40%) at the time of the CHW's engagement. On job training concept is relatively new and is embraced based by many based on the fact it is more viable and cost effective. While CHWs are inducted at the point of entry, OJT is what most agencies recommend and the results can be seen. This finding confirms a study that was conducted by (Opole,2009), that looked at the effectiveness of community health workers on the implementation of CDC projects in Karemo division in Siaya district which also revealed that CDC should apply On Job training to refresh CHWs on their work

4.5.7 Effectiveness of the trainings received by CHWs

The study sought to understand the efficacy of the training received by the Community health workers. To answer the question, LVCT staffs were asked to rate the effectiveness of the training received by the Community health workers received training and the responses are shown in table 4.22

Table 4.17: Opinion of LVCT staff on the effectiveness of trainings on the CHWs

Responses	Frequency	Percentage (%)
Yes	19	95
No	1	5
Don't know	0	0
Total	**20**	**100**

Table 4.17 states that 19(95%) of the staff interviewed felt that the training the CHWs received was very effective while 1(5%) felt that it was not effective. No respondents reported that they did not know whether the training was effective or not. On job trainings have proved very effective as the participants are mentored as the project continues. From studies done in the U.S, training was supported as a very effective strategy to improve the effectiveness of community health worker, it came out that CHW interventions can improve participant knowledge when compared with alternative approaches such as no intervention, media, or usual care plus pamphlets. (http: //www.ahrp.gov/clinic/tp/comhworktp.htm, 2009)

4.5.8 When CHWs receive training

The study sought to understand at what point the community health worker received the training. To answer the question, LVCT staffs were asked to mention at what point the training occurred and the responses are shown in table 4.18.

Table 4.18 Opinion of LVCT staff on when CHWs received training

Responses	Frequency	Percentage (%)
On job training	12	60
At the time of engagement	8	40
Don't Know	0	0
Other (Specify)	0	0
Total	**20**	**100**

Out of the 20 staff interviewed, 12(60%) responded that the CHWs received training while on job. 8(40%) said that the CHWs received training at the time of their engagement. From the findings, it shows that On Job training is getting prominence. This concept is relatively new and is currently embraced by many and is also based on the fact it is more viable and cost effective. While CHWs are inducted at the point of entry, OJT is what most agencies recommend and the results can be seen. This finding confirms a study that was conducted by (Opole,2009), that looked at the effectiveness of community health workers on the implementation of CDC projects in Karemo division in Siaya district which also revealed that CDC should apply On Job training to refresh CHWs on their work.

4.6 Follow up of clients and uptake of ART among PLWHA

The third objective of the study sought to investigate the influence of follow ups done by the CHWs to their positive clients. The study sought to understand how the follow up of clients by community health workers influence the uptake of ART.

4.6.1 Follow up of clients by CHWs

The study sought to understand whether community health workers follow their clients or not. To answer the question, community health workers were asked to state whether they follow their clients and the responses are shown in table 4.19

Table 4.19: Follow up of Clients by CHWs

Responses	Frequency	Percentage
Yes	80	100.0
No	0	0.0
Total	**80**	**100.0**

Table 4.19 states that all the 80(100%) CHWs interviewed followed up their clients. Follow up of the clients conducted by the community health workers made the clients to utilize the ART services meaning the CHWs contributed immensely to the uptake of ART. This can be attributed to the fact that they took their time to visit their clients at home and these visits were critical to the clients as the CHWs is the contact person between the client, Liverpool VCT Care and Treatment and at the same time a link between the client and the patient support centre (PSC).

4.6.2 Frequency of follow up by CHWs

The study sought to understand the frequency of follow up by Community health workers. To answer the question, community health workers were asked to state how often they followed the clients and the responses are shown in table 4.20

Table 4.20: Frequency of follow up

Responses	Frequency	Percentage
Once a week	25	31.3
Fortnightly	23	28.8
Once a month	32	40.0
Once a quarter	0	0.0
Total	**80**	**100.0**

From the study conducted, table 4.20 states that out of the 80 CHWs interviewed, 25(31.3%) followed their clients once a week while 23(28.8%) followed their clients fortnightly and 32(40%) once a month. No CHW followed up clients after three months. In my understanding, three months for one who is taking ART is such a long time based on the many challenges the clients might be going through. From observation, positive clients need regular support and follow up. One other critical thing to note is that these are volunteers who apart from following their clients have other responsibilities within their households.

The concept of using community health workers has a long history of 50 plus years and different countries have referred to the CHWs in a varied ways (Brownstein, 1998) Based on challenges of having inadequate personnel across many countries in Africa and beyond, CHWs have been used to reach hard to reach population such as sex workers, HIV positive clients, men having sex with men (Castro, 1995).

4.6.3 Influence of follow up on ART

The study investigated whether there is any influence of follow up done by the CHWs and uptake of ART by the clients. The researcher cross tabulated the frequency of follow up on the uptake of ART. Table 4.21 shows the response

Table 4.21 Influence of follow up on uptake of ART

Follow up	Uptake of ARTs				Total	
	Very frequently		Frequently			
	F	%	F	%	F	%
Once a week	18	22.5	7	8.75	25	31.25
Fortnightly	15	18.75	8	10.0	23	28.75
Once a month	15	18.75	17	21.25	32	40.00
Total	**48**	**60**	**32**	**40**	**80**	**100**

Table 4.21 shows that out of the 80 sampled community health workers, 18(22.5%) who did their follow up once a week, influenced their clients very frequently whereas 7(8.75%) of CHWs who did their follow up once a week, influenced their clients frequently on uptake of ART on the contrary, 15(18.75%) who followed up their clients fortnightly, influenced their clients very frequently while, 8(10.0%) influenced their clients frequently. Lastly, 15(18.755) of CHWs who did their follow up once a month influenced their clients very frequently on uptake of ART whereas 17(21.25%) influenced their clients frequently. The results from the table above shows that conducting follow up once a month is ideal as it provides adequate time for CHWs to provide feedback to LVCT on the progress of the clients on ARTs. Thus justifying the highest number of follow ups once a month.

4.6.4 Usefulness of follow up on the improvement of ART among clients

The study sought to understand the usefulness of follow up and whether there is any influence of follow up done by the CHWs and uptake of ART by the clients. To answer the question, the CHWs were asked to rate the usefulness of the follow up to the clients and the responses are shown in table 4.22

Table 4.22: Usefulness of follow up on the improvement of uptake of ART among PLWHA

Responses	Frequency	Percentage (%
Very useful	76	95.0
Useful	4	5.0
Not useful	0	0.0
Don't know	0	0.0
Total	**80**	**100.0**

Table 4.22 shows that a large number 76(95.5%) of the respondents interviewed said that follow up was very useful. While only 4(5%) said that follow up was useful and none thought that it was neither useful or did not know the usefulness. This is very critical because follow up of clients in uptake of ART can reveal a lot whether the client is in the right direction or not as far as taking of medication is concerned. This finding is in line with Gill, (1989) who supported that follow up of clients is very important in project implementation even though it can be costly to many organizations because they either underestimate or inadequately plan for its implementation.

4.7 Influence of activity report by the community health worker on uptake of ART

The status of report writing is critical in any project as it provides evidence that the activity was conducted. Evidence Based approach has become the more and more embraced by many. It is not only a proof that the activity was undertaken but also necessitates payment of activities conducted. This was further discussed based on the following sub-sequent themes:

4.7.1 Report writing by CHWs

The study investigated the influence of reporting done by CHW on the uptake of ART as the fourth objective. The researcher presented the respondents with a question seeking to know whether they write reports or not. Table 4.23 shows the responses.

Table: 4.23: Report writing by the CHWs

Responses	Frequency	Percentage (%
Yes	80	100.0
No	0	0.0
Total	**80**	**100.0**

Table 4.23 indicates that the study revealed that 80 CHWs (100%) do write activity reports. Reports are very important documentation to show that activities were conducted or not. Apart from being evidence based, from the reports, one is able to tell whether the project is going the right direction or not. The critical questions include whether the objectives are being met, how best the clients can be supported and challenges which might arise with the uptake. The reports can also inform the government of Kenya on policy issues. LVCT relies on the CHWs since they are the link between the clients and the organization.

4.7.2 Frequency of report writing

The study sought to understand the extent of frequency of writing reports among community health workers. To answer the question, community health workers were asked how often they wrote the reports and the responses are shown on table 4.24

Table 4.24: How often do CHWs write reports?

Responses	Frequency	Percentage
Weekly	5	6.25
Fortnightly	1	1.25
Monthly	74	92.5
Quarterly	0	0.0
Total	**80**	**100.0**

Table 4.24, shows that from 80 CHWs interviewed, 5 (6.25%) responded that they wrote reports on a weekly basis 1(1.25%) on fortnightly basis, 74(92.5%) on monthly basis while none reported on quarterly basis. The frequency of report writing is critical. It is a requirement that each CHW attached to LVCT share their work on a monthly basis because this is when feedback is given to the LVCT staff. It has also become prudent from most donors that things which are not documented were not done and therefore cannot be paid for. This reflection is very critical as it indicates that the CHWs are in touch with the clients they serve. While we also appreciate the fact that they are volunteers, it is only realistic that this cannot happen too often and therefore the monthly generation of reports gave a good feedback to the project staff. One other thing the CHWs attested to is the fact that the monthly visits was the ideal situation however, if a client was in a dire need, the CHW would extend a helping hand. Among the items that the CHWs documented were on whether clients took their medication as required, where the clients live, any challenges they face while taking drugs and who offered them support.

4.7.3 Activity report and uptake of ART

The study sought to understand the extent to which activity reports by community health workers influence uptake of ART. To answer the question, community health workers were

asked to state frequency of report writing and the results were cross tabulated with their responses as shown on table 4.25

Table 4.25: Influence of activity reporting on uptake of ART

Frequency of reporting	Uptake of ART				Total	
	Very frequently		Frequently			
	F	%	F	%	F	%
Weekly	5	6.25	0	0	5	6.25
Fortnightly	1	1.25	0	0	1	1.25
Monthly	42	52.50	32	40	74	92.50
Total	**48**	**60**	**32**	**40**	**80**	**100**

Out of 80 sampled CHWs, 5(6.25%) who wrote activity reports weekly had their clients taking medication very frequently while none of the clients took their medication frequently. 1(1.25%) who wrote their activity report fortnightly had their clients taking medication very frequently while none of the clients took medication frequently. Lastly, out of 42(52.50%) who wrote their activity reports on monthly basis had clients taking medication very frequently where as 32 (40%) took their medication frequently. From the findings of these results, it can be concluded that activity reporting by the community health workers increased the chances of more clients frequently taking ARTs.

4.7.4 Report writing by CHWs

The study sought to understand whether activity reports were written by community health workers. To answer the question, LVCT staffs were asked to state whether CHWs write activity reports and the results are shown in table 4.26

Table 4.26: Report writing by the CHWs

Responses	Frequency	Percentage (%)
Yes	20	100
No	0	0
Total	**20**	**100**

Table 4.26 shows that 20 LVCT staff who were interviewed reported that 80 Community health workers write reports. As earlier indicated, report writing is important as it gives an organization the direction in which the project is taking. The reports that the CHWs generate have been very useful in that they show the trends in which clients take their medication, it also shows if the clients are defaulting or not. Recommendations from World health Organization (WHO) stresses that clients who do not take medication as required end up being resistant and therefore may only require second line treatment which is very expensive,. The engagement of CHWs is extremely important as it monitors the health seeking patterns of clients concerned. (WHO,2010).

4.7.5 Frequency of report writing by CHWs

The study sought to understand how often the CHWs write their activity reports. To answer the question, LVCT staffs were asked to state the frequency of these activity reports and the results are shown in table 4.27

Table 4.27: Frequency of report writing

Responses	Frequency	Percentage (%)
Weekly	1	5
Fortnightly	0	0
Monthly	19	95
Quarterly	0	0
Total	**20**	**100**

Table 4.27 states that 19(95%) out of the 20 LVCT staffs interviewed, reported that CHWs write reports once in a month while 1(5%) reported that CHWs write their reports weekly.. Monthly report writing is important as it gives the CHWs time to engage in other economic generating activities for their livelihood based on the fact that they are not salaried. 1(5%) of the 20 staffs interviewed mentioned that the CHWs wrote reports on a weekly basis. This enabled the CHWs to take notes that help them to compile one activity report at the end of the month.

4.7.6 Contribution of the reports on ART uptake

The study sought to understand whether the activity reports generated by the Community health workers informed Liverpool VCT on uptake of ART. To answer the question, LVCT staffs were asked to state in their opinion whether the activity reports CHWs wrote, informed LVCT on ART uptake and the results are shown in table 4.28

Table 4.28: Contribution of the reports on ART uptake

Responses	Frequency	Percentage (%)
Yes	17	85
No	3	15
Don't Know	0	0
Total	**20**	**100**

Table 4.28 shows that, 17(85%) of LVCT staff interviewed felt that the reports CHWs generated informed LVCT on the ART uptake level among positive client while 3(15%) felt that these reports did not inform LVCT on the uptake. These reports form an important link between the client and the organization. The reports can also inform government policies at various levels as LVCT works within government structures. Lessons learnt can be very informative to other stake holders who may want similar projects elsewhere.

4.7.7 Influence of CHW on uptake of ART among clients

The study sought to understand whether the Community health workers influence uptake on ART among clients. To answer the question, LVCT staffs were asked to state the influence of CHW on uptake of ART. Their responses are shown in table 4.29.

Table 4.29: Influence of CHWs on the uptake of ART among clients

Responses	Frequency	Percentage (%)
Yes	20	100
No	0	0
Total	**20**	**100**

Table 4.29 shows that, 20 (100%) of Liverpool VCT staff interviewed reported that the CHWs influenced the uptake of Antiretroviral therapy greatly. This can be attributed to the fact that the CHWs being members of the same community may feel indebted to serve their members as the client can be a brother, sister or in law. This confirms publication from (Journal of health Care, 2006) which states that the intrinsic characteristics of CHWs include their belief that they can influence community decisions, self perceptions that they are leaders in the community and knowledge who to talk to in their community to make a change.

4.7.8 CHW influence on LVCT project

The study sought to understand the Community health workers influence on LVCT project. To answer the question, LVCT staffs were asked to rate the influence of CHW on LVCT project and their responses are shown in table 4.30.

Table 4.30: Influence of CHW within LVCT Project

Responses	Frequency	Percentage
Very influential	13	65
Influential	7	35
Not influential	0	0
Other specify	0	0
Total	**20**	**100**

Results presented in table 4.30 shows that 13 (65%) LVCT staff out of the 20 interviewed said that the CHWs were very influential within Liverpool VCT project while 7(35%) said that CHWs were influential. This goes without saying that clients identified with the community health workers greatly.

4.7.9 Extent to which CHWs contribute to the success of ART uptake

The study sought to understand the extent to which Community health workers contribute to the success of ART. To answer the question, LVCT staffs were asked to mention to what extent CHWs contribute to the success of ART among PLWHA. The responses are shown in table 4.31.

Table 4.31: Extent to which CHWs contributed to success of ART uptake

Responses	Frequency	Percentage
Larger Extent	16	80
Somehow	4	20
No extent	0	0
Don't know	0	0
Total	**20**	**100**

Table 4.31 shows that 16(80%) of LVCT staffs responded that the CHWs contributed to a larger extent to the success of the ART uptake compared to 4(20%) who reported that somehow the CHWs contributed to the success of ART project. From this feedback, it is evident that the CHWs 16 (80%) reported by the LVCT staff as having played a vital role in the success of ART and the success relied upon the fact that clients referred to community health workers from the VCT counselors took up these important services.

CHAPTER FIVE

5.0 SUMMARY OF THE FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter focuses on the summary of findings, conclusions, recommendations, contribution of this study to the body of knowledge and suggestions for further research based on the issues raised by this study.

5.2 Summary of the findings

The first objective for this study was to establish to which extent demographic characteristics of CHWs influence the uptake of ART among people living with HIV and AIDS. On gender composition of the community health workers, the study found that community health workers are dominated by females (76.25%) while male Community health workers constituted only (23.75%.) Majority of the Community health workers were found to be in the age brackets between 40-50 years (66.25%). On level of education, (78.75%) of the CHWs interviewed had secondary level of education while on marital status, the study found that most of the Community health workers are married (42.5%). The study findings established that gender of the community health worker influenced the uptake of ART by the clients since (56.25%) female CHWs had clients who very frequently took ART compared to (3.75%) in the case of the male CHWs.

Age distribution also had an influence on taking of ART in the sense that the CHWs who were aged 40-50 (42.5%) influenced more clients on Uptake of ART, 4 (28.57%) had clients who very frequently took ARTs, On level of education of CHWs, the study found that Community health workers who had attained secondary education had more clients 63(78.75%). These results can be interpreted to mean that demographic characteristics of the CHWs influenced to a great extent the uptake of ART by the PLWHA.

The second objective looked at the level of training received by CHWs in handling clients and how it influenced uptake of ART. 39(48.75%) reported that the trainings they received was very useful and assisted their clients to take their medication very frequently while 13(16.25%) who acknowledged the fact that the training they received was very useful assisted their clients frequently. The highest number of CHWs who appreciated the fact that training was very useful confirmed the modern trend where emphasis is laid on training and manpower development for sustainable delivery of services.

The third objective of the study was to determine how frequency of follow up by the CHWs influenced uptake of ART among HIV positive clients. The highest number of CHWs who appreciated the fact that training was very useful confirmed the modern trend where emphasis is laid on training and manpower development for sustainable delivery of services.

The fourth objective of the study was to examine the extent to which activity reports by CHWs influenced uptake of ART among PLWHA. The study revealed that among the CHWs interviewed, out of 42(52.50%) who wrote their activity reports on monthly basis had clients taking medication very frequently where as 32 (40%) took their medication frequently. From the findings of these results, it can be concluded that activity reporting by the community health workers increased the chances of more clients frequently taking ARTs.

5.3 Conclusions

The study examined the influence of Community health workers on uptake of ART among people living with HIV and AIDS in Kawangware Division, the case of Liverpool VCT care and treatment.

The study established that the community health workers' characteristics such as age, gender composition, Level of education and marital status have significant influence on the uptake of ART among PLWHA. Community health worker's job require a lot of dedication and commitment to serving humanity this therefore requires one who does not have a lot of

other commitments be it at family level and one with a husband may find it very difficult to cope with this volunteer job of CHWs. Being single or widowed still amounts to a level of being single and therefore, majority of people in this category can make their own decisions of wanting to help or not. Regarding training, 100% of the CHWs interviewed responded that they received training before the project was implemented. This was also responded to by LVCT staff interviewed (100%). Training of CHWs has been viewed as an important aspect for delivery of services. Looking at the duration, the CHWs responded differently on how long the trainings they received lasted. This was same to the Liverpool VCT staffs interviewed. The trainings the CHWs received seemed to have scored very highly, however, it is important to standardize trainings. The training methods which LVCT used (On job training method) was embraced by many as it gave a continuous touch with the community health workers.

The third objective was to determine how frequency of follow up by the CHWs influenced uptake of ART among people living with HIV and AIDS. Follow up came out as an effective way of supervising clients, however, need for frequent follow ups on weekly basis as opposed to monthly visits seemed to be the best practice. Follow up activity should not be pegged only on monthly basis but when there is dire need from clients. On report writing, this activity played a very crucial role played by the CHWs and from the findings it was done at least once a month.

5.4 Recommendations

The study made the following recommendations:

1. The Ministry of Public health and sanitation and ministry of medical services should see the essence of incorporating Community health workers to realize uptake of anti-

retroviral therapy. Based on the findings, the study established that the Community health workers are important in promoting health care among informal settlements.

2. There should be standardization in community health workers training, On Job training method came out as the most outstanding methodology as it is less expensive and the aspect of mentorship is important especially to those whose level of education is low. Most adults learn better at what they see as opposed to what they read. Community health workers should be attached to Comprehensive Care Clinics for adequate follow up of clients who test HIV positive. The CHWs should be given more skills especially on counseling and therefore through NASCOP, allow CHWs with less than form four certificate to be trained as counselors. From evidence, counseling addresses private matters that clients may not want to share with everybody else.

3. The government should mainstream community health workers activities within their support supervision agenda at least on a monthly basis to strengthen uptake of ART.

4. Documentation of CHW's activities should be given priority as it is very important and therefore for continuity purposes, a copy of CHWs report should be submitted to health Records Officers in every district in Kenya and feedback given in various forum stakeholders meetings at the district level and this should be replicated everywhere as HIV has no boundaries.

5.5 Contribution to the body of knowledge

The study made the following contributions to the body of knowledge.

Table 5.1 Contribution to the body of knowledge

No.	Objective	Contribution to knowledge
1.	To establish the extent to which demographic characteristics of CHWs influence uptake of ART among people living with HIV and AIDS.	Age, marital status, gender and educational level of CHWs play key role in uptake of ART.
2	To investigate the level at which training received by community health workers influence uptake of ART among positive clients.	On job training (OJT) enhances skill transfer and is cost effective.
3	To determine how frequency of follow up of positive clients by CHWs influence uptake of ART among people living with HIV and AIDS.	Follow up activities are critical to people living with HIV and AIDS.
4	To examine the extent to which activity reports by Community health workers influence uptake of ART among positive clients.	Documentation enhances evidence based approach (EBA)

5.6 Suggestions for further Research

This study was not able to establish the response from HIV positive clients who benefitted from ART and support from the community health workers. In order to complement the findings of this study, following areas of study are therefore recommended for further research.

1. This study was conducted in Kawangware targeting Community health workers engaged with Liverpool VCT care and treatment. A comparison study for instance in Millennium Villages project in Siaya district could be conducted.
2. Conduct a study on the response of the people living with HIV and AIDS using various methods including in depth interviews
3. Since the study was done at once, future researchers need to do a follow-up study in the same study so as to monitor the progress of respondents.
4. A similar study also needs to be done in other areas i.e. in the rural areas or peri – urban areas for the purpose of comparison with the findings of this study.

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APPENDIX I

LETTER OF TRANSMITTAL

Pamela Ayoo Menya Onyango,

Liverpool VCT Care and Treatment,

P.O.BOX 1983-00202,

Nairobi,

Email: PMenya@lvct.org

Cellphone: 0729390102

July, 2011.

Dear Sir/Madam,

RE: PERMISSION TO CONDUCT A RESEARCH PROJECT STUDY.

I am a Masters of Arts (Project Planning and Management) Student at the University of Nairobi carrying out research on the topic ***Influence of Community Health Workers on uptake of Anti Retroviral Therapy among people living with HIV and AIDS in Kawangware, Nairobi Province, a case of Liverpool VCT Care and Treatment.*** It is my humble request that you assist me by filling in the questionnaires as correctly and honestly as possible. Be assured that your identity and responses will be treated with utmost confidentiality and for that reason, do not write your name on any tool.

I take this opportunity to thank you in advance for your willingness to participate in this important exercise.

Yours Faithfully,

Pamela Ayoo Menya

Student University of Nairobi

APPENDIX I1

QUESTIONNAIRE FOR LVCT STAFF

Introduction

The purpose of this questionnaire is to solicit the perceptions, views, opinions and insights of the Liverpool VCT Care and Treatment (LVCT) staff on the influence of CHWs on uptake of Anti retroviral therapy among People living with HIV and AIDS.

SECTION 1

Demographic information

1. Gender

   ☐ Male ☐ Female

2. Age

   ☐ 18-28 ☐ 29-39 ☐ 40-0 ☐ 51+ ☐

3. Educational Level

   ☐ Primary ☐ Secondary ☐ Diploma ☐ Higher Diploma

   ☐ University ☐ Other specify----------

4. Marital status

   ( ) Single ( ) Married ( ) Widow/Widower ( ) Separated

5. What is your current position in the organization?

   ☐ Coordinator ☐ Project Officer ☐ HTC Provider.

(B) SECTION 2

Level of training of CHWs and uptake of ART

1. Were the CHWs trained before the implementation of the project?

   Yes ☐
   No ☐
   Don't Know ☐

2. In your opinion do you think that CHW receive adequate training at the time of their engagement?

   ☐ Yes
   ☐ No
   ☐ Don't know

(b) At what point do you give training to the CHWs?

☐ On job training
☐ At the time of engagement
☐ Don't Know
☐ Other (Specify)

(C) Do you think the method mentioned above is effective?

☐ Yes ☐ No ☐ Don't Know

Follow up of clients of CHW and uptake of ART

5. Do CHWs follow up their clients at home?

☐ Yes
☐ No
☐ Don't know

6. If yes how often do CHWs follow their clients?

( ) Once a week
( ) Fortnightly
( ) Once a month
( ) Once a quarter

7. How useful is this follow up in the improvement of ART?

( ) Very useful
( ) Useful
( ) Not useful
( ) Don't Know

Activity reports by CHW and uptake of ART

8. Do CHWs write reports?

( ) Yes
( ) No

(B) If yes, how often does this happen?

( ) Weekly
( ) Fortnightly
( ) Monthly
( ) Quarterly

9. In your opinion do you think that the reports CHW generate inform LVCT on the ART uptake level on clients?

( ) Yes
( ) No
( ) Don't Know

10. In your opinion, do you think that CHWs influence the uptake of ART among positive clients?

( ) Yes
( ) No

(B) If yes, how would you rate their influence within the LVCT project?

( ) Very influential
( ) Influential
( ) Not influential
( ) Other specify

11. To what extent do CHWs contribute to the success of ART uptake among PLWHA?

( ) Larger Extent
( ) Somehow
( ) No extent
( ) Don't know

Thank you for your time

APPENDIX III

QUESTIONNAIRE FOR COMMUNITY HEALTH WORKER

Introduction

I thank you for agreeing to participate in this interview. You have been identified as one of the individuals in this District who has the opportunity to contribute to the study which tries to gauge the influence of CHWs on uptake of ART among positive clients. An important part of this profile is learning about the experience of Liverpool VCT care and treatment (LVCT) staff with the CHWs.

Before we begin, I would like to reassure you that your identity and the information you provide during this interview will be kept strictly confidential and for the research purposes only.

Instructions of completion of the questionnaire

Please answer the questions honestly. You are humbly requested to tick in the appropriate box or give your brief opinion where necessary.
Do you have any questions at this point?

SECTION 1

Demographic information

1. Gender

   Male ( ) Female ( )

2. Age

   18 – 28 ( ) 29- 39 ( ) 40 – 50 ( ) 51+ ( )

3. Educational level

   Primary ( ) Secondary ( ) Diploma ( ) Degree ( ) Masters ( )

   Other specify----------

4. What is your marital status?

   Single ( ) Married ( ) Widow/widower ( ) Separated ( )

SECTION 2

1. Kindly rate the frequency of how your clients take medication?

Very frequent ( )
Frequent ( )
Rarely ( )
None ( )

Level of CHWs training and uptake of Antiretroviral Therapy among PLWHA

2. Before implementing Liverpool VCT Care and treatment (LVCT) project, did you receive any training?

Yes ( )
No ( )

(B) If yes, how long did the training take?

Less than one week ( )
One week ( )
Two weeks ( )
One month ( )

(C) How would you rate the training?

Very useful ( )
Useful ( )
Not useful ( )
Don't Know ( )

Frequency of follow-up of Clients by CHWs and uptake of ART

3. Do you follow up your clients?

Yes ( )
No ( )

B. If yes, how often do you follow them up?

Once a week ( )
Fortnightly ( )
Once a month ( )
Once a quarter ( )

4. How useful is this follow up in the improvement of uptake of ART

Very useful ( )
Useful ( )
Not useful ( )
Don't know ( )

(D) Activity Reports by CHWs and uptake of ART among PLWHA

5. Do you write reports?

Yes ( )
No ( )

B. If yes how often do you write the reports?

Weekly ( )
Fortnightly ( )
Monthly ( )
Quarterly ( )

Thank you for your time

APPENDIX 1V

CONSENT FORM

My name is _____ and I am conducting a study for a Master of Arts in Project Planning student at the University of Nairobi. I am carrying out a research on the influence of CHWs on the uptake of ART among persons living with HIV. I intend therefore to interview the CHWs, PLWH and the major stake holders within Dagoretti District.

The information will help us to create awareness on uptake of ARVs among the positive clients and whether there are any efforts the government should employ to improve the uptake, Knowledge of status and disclosure.

I hope it will enable the Faith Based Organization (FBOs), the government, community based organizations (CBO), policy makers, the family and nongovernmental organizations (NGO) to intervene in the process of implementing programs for those infected and affected in Kawangware location.

The information given will be treated confidentiality. Participating in the study is voluntary. You may withdraw from Participating in this study at any time.

I have read and understood this consent form and I agree to participate in the study.

Signature of the participant: .....

Date: .....

Telephone number: .....

APPENDIX V

RESEARCH CLEARANCE PERMIT

PAGE 2

THIS IS TO CERTIFY THAT:
Prof./Dr./Mr./Mrs./Miss/Institution
Pamela Ayoo M. Onyango
of (Address) *University of Nairobi*
P.O. Box 825, Kisumu
has been permitted to conduct research in

Dagoreti	Location
Nairobi	District
	Province

on the topic: *Influence of community health workers on uptake of anti-retroviral therapy among people living with HIV/AIDS in Nairobi Province. A case of Liverpool VCT care and treatment.*

for a period ending *30th September* 2011

PAGE 3

Research Permit No. *NCST/RR1/12/1/MED011/137*
Date of issue *16th August 2011*
Fee received *kshs.1000*

Applicant's Signature

Secretary
National Council for
Science and Technology

CONDITIONS

1. You must report to the District Commissioner and the District Education Officer of the area before embarking on your research. Failure to do that may lead to the cancellation of your permit
2. Government Officers will not be interviewed with-out prior appointment.
3. No questionnaire will be used unless it has been approved.
4. Excavation, filming and collection of biological specimens are subject to further permission from the relevant Government Ministries.
5. You are required to submit at least two(2)/four(4) bound copies of your final report for Kenyans and non-Kenyans respectively.
6. The Government of Kenya reserves the right to modify the conditions of this permit including its cancellation without notice

REPUBLIC OF KENYA

RESEARCH CLEARANCE PERMIT

GPK6055t3mt10/2011

(CONDITIONS—see back page)

APPENDIX VI

RESEARCH AUTHORIZATION LETTER

REPUBLIC OF KENYA

NATIONAL COUNCIL FOR SCIENCE AND TECHNOLOGY

Telegrams: "SCIENCETECH", Nairobi
Telephone: 254-020-241349, 2213102
254-020-310571, 2213123,
Fax: 254-020-2213215, 318245, 318249
When replying please quote

P.O. Box 30623-00100
NAIROBI-KENYA
Website: www.ncst.go.ke

Our Ref: **NCST/RRI/12/1/MED-011/137**

Date:
16th August 2011

Pamela Ayoo Menya Onyango
University of Nairobi
Kisumu Campus
P.O BOX 825-40100
KISUMU

RE: RESEARCH AUTHORIZATION

Following your application for authority to carry out research on "***Influence of community health workers on uptake of anti-retroviral therapy among people living with HIVand AIDS in Nairobi Province.A case of Liverpool VCT care and treatment***" I am pleased to inform you that you have been authorized to undertake research **in Dagoretti District** for a period ending ***30th September 2011***

You are advised to report to **The Provincial Commissioner, The Provincial Director of Education and The Provincial Director of Medical Services, Nairobi Province** before embarking on the research project.

On completion of the research, you are expected to submit **one hard copy and one soft copy** of the research report/thesis to our office.

P.N. NYAKUNDI
FOR: SECRETARY

Copy to:

The Provincial Commissioner
Nairobi Province

The Provincial Director of Education
Nairobi Province

The Provincial Director of Medical Services
Nairobi Province