

**FACTORS INFLUENCING DECENTRALIZATION OF ANTIRETROVIRAL TREATMENT SERVICES IN THE HEALTH SECTOR: THE CASE OF NYERI COUNTY, KENYA.**

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**A RESEARCH PROJECT REPORT SUBMITTED IN PARTIAL FULFILMENT OF THE REQUIREMENT FOR THE AWARD OF THE DEGREE OF MASTERS OF ARTS IN PROJECT PLANNING AND MANAGEMENT OF THE UNIVERSITY OF NAIROBI.**

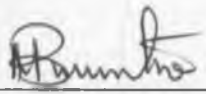
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## DECLARATION

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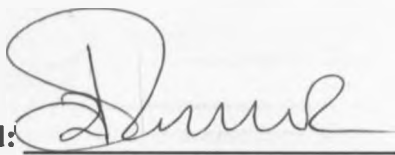
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## **DEDICATION**

This project is dedicated to my dear parents Pius Musyoki and my mother Victoria Nthenya, for having brought me up with great love, care and support for my education. I would also like to dedicate this work to my brothers, sister and colleagues who have been my greatest sources of encouragement throughout my postgraduate study. May the Almighty Lord bless them abundantly.

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## ABBREVIATIONS AND ACRONYMS

<b>ART</b>	Anti Retroviral Treatment/Therapy
<b>CCC</b>	Comprehensive Care Centre
<b>CDC</b>	Centre for Disease Control
<b>CORP</b>	Community Owned Resource Persons
<b>DHMT</b>	District Health Management Team
<b>HAART</b>	Highly Active Antiretroviral Therapy
<b>JAPR</b>	Joint Aids Program Review
<b>KAIS</b>	Kenya Aids Indicator Survey
<b>KDHS</b>	Kenya Demographic and Health Survey
<b>KNASP</b>	Kenya National HIV/AIDS Strategic Plan 11 and 111
<b>MDG</b>	Millennium Development Goals
<b>NACC</b>	National Aids Control Council
<b>NASCOP</b>	National AIDS and STI Control programme
<b>NGO</b>	Non – Governmental Organization
<b>PHC</b>	Primary Health Care
<b>PLWAH</b>	Persons Living With HIV and Aids
<b>PMTCT</b>	Prevention of Mother to Child Transmission
<b>SDP</b>	Service Delivery point
<b>SPSS</b>	Statistical Package for Social Scientist
<b>UNAIDS</b>	Joint United Nation on HIV and Aids
<b>WHO</b>	World Health Organization

## ABSTRACT

The purpose of the study was to establish the factors influencing decentralization of antiretroviral treatment (ART) services in Nyeri County. Using a descriptive survey design, the study targeted Nyeri County health providers dealing with care and treatment of HIV patients in health facilities (Service Delivery Points) and the District Health Management Teams (DHMT) responsible for implementation of ART decentralization policies in Nyeri County. Employing purposive and stratified sampling, the researcher sampled 61 respondents to represent the DHMT, ART sites as well as Non-ART sites. Data was collected using a structured questionnaire and analysed using SPSS version 20 for windows. Research revealed that policies were moderately effective while an equal number said they were less effective. The major challenge in implementing these policies was inadequate funds and shortage of staff in the health facilities. The quality of health was found to be high with facilities having a patient retention of above 90% and patients were appropriately referred to other facilities where they would access the services lacking services in their attached facility. The infrastructural capacity was also found to be inadequate. Only 53.3% of the facilities had adequate storage area to accommodate ART commodities while 33.3% said they did not have adequate patient consultation rooms. Majority said the infrastructure was inadequate and impacted negatively on ART decentralization. Generally the financial capability was inadequate, and majority of the sites said financial support was fair. The researcher concluded that despite the decentralization policies being found to be less effective and inadequate they did not affect the quality of services. The researcher recommended that the District Health Management Team should open more ART sites and convert standalone sites to central sites to ease the pressure on the available central sites and the government should source for more resources and employ more staff to facilitate the decentralization of ART services through increased collaborative activities with other stakeholders in the region.

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## CHAPTER ONE

### INTRODUCTION

#### 1.1 Background of the Study

According to Joint United Nation program on HIV and AIDS (UNAID) World AIDS Day Report 2011, people living with HIV are living longer and AIDS-related deaths are declining due to the lifesaving effects of antiretroviral therapy. Globally there were an estimated 34 million people [31.6 million – 35.2 million] living with HIV in 2010, and since 2005, AIDS-related deaths decreased from 2.2 million [2.1 million – 2.5 million] to 1.8 million [1.6 million – 1.9 million] in 2010. Around 2.5 million deaths are estimated to have been averted in low- and middle-income countries due to increased access to HIV treatment since 1995 and further highlighted that there are early signs that HIV treatment is having a significant impact on reducing the number of new HIV infections.

According to UNAIDS and World Health Organization (WHO) estimates, in 2010, reveals that 47% (6.6 million) of the estimated 14.2 million people eligible for treatment in low and middle-income countries were accessing lifesaving antiretroviral therapy (ART), an increase of 1.35 million since 2009. Many families throughout the developing world spend more than 50% of house hold income on food, and both food production and wage earning are adversely affected when an adult has AIDS (Rutengwa, 2004; Smith Fawzi et al., 2005).

HIV/AIDS is a major public health concern and cause of death in Africa. Although Africa is inhabited by just over 14.7% of the world's population, it is estimated to have more than 88% of people living with HIV and 92% of all AIDS deaths in 2007 (Africa's HIV Legacy, May 2011) . Highly Active Antiretroviral Therapy (HAART) was a breakthrough in the industrialized world, leading to the reduction of mortality and the improvement of quality of life of PLWHA. It

transformed the disease into a chronic treatable condition for a significant proportion of PLWHA with access to this treatment (Alemayehu et al. 2008).

According to WHO 2006, HIV is a social problem that has affected the whole world with Sub Saharan Africa bearing the biggest burden of caring for PLHIV, orphans and elderly caregivers. A recent mathematical model by the World Health Organization (WHO) suggests that intensifying HIV testing, combined with antiretroviral therapy, has the potential to reduce new HIV infections by 95% within 10 years (Granich et al.2009). According to UNDP report (2011) every day over 7,400 people are infected with HIV and 5,500 die from AIDS- related illnesses. HIV remains the leading cause of death among reproductive-age women worldwide and estimated that there are 17.5 million children who have lost one or both parents to AIDS and More than 80 per cent of them (14.1 million) are in sub-Saharan Africa.

Studies conducted in Botswana showed that, patterns in sexual behaviour have remained relatively stable since 2000. The country scaled up access to treatment from less than 5% in 2000 to over 80% which it has maintained since 2009. The annual number of new HIV infections has declined by over two thirds since the late nineties and data suggests that the number of new HIV infections in Botswana is 30% to 50% lower today than it would have been in the absence of antiretroviral therapy. As treatment reduces the viral load of a person living with HIV to virtually undetectable levels, it also reduces the risk of transmitting the virus to an uninfected partner. Recent studies show that treatment can be up to 96% effective in preventing HIV transmission among couples (UNAIDS World AIDS Day Report, 2011).

To better manage the challenge of HIV/AIDS, countries must strengthen various aspects of their health systems. Specific investments in strengthening health systems may improve the capacity of the system to plan and deliver services (WHO, 2004). As sub-Saharan African countries continue to scale up antiretroviral treatment (ART), there has been an increasing Emphasis on moving provision

of services from hospitals to primary health care (PHC) clinics ((Journal of the International AIDS Society 2009).

The first case of HIV/AIDS in Kenya was reported in 1984 and since then, the virus has infected many Kenyans and the devastation brought about by HIV/AIDS shows that it is the single major and most important public health problem and development challenge that the country has faced in its post-independence history (National AIDS and STI Control programme (NASCOP), 2003). In Kenya according to UNAIDS Kenya 2009, HIV infection incidences remained high at 132,000 adults, and 34,000 new paediatric infections per year, with approximately 1.4 million Kenyans currently living with HIV up from 722,869 in 2000.

The Kenya AIDS indicator survey (KAIS, 2007) results estimates HIV and AIDS national prevalence of 7.1%. NASCOP (2009) estimated that 35,000 HIV patients qualified for ART by the end of March 2009, and over 260,000 Kenyans were receiving antiretroviral (ARVs) drugs through government and donor supported programs. HIV treatment is central to the development of a comprehensive response to the AIDS epidemic and to rapidly reduce new HIV infections and save lives, the 2011 UNAIDS World AIDS Day report underscores that a shared responsibility is needed.

Like in any other region in Kenya, Nyeri County is equally affected. The Kenya AIDS indicator survey (KAIS, 2007) conducted jointly by Kenya National Bureaus of Statistics (KNBS), Ministry of Health (MOH) and National Aids control council(NACC) revealed a HIV prevalence of 3.6% in Central Province. This means that approximately 144,000 persons are living with the HIV virus that causes AIDs in the region.

According to the Joint Aids program Review Report (JAPR) by National Aids Control Council (NACC, 2008) majority of those infected and affected are residents of Nyeri, one of the factors attributing to fast growth of Nyeri town, emergence of shanties and informal settlement in Nyeri Town, and commercial sex workers (NACC-JAPR).

## 1.2 Statement of the problem.

In Kenya ART program is supported by Ministry of Health and other stakeholders both government and non-governmental institutions. Some of the key stakeholders that support both in financing and implementing HIV Care and treatment include President's Emergency Plan for AIDS Relief (PEPFAR) and other implementing partners such as Global fund. These stakeholders have been key in financing the procurement of ARV drugs and other ART related commodities while facilitating implementation of a decentralized ART services through government and other partners in Kenya (NASCO, 2012).

Nyeri District Health Record Offices (DHRO, 2011) has documented evidence, that the estimated numbers of patients in Nyeri County are 21,600 and the numbers of health facilities offering ART services are few compared to the number of patients and health personnel's in these sites, with high volume facilities serving over 4,000 patients. According to the District Health Management Team (DHMT, 2011), The numbers of service delivery points (SDPs) in Nyeri County offering ART services are 29 compared to eligible 294 health facilities in this county that can be utilized to ease workload in high volume sites in the region in collaboration with HIV/AIDS Implementing Organizations (NGOs) in this region.

Current situation is that a central site has satellite sites that order and report their active patient numbers and drug consumptions to them, with several central sites having more than 15 satellite sites where all this data is consolidated at this point to one report and then channelled to the supplies at the main warehouse in Nairobi (ART Decentralization Guideline Handbook, 2009). Unfortunately, this current arrangement has resulted to high volume central sites having over 4,000 patients in their dispensing points minus their respective satellite sites patients with several satellite sites travelling long distances to submit their reports and orders where some even fail to report due to resource constrains. This has affected data quality in the central sites by submitting incomplete and inaccurate

data to drug supplies which hinder proper decision making on forecasting and quantification of ARV drugs as per the actual needs of the patients thus causing unnecessary and avoidable drug shortages in the country as a result.

Without effective policy implementation this current situation will continue to impact negatively on staff productivity, quality of care, information management, processing of ART reports and orders, service delivery to the patients and patient data quality that has been a key challenge for sourcing more funds to support ART program not only in this region but in the whole country (Nyeri District Medical services office, 2011). Lack of adequate information on the HIV/AIDS prevalence at the division levels also poses a challenge in generating quality data at the District levels to be utilized by stakeholders for decision making.

Therefore, there is need to increase the number of health facilities offering ART services, increase the number of ordering sites and adapt to the changing needs of the patients and staffs. Researchers explored on factors influencing decentralization of ART services in Nyeri County with an aim of achieving quality service delivery to PLWHA and further explore implications for wider application within Kenya.

### **1.3 Purpose of the Study**

The purpose of the study was to establish the factors influencing decentralization of antiretroviral treatment (ART) services in Nyeri County.

### **1.4 Objective of the Study.**

Study was guided by the following objectives;

- i. To establish the influences of policies on decentralization of ART services in health facilities in Nyeri County.
- ii. To establish the influence of quality of health services on decentralization of ART services in health facilities in Nyeri County.



- iii. To investigate the infrastructural capacity on decentralization of ART services in health facilities in Nyeri County.
- iv. To establish the extent to which the availability of financial support influences decentralization of ART services in health facilities in Nyeri County.

### **1.5 Research questions.**

Researcher was guided by the following research questions during the study;

- i. How do decentralization policies influence ART services in health facilities within Nyeri County?
- ii. To what extent does quality of health services influence decentralization of ART services in health facilities within Nyeri County?
- iii. To what extent does infrastructural capacity in health facilities influence decentralization of ART services in Nyeri County?
- iv. How does the availability of financial support influence implementation of decentralized ART service in Nyeri County?

### **1.6 Justification of the Study**

In order to improve and sustain provision of ART services in Kenya, there was a need to investigate factors influencing decentralization of antiretroviral treatment service in health sector. A 2006 study in Lusikisiki sub district, South Africa revealed that HIV-infected persons received treatment faster and had better retention at the clinics than at the hospital and Only 2% of people were lost to follow-up in the clinics, compared with 19% at the hospital and further showed that, In early 2004, 50% of service users at the hospital and 40% of those at clinics arrived with CD4 cell counts  $<50 \text{ cells/mm}^3$ ; by the end of 2005, the number of patients with CD4 cell counts  $<50 \text{ cells/mm}^3$  had decreased to 16% at both the hospital and clinics. Patients were arriving in better health conditions due to the universal coverage achieved in the sub district and due to this people were arriving with a better

immune status, clinical management was less time-consuming, which allowed for more patients to be seen.

Therefore there was a need to establish the factors influencing decentralization of Antiretroviral Treatment in health sector within Nyeri County and give recommendation on how to strengthen the affected health systems to enhance better treatment, care and quality services to PLWHIV and AIDS in future, which will then improve their livelihood and reduce AIDs related deaths.

### **1.7 Significant of the Study**

This study on decentralization of ART services is useful to the government to look at the decentralization policy afresh and make changes where necessary for its smooth implementation. Government and NGOs implementing HIV/AIDS programs can also benefit from this study in that the findings can be applied or replicated elsewhere while Implementing and operationalizing a decentralized antiretroviral treatment services in other regions of the world while enhancing their capacity for sourcing more resources from funders to support HIV/AIDS programs.

Moreover, this study is of value to Scholars, researchers and students interested in undertaking similar studies on decentralization of ART and service delivery to PLWHIV and AIDs.

### **1.8 Research Scope**

Study was based in Nyeri County. It targeted health facilities staff and the District Health Management Team that is in charge of implementing the decentralization policies on ART services in this county in collaboration with Non-Governmental organizations supporting HIV programs in this region.

### **1.9 Assumption of the Study**

The study assumed that the sample chosen represented the population; the respondents were honest in their responses, aware of HIV pandemic situation and process of ART decentralization in Kenya.

### **1.10 Delimitations of the Study**

This study was limited to health facilities offering ART services and those not offering ART services, and also health policy implementers in Nyeri County and not any other county in Kenya.

### **1.11 Limitations of the Study.**

During the study the researcher encountered several challenges such as time, distances covered due to geographical distribution of health facilities in this region and resources constraints. Thus the researcher worked with a smaller number of the target population but this did not interfere with the research study.

## **1.12 Definition of Significant Terms.**

**Antiretroviral Therapy (ART)** – Is treatment of people infected with human immunodeficiency virus using anti-HIV drugs (antiretroviral medicines).

**CD4 count cells** – CD4 cells are a type of white blood cell that fights infection.

**ART Decentralization** – Is the process of moving delivery of Antiretroviral Therapy (ART) from hospitals to health centres, dispensary, clinics and Community health Care. These improves patient access (proximity) to care and treatment.

**ART sites** – This are Health Facility that offer HIV treatment services to PLWHIV.

**Central site** – This are health facilities that compile satellite sites reports and submit them to their respective supplier, ARV commodities received are then distributed to satellite sites.

**Satellite sites** – This are Health facilities (attached to central site) that report and obtain their HIV drug supplies from a central site.

**Standalone sites** – This are health facilities that order and receive ARV commodities from supplier directly and do not have satellite sites attached to them.

**High volume sites** – This are health facilities that serve many ART patients in the research region

**Availability of financial support** – Allocation of funds from the government, non-governmental organizations, private agencies and cost sharing to support ART services in Nyeri County.

**Quality of health services** - This refers to availability and adequacy of right HIV drugs, length of time taken by client to get the needed services, the quality of the services and care given by the health services providers to the patients.

## CHAPTER TWO

### LITERATURE REVIEW

#### 2.1 Introduction

This chapter presents an overview of existing literature from relevant scholars on HIV/AIDS and health services delivery in general. Relevant literature review was based on each of the specific objectives as discussed in chapter one. A conceptual framework on which the entire study is based was also presented.

#### 2.2 HIV/AIDS as a life - threatening condition

The HIV/AIDS epidemic has resulted in history's single sharpest reversal in human development, negatively impacting achievement of the Millennium Development Goals (MDGs). In the most-affected countries, HIV has reduced life expectancy, slowed economic growth, deepened poverty, and weakened governance structures. The effective service delivery for all HIV/AIDS patients depends on a proper organization of the healthcare system, AIDS related illness and deaths have aggravated existing institutional capacity constraints, and compromised governments' ability to effectively deliver services and meet their core mandates. Loss of skill and institutional memory due to AIDS is often compounded by the financial cost of training new staff, and increased demand for health care, funeral costs, and pensions (Africa's HIV Legacy, 2011). Sub-Saharan Africa, which has less than eleven percent of the world's population, is estimated to have seventy percent of all the HIV and AIDS infected persons (Murrah and Kiarie, 2001).

According to NASCOP 2003, The HIV and AIDS epidemic has moved beyond public health crisis to a personal, community, and national development catastrophe. Because the epidemic acts at all these levels, efforts to contain it must also act at individual, community, and national levels. One important way of addressing the epidemic at these points is by developing systems, strategies, and capacities to provide care for people living with HIV and AIDS within their own homes and communities by decentralizing care and treatment to health centres, dispensaries and Home Based Care. With over 1.5 million Kenyans living with HIV and AIDS and over seventy thousand of them on ARVs, the importance of ensuring that quality care is extended beyond the health facility becomes a priority strategy (KAIS, 2007).

UN Aids says there are now 5.2 million people worldwide receiving treatment for HIV/Aids, which has helped to ensure that 200,000 fewer people died from the virus in 2008 than in 2004. National HIV responses are too often poorly targeted to the national epidemiological situation, and the HIV interventions delivered in many settings are of poor quality and do not adequately focus on vulnerable and most-at-risk populations in both generalized and concentrated epidemic settings. Although variations in prevalence and epidemiological patterns within countries and regions require different priorities and interventions, all national HIV plans should incorporate service delivery to these populations in order to ensure the effectiveness of national HIV responses. In addition those national plans need to incorporate measures to overcome structural barriers that undermine access to quality services (WHO, Global Health Sector Strategy on HIV/AIDS, 2011-2015)

### **2.3 Decentralizing Antiretroviral Therapy**

Decentralization of Antiretroviral therapy services is one of the key strategies to achieving Millennium Development goals (MDG 6) on intervention to combat burden of HIV/AIDS in Kenya. Decentralization requires the expansion of small and concentrated ART programs to a greater scale, with an emphasis on increasing utilization to improve the quality of life for a significant number of people living with HIV/AIDS (Gilks et al. 2006).

Recent studies in Kenya on healthcare financing (United Nations General Assembly Special Session on HIV and AIDS Country Report (UNGASS) – Kenya 2010), show that out of pocket expenditure constitutes the highest proportion of the total health expenditure. The total out of pocket expenditure in health in Kenya stands at about 35.9 percent while public expenditure as a proportion of total health expenditure is 29.1 percent. Typically a report by Ministry of health, 2005 on AIDs in Kenya reveals that in the health sector major challenges remain to provide the more intensive services required by HIV care and treatment throughout the country, to integrate these services into existing programmes, and to attain high levels of quality care, accountability and reporting. All this must be

achieved with a limited workforce of health workers, who must acquire new knowledge and skills to deliver the new and more intensive level of services.

Studies conducted by AIDSTAR-ONE (2010) revealed that, many countries particularly those addressing a generalized HIV epidemic, have begun to decentralize HIV treatment to primary health care (PHC) centres. This effort is intended not only to increase geographic coverage of HIV clinical care, including antiretroviral treatment (ART), but also to decrease the burden of providing HIV services at existing facilities while making access to care easier for PLHIV. The ultimate goal of many of these nascent efforts is to further foster a public health approach that will eventually bring universal access to HIV treatment.

Because primary health care centers provide a broad range of services to a large segment of the population, they offer an opportunity to implement a sustainable continuum of care across different areas of service delivery (Walley et al. 2008). Studies have indicated that, as the number of people accessing ARV services grows, space at PHC centers can become inadequate for patients waiting areas, consulting rooms and counselling services (Population council 2009). According to UNAIDS & WHO 2002, the services needed for the control and treatment of HIV/AIDS span a range from prevention and care services, including VCT, PMTCT, diagnosis and treatment of opportunistic infections and other HIV-related illnesses, to other prevention, care and social support services.

According to Kenya National AIDS and STI Control programme (NAS COP, 2009), Meeting the needs of growing numbers of PLWHA, their caregivers and their family members require the collective effort of many facilities, Organizations, both decentralized clinical ART services and community-based care. It also requires appropriate policies, supportive social attitudes and community support systems. It is critical that communities are empowered to play their role in policy setting, program development, resource mobilization and allocation, implementation and evaluation.

Participatory approaches to program development and monitoring should be adopted to create an effective interface between communities and the public health system

#### **2.4 Decentralization Model in Kenya**

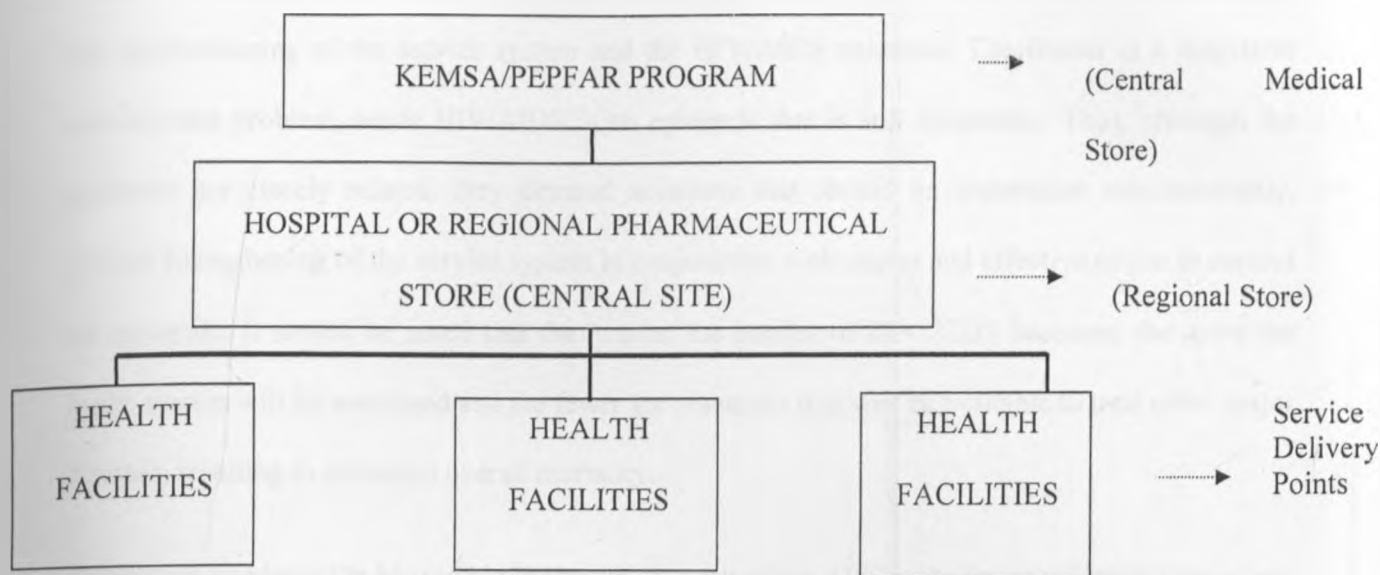
The biggest risk of decentralizing HIV care is one of maintenance of quality. If patients do not receive quality comprehensive HIV services at the satellite site, then the individual is at risk of poor adherence, poor clinical management, both of which lead to viral resistance, which has long-reaching ramifications at the family, community, and at the national level. Maintaining quality of care involves implementing strategies to achieve compliance with minimum standards and practices across the nation/region (HIV/AIDS Pharmaceutical Management Decentralization Handbook - May 2009).

In line with the National Health Sector Strategic Plan, NHSSP II (2005-2010), NASCOP developed a decentralization model that uses the concept of a “satellite” health facility attached to a “central” ART health service delivery site or a District pharmaceutical store for ARVs re-supply. Decentralization of ART services began informally in November 2006 to address challenges at national level, proposed creation of satellite health facilities that were attached to central ART health facilities in order to allow and improve easy access to ART care and treatment services by providing HIV care and antiretroviral therapy near the home of the person being treated. Decentralizing HIV care and antiretroviral therapy requires that ART central health facilities have the capacity to undertake and support the capacity-building at the satellite sites so that they can also provide services of the same standard as them (HIV/AIDS Pharmaceutical Management Decentralization Handbook - May 2009).

The central site plays a crucial role in capacity building of the satellite sites to provide quality HIV care and treatment services. The central site should already be engaged in providing quality care and treatment services and implement efficient inventory, laboratory, and monitoring and evaluation systems. Comprehensive care services that must be in place at the central site including, at minimum, HIV counselling and testing; HIV care and treatment including effective defaulter management and adherence support; effective PMTCT including appropriate ARV drug use in pregnant women, follow up of mothers and their infants, early infant diagnosis and interventions for improved infant survival; TB/HIV services, and reproductive health services (NASCOP, 2009). The figure below



provides a diagrammatic view on how the ART decentralization was modelled (HIV/AIDS Pharmaceutical Management Decentralization Handbook - May 2009).



**Figure1, ART Commodity Management Decentralization Model in Kenya.**

### 2.5 Decentralization Policies

HIV/AIDS remains a global health problem of unprecedented dimensions. Unknown 27 years ago, HIV/AIDS has already caused an estimated 25 million deaths worldwide and has generated profound demographic changes in the most heavily affected countries. The most recent international epidemiological data contains some good news. In some countries in Asia, Latin America, and sub-Saharan Africa, the annual number of new HIV/AIDS infections is falling. The estimated rate of HIV/AIDS deaths has also declined in part as a result of the success in expanding access to antiretroviral drugs in resource-limited settings. Yet these favourable trends are not uniformly evident, either within or between regions, underscoring the need for more comprehensive progress in implementing effective policies and programmes (WHO, 2008).

One of the main challenge in Kenya is strengthening of decentralized HIV response structures for a more sustained and focus response at the community level (UNAID Kenya, 2009).

In a 2004 WHO publication paper on Scaling up HIV/AIDS care, describes countries where the greatest challenges for scaling up ART are encountered; health systems face two major challenges, the malfunctioning of the service system and the HIV/AIDS epidemic. The former is a long-term development problem, while HIV/AIDS is an epidemic that is still expanding. Thus, although the problems are closely related, they demand solutions that should be undertaken simultaneously, gradual strengthening of the service system in conjunction with urgent and effective action to control the epidemic. It should be noted that the heavier the burden of HIV/AIDS becomes, the more the health system will be weakened and the fewer the resources that will be available to treat other major diseases, resulting in increased overall mortality.

A Research conducted in Mozambique showed that providing ART at the Primary Health Care clinic level there is an increase in the number of entry points to care, while the greater proximity of services encourages retention in care, the mass transfer of patients enrolled in care at the hospital level can quickly overwhelm minimally staffed clinics if appropriate steps are not taken. In addition to the extra workload, clinic staff may feel uncomfortable with their new level of responsibility, particularly if training and supervision mechanisms are not in place (Tom Decroo, Kathryn Chu et al., 2009) , this findings further showed that Down referral or decentralization requires careful planning, implementation over a realistic timeframe, and attention to monitoring at all levels. Perhaps the most obvious lesson is the need to take time to explain to the patients the reasons behind the decisions taken for the down referral, and explain that they would benefit from more proximal services without any compromise in care. Criteria for referral should ideally be determined in consultation with all stakeholders, including service users. The introduction of antiretroviral therapy to the management of HIV positive patients further stresses the importance of decentralized ART services to ensure adherence to therapy and close supervision for any adverse effects to treatment.

According to UNAID Kenya 2009 report, Kenya has an extremely vibrant civil society sector with an estimated 8,000 non-governmental organizations (NGOs) registered to respond to HIV, out of which 3,000 provide reports through the Community Based Activity Reporting System (COBPAP). Civil Society is represented on the major leadership and policy bodies (the National AIDS Control Council Board and the Country Coordination Mechanism). Although considerable commitment has so far been demonstrated to delivering comprehensive treatment in HIV and AIDS programmes, their effectiveness is often hindered by weak linkages with other HIV services. Top-down donor policies and a lack of sustainable and consistent funding strategies represent a formidable threat to these programmes in the long term (Orner, 2006).

## **2.6 Quality of health services on Decentralization of ART**

If care is to be effective it should be of good quality. Quality of care though is a complex term; Donabedian (1988) developed a framework for defining quality of care. She differentiated between observed quality of care and perceived quality of care. The observed quality of care focuses merely on the structure, the process and the outcome. Structure refers to facilities, personnel and organisation. Process refers to interaction between provider and consumer. Outcome measures the extent to which the service interaction meets the consumers' expectations. The observed quality of care relates to professionally defined standards of care and the perceived quality of care reflects the views of the patients. For example, patients can be satisfied even after receiving treatment in a health system which does not offer quality of care according to professional standards. The opposite is true if a doctor offers good quality of care but communication with the patient does not satisfy the patient (Jan and Maaik, 2010).

A two year study conducted by Edwin Wouters et al. (2008) in primary health care facilities in South Africa revealed that with respect to both general services and the services provided by nurses, high overall satisfaction among Free State patients receiving public-sector ART. However, this data

present a less positive picture of patient satisfaction with waiting times. In fact, waiting times at assessment sites were the most important predictor of discontent among ART patients and final analysis revealed patients attending facilities with high professional nurse vacancy rates reported significantly less satisfaction with nurses' services than did those attending facilities with fewer vacant nursing posts. Centres for Disease Control and prevention (CDC) South Africa and its implementing partners work closely with the National Department of Health's to build the human resource capacity at the primary health-care level by conducting trainings and working with medical and nursing schools to ensure their curriculum addresses HIV. This includes a significant effort to increase the availability of doctors, nurses, pharmacists, lab staff, and community health workers in support of the ART rollout. All these activities aim to develop a new cadre of effective health-care professionals (CDC South Africa, 2011).

According to Kenya HIV Service Provision Assessment Survey (KSPA, 2004), Private for-profit facilities, which are least likely to have treatment guidelines on site, are also least likely to have providers recently trained in ART and adherence counselling and least likely to provide personal supervision. This raises serious concerns about the quality of ART provided in private facilities. KSPA presents a very mixed picture of HIV services in Kenya. On one hand, Kenya has made enormous strides in developing HIV services including VCT, PMTCT, treatment of related infections, and ART. On the other hand, accessibility to services varies widely among the provinces, and many aspects of service delivery need significant improvement (Kenya HIV Service Provision Assessment Survey, 2004)

Results from a study conducted by Ngure-Ndonga, et al. (2007) in Nyeri district, Kenya, showed that public hospitals were the preferred source of care (45.8%). Contrary to the current perception about the quality of health care in public facilities being poor, the results of this study indicate that demand is high at these facilities despite the unfavourable attitude of patients about medical personnel.

Inadequate staffing and inadequate health care quality are the main factors constraining health services utilization in Kenya. However, empirical information about this issue is lacking, for example, the demand for health care at some facilities is higher than others yet the technical quality of service at the same facilities is low.

Notably, gaps still exist in our knowledge of PLWHA on ART, PLWHA not on ART, and providers' perceptions of the quality of ART services, constraints experienced by providers in the delivery of ART services, the impact of quality of care on ART outcomes, and the perspectives of PLWHA on antiretroviral treatment

### **2.7 Infrastructural capacity**

A longitudinal study in five hospitals in different African countries showed that the proportion of beds occupied by HIV-positive patients varied between 50% and 70 % (WHO, 2003). In Tanzania, Patients with AIDS-related illnesses spent an average of 18 days in hospital against six days for all other patients. Two district hospitals were forced to increase bed capacity by building new wards to accommodate the increasing demand for HIV/AIDS-related admissions. The hospitals have been forced to create HIV/AIDS counselling units by using the available nursing personnel, thus increasing their workload (Malecela-Lazaro et al., 2001).

The cost implications for the health budget have been significant at the health services level, shortages of infrastructure, equipment and human resources now constitute the most important bottlenecks. The biggest problems have been identified as very limited geographical, financial and cultural access; poor quality of services; the shortage of human resources in both quality and quantity; low motivation of health workers and huge gaps in both initial and continuing professional training; weak institutional capacity for the management of the health system; and insufficient support structures at central, regional and local levels (World Health Organization 2004). These

general constraints affect scaling up ART and can constitute more serious bottlenecks as implementation progresses, especially as they can hamper expansion of the coverage beyond a certain threshold.

## **2.8 Availability of financial support**

According to Ethiopia's Federal Ministry of Health July 2007, Decentralization increases access by taking services closer to more people, reducing transport and related costs for patients and families, resulting in improved adherence and enrolment in care and treatment services early in the course of the disease.

Benefits associated with decentralized ART service are reduced costs for travel to hospital, time saving since time which could be spent going to hospital is utilised in other beneficial ways. Decentralized ART services in HIV and AIDS programmes utilize both human and financial resources in running its activities aimed at caring and supporting people living with HIV and their families. It is evident that, those countries most severely affected by HIV/AIDS cannot handle the crisis with their own resources alone. A study in Uganda showed that HIV/AIDS has more than doubled the health sector's recurrent expenditures since the HIV/AIDS epidemic started (Jjemba, Madraa & Lutalo, 1998). At this turning point flat-lining or reductions in investments will set-back the Aid response and threaten the world's ability to reach MDG 6. In Kenya major challenge is that, the national HIV budget is heavily dependent (over 80%) on external resources such as the Global Fund. There is agreement nationally that to better sustain the momentum of the response, the Government will increasingly need to look to local financing mechanisms (UNAID Kenya, 2009).

UNAID report on AIDS dependency crisis estimates suggest that US\$ 11-12 billion will be needed annually by 2015 to prevent new HIV infections and scale up treatment in Africa, if important gains in efficiency and smart investments in effective programmes are made. African governments invest less on AIDS than would be expected. For the Continent as a whole, approximately 5% of health

budgets are allocated to AIDS, despite AIDS causing a median of more than 7% of the overall burden of disease across countries. The procurement of antiretroviral drugs is highly dependent on external funding. In 27 countries for which accurate data is available, 84% of expenditures for antiretroviral therapy in sub-Saharan Africa originated from international sources. In the same report, the current funding decline may result in an increase in new infections, due both to downturns in effective prevention programming and a stagnation or decline in treatment access.

The chronic shortage of health care workers is recognized as one of the major bottlenecks to health care provision including scaling up HIV care and treatment. Most public health facilities in Kenya are staffed at about 50% of their needs. This has created an increasing need for task shifting of roles and responsibilities from the health care workers to the community. Strong community ownership of and participation in health care delivery has benefits in improving the general quality of health care services. Engaging community in HIV/AIDS care is a proven way to enhance program quality, in terms of clinical outcomes, adherence rates and retention Kenya has developed a community strategy that has set out the approaches to be taken to ensure that Kenyan communities have the capacity and motivation to take up their essential role in health care delivery (NASCOP, May 2009)

## **2.9 Conceptual frame work**

Figure 2.1 shows the relationships between the independent variables, dependent variables and intervening variables. Decentralization of ART in the health sector has been conceptualized as the dependent variable while decentralization policies, quality of health services, Availability of financial support and infrastructural capacity form independent variables. Effective decentralization of ART in the health sector is influenced by interaction of all independent variables. The relationship between the dependent variable and the independent variables can be conceptualized as below.

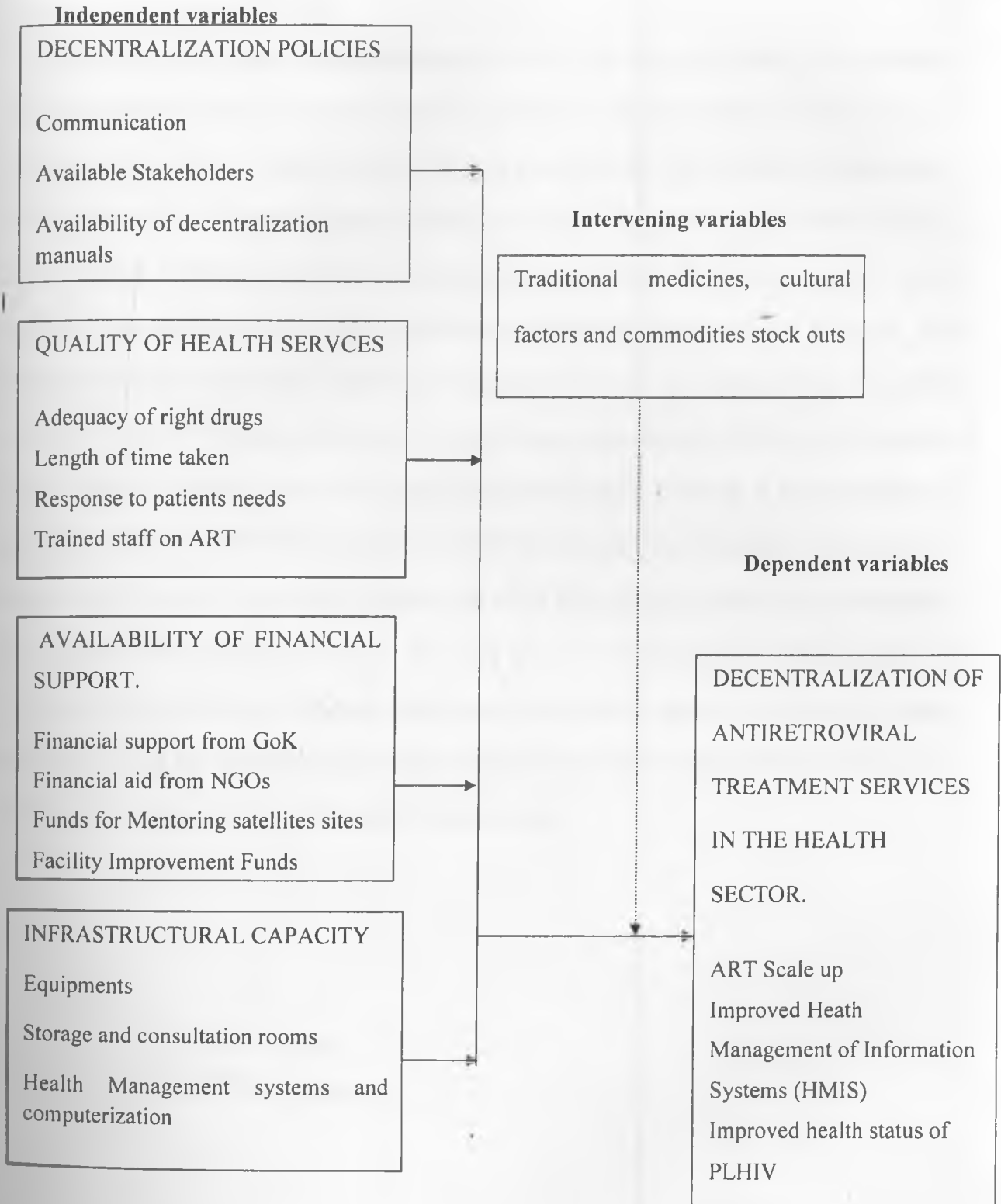


Figure 2 Conceptual framework



## **2.10 Summary and Research Gap**

The chapter reviewed literature on decentralization of ART services in the world, in the continent and in the Kenyan context. It also reviewed the importance of decentralization of ART services in the health sector to the well being of PLHIV in Kenya and elsewhere. Top-down donor policies and a lack of sustainable and consistent funding strategies represent a formidable threat to HIV programs in the long term, findings have further showed that decentralization of ART services requires careful planning, implementation over a realistic timeframe, and attention to monitoring at all levels. The researcher has noted that in some countries in Asia, Latin, America, Sub- Sahara Africa, the annual number of new HIV infections is falling as a result of expanding access to ARV drugs in resource limited settings. Literature review has clearly shown that the major challenge in Kenya remains to provide the more intensive service required by HIV care and treatment throughout the country, to integrate these services into existing programs and attain high level of quality care, accountability and reporting. The literature reviewed on the major issues on decentralization policies, quality of health services, availability of financial support and infrastructural capacity. Literature has shone light into the study but the researcher investigated on how these factors influence the decentralization of ART services in the health facilities within Nyeri County.

## CHAPTER THREE

### RESEARCH METHODOLOGY

#### 3.1 Introduction

This chapter deals with the research design and the research methodologies that the researcher adopted. It gives a clear systematic research procedure, techniques the researcher applied in the collection and analysis of data. It also describes the sample and instruments used in data collection, analysis and presentation.

#### 3.2 Research Design

Descriptive survey design was employed for the purpose of this study. Welman and Kruger (2001) define survey as an attempt to collect data from an identified population in order to establish the current status of the population in respect to one or more variables.

Nyeri County was considered and an in-depth investigation conducted on factors influencing decentralization of antiretroviral therapy in Nyeri County where questionnaires were employed for data collection. This study further describes the issues arising from the process of decentralizing antiretroviral therapy services within this region. Descriptive research design is a scientific method which involves observing and describing the behaviour of a subject or a phenomenon without influencing it in any way. Many scientific disciplines, especially social science and psychology use this method to obtain a general overview of the subject (Orodho, 1998, Mugenda and Mugenda, 1999 Kerlinger, 2007). It has merits for studies being undertaken in their natural unchanged environment.

#### 3.3 Target population

A population is defined as the total collection of elements about which we wish to make some inferences (Cooper and Schindler, 2003). The target population consisted of Nyeri County health providers dealing with HIV drugs and patients in health facilities (Service Delivery Points) and

District Health Management Teams (DHMT) responsible for implementation of ART decentralization policies in Nyeri County.

**Table 3.1 Categories of target population:**

<b>Category of population</b>	<b>Population</b>
ART sites in Nyeri North	17
ART sites in Nyeri South	12
Non-ART sites in Nyeri North	175
Non - ART sites in Nyeri South	80
Nyeri North District Health Management Teams (DHMT)	20
Nyeri South District Health Management Teams (DHMT)	20
<b>Total</b>	<b>324</b>

The above target population was obtained from Nyeri Medical office of Health, January 2012 reports.

### **3.4 Sample size and Sampling procedure**

According to cooper and Schindler (2003), the ultimate test of a sample design is the characteristic of population it represents. In its measurement term the sample must be valid. The survey sample size is defined as the minimum required number of sampling units that are needed to build sound statistical conclusions and inferences. Sample used was stratified according to two main criteria, Category of health facilities that is ART and Non- ART sites and geographic location of these health facilities.

A purposive sampling was used to sample District Health Management Teams (DHMT) members in each District since the entire population involved in ART management is sufficiently small. This sampling method was used on this sample group because they can influence decisions and make a difference in reference to decentralization of antiretroviral therapy services in this region. Stratified random sampling was also used to sample health facilities. There were two strata that is; ART sites and Non- ART sites in each District and random sampling method was used to identify the participants in each specific stratum of these health facilities. This method was preferred because it is important the sample includes representative survey units with specific characteristics of a pre-determined size obtained from stratum of the two major Districts in Nyeri County (Nyeri south and Nyeri North). This gave every health facility an equal chance of being selected in the study

The sample size was based on population obtained from the Medical office of Health, Nyeri statistics for 2012, Table 3.1. Looking at table 3.1, it shows that Non- ART sites group comprises of a large population of 255 health facilities (175 in Nyeri North and 80 in Nyeri South) out of the total population of 324. This is 78.7% of sampling population, a sample size of 10% was selected from each stratum in each District, while in the category of ART sites that contains a population of 29 health facilities (17 in Nyeri North and 12 in Nyeri South) a sample size of 50% was selected from this stratum in each District. According to Mugenda (2003), for descriptive studies a sample size of 10% of population is convenient. For the District Health Management Teams (DHMT) the researcher sampled 10 out of 20 participants in each of the two Districts which is a sample size of 50% of this population. In total the sampling procedure provided the researcher with a sample size of 61 respondents has shown in Table 3.2.

**Table: 3.2 sample Size**

Category of population	Population	Percentage	Sample size	Sampling procedure
Number of ART sites in Nyeri North	17	50	9	Stratified sampling
Number of ART sites in Nyeri South	12	50	6	Stratified sampling
Non-ART sites in Nyeri North	175	10	18	Stratified sampling
Non - ART sites in Nyeri South	80	10	8	Stratified sampling
Nyeri North District Health Management Teams (DHMTs)	20	50	10	Purposive sampling
Nyeri South District Health Management Teams (DHMT)	20	50	10	Purposive sampling
<b>Total</b>	<b>324</b>		<b>61</b>	

### 3.5 Research Instruments

Primary data was collected and used for this study. The researcher administered questionnaire designed specifically for this study to collect research data. Researcher used structured and semi-structured questionnaires consisting of open and closed ended questions. The open ended questionnaires were used to obtain data about the general view of decentralization of ART service in the region and face to face interactive interview was employed to allow the researcher to probe for responses and clarify any ambiguities. Kombo et al, (2006) argued that such a probe facilitates collection of more in-depth information and minimizes misinterpretations and inconsistencies. To ensure high return of questionnaire, the researcher personally collected data from the respondent.

People with special knowledge or interest to decentralization of ART services were interviewed including key health providers from selected facilities Comprehensive Care Centre (CCC staff) in care and treatment department, and District Health Management Teams (DHMT). Questionnaire was subdivided into four parts that aimed at investigating how decentralization policies, quality of health

services, infrastructural capacity and availability of financial support affect decentralization of ART and service delivery in the health sector within Nyeri County.

### **3.6 Instruments Validity**

According to Trochim, (1996) validity has to do with how much accurate the data obtained in a study represents the variable of study. The validity is compromised negatively or positively depending on the tools used to gather data, it's also concerned with whether or not the information is relevant to the purpose of the study. According to Borg and Gall (1989) content of validity of an instrument is improved through expert's judgement and this was considered in the study.

A pilot study was carried out where questionnaires were administered to a small group of respondents from health facilities similar to the actual sample used in this study. This helped in making adjustments by checking on the consistency of the responses of specific question items to ensure that the data collection instruments measures what the research study intends. A test re-test was carried out later to confirm whether the changes made on the instruments achieved the required results.

### **3.7 Instruments Reliability**

Reliability according to Mugenda and Mugenda (2003) is a measure of the degree to which a research instrument yields consistent results or data after repeated trials. A reliable tool should not vary according to the environment of use. To test reliability the researcher used split half technique. By using this method the researcher aimed at determining the co-efficient of internal consistency or reliability co-efficient whose value vary between 0.00(indicating no reliability and +1.00(indicating perfect reliability). Questionnaires were pre-tested in a small sample before being administered to the selected sample and adjusted accordingly to ensure reliability.

### **3.8 Data collection procedure**

Primary data was obtained through use of questionnaires. The researcher contacted participants with a written letter. The researcher then made a list of all respondents to be interviewed. Before proceeding to the field, telephone calls were made to book necessary appointments to fill questionnaires. All respondents were assured of confidentiality of information given. This was after obtaining authority from the University of Nairobi to conduct the study.

### **3.9 Data Analysis Techniques.**

After the collection of data, the first step for the researcher scrutinised the instrument for completeness, accuracy and uniformity. Coding was done to classify the answer to a question into meaningful categories so as to bring out their essential pattern. The researcher used statistical package for social sciences to generate frequency distributions using descriptive statistics in order to examine the pattern of the responses. The findings are presented in form of tables, frequencies and percentages in order to bring out the relative differences of values. The software was used in provision of samples and measures. Descriptive statistics enabled the researcher to meaningfully describe a distribution of measurements (Mugenda & Mugenda, 1999) and also to describe, organize and summarize data (Fain 1999). The data collected was then organized into themes, categories, and patterns pertinent to the study. This assisted in identification of information which is relevant to the research questions and objectives.

### **3.10 Ethical Issues**

An informed consent was sought from respondents by providing a detailed explanation of the study. All the respondents were made aware of voluntary participation and the confidentiality of information obtained by ensuring them that this information will only be used for the purposes of the study.

### **3.11 Operationalization of Variables**

Operational definition is a description of a variable, term or object in terms of the specific process or set of validation tests used to determine its presence and quantity. Operation definition of a variable is the description of the operation that will be used in measuring the variables. Table 3.3 shows the operationalization of the independent and dependent variables that were used in the study.



**Table 3.3: Operationalization of Variables.**

<b>Objective</b>	<b>Variable</b>	<b>Indicator(s)</b>	<b>Measurement</b>	<b>Levels of scale</b>	<b>Data Collection Method</b>	<b>Data Analysis</b>
To establish the influences of decentralization policies on ART services in health facilities within Nyeri County.	<p><b><u>Independent Variable</u></b></p> <ul style="list-style-type: none"> <li>Decentralization policies</li> </ul>	<ul style="list-style-type: none"> <li>Leadership and governance</li> <li>Communication channels.</li> <li>Category of ART sites</li> <li>Speed of receiving feed back</li> <li>Availability of stakeholders</li> <li>Availability of decentralization policy manual.</li> </ul>	<ol style="list-style-type: none"> <li>Running the program activities.</li> <li>Number of ART sites upgraded.</li> <li>Role of stakeholders in the region.</li> <li>Health facilities perception on ART decentralized services.</li> </ol>	<p>Interval</p> <p>Ordinal</p> <p>Nominal</p>	Questionnaires	Descriptive analysis

To establish the influence of quality of health services on decentralization of ART services in health facilities within Nyeri County.	<u><b>Independent Variable</b></u> <ul style="list-style-type: none"> <li>• quality of health services</li> </ul>	<ul style="list-style-type: none"> <li>• Adequacy of right drugs for HIV treatment and care</li> <li>• Length of time taken</li> <li>• Clients perception on quality of services</li> </ul>	<ul style="list-style-type: none"> <li>a) Adequate staff</li> <li>b) Relevant HMIS tools</li> <li>c) Level of patient's retention.</li> <li>d) Patient's adherence.</li> </ul>	Ordinal Nominal interval	Questionnaires	Descriptive analysis
To investigate the infrastructural capacity on decentralization of ART services in health facilities within Nyeri County.	<u><b>Independent Variable</b></u> <ul style="list-style-type: none"> <li>• Infrastructural capacity</li> </ul>	<ul style="list-style-type: none"> <li>• Accessibility of health facilities.</li> <li>• Adequate storage space</li> <li>• Adequate consultation rooms.</li> <li>• Transport net works</li> <li>• Adequate equipment</li> <li>• Health Management systems and computerization</li> </ul>	<ul style="list-style-type: none"> <li>a) Distribution of health facilities</li> <li>b) Distance to the central site.</li> <li>c) Availability of enough drugs storage area</li> <li>d) Means of transport.</li> <li>e) Availability of equipment.</li> </ul>	Nominal Interval Ordinal	Questionnaires	Descriptive analysis
To establish the extent into which the availability of financial support	<u><b>independent Variable</b></u> <ul style="list-style-type: none"> <li>• Availability</li> </ul>	<ul style="list-style-type: none"> <li>• Staff training.</li> <li>• Financial support from GoK</li> <li>• Financial aid from NGOs</li> <li>• Facility improvement funds.</li> </ul>	<ul style="list-style-type: none"> <li>• Funds to support outreach programs</li> <li>• Level of staffing</li> </ul>	interval nominal Ordinal	Questionnaires	Descriptive analysis

influences implementation of decentralized ART services in Nyeri County	of financial support.	<ul style="list-style-type: none"> <li>• Availability of funds to support psychosocial group.</li> </ul>	<ul style="list-style-type: none"> <li>• Number of trained staff</li> <li>Submission of reports to central sites.</li> <li>• Funds for Mentoring satellite sites by central sites.</li> </ul>			
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## CHAPTER FOUR

### DATA ANALYSIS, PRESENTATION AND INTERPRETATION

#### 4.1 Introduction

This section presents the findings of the data accompanied by a brief interpretation. Data was analyzed using Statistical Package for Social Sciences version 20 for windows. Qualitative data was analyzed using descriptive statistics while quantitative data was organized into themes and presented by way of narration. Findings were presented in form of tables.

The researcher distributed 20 questionnaires for the District Health Management Team, 15 for the ART sites and 26 Non-ART sites. All the questionnaires were returned filled representing a return rate of 100%.

#### 4.1.1 Demographic characteristics of the respondents

The following is the distribution of the respondents by age and gender.

**Table 4.1 Demographic characteristics of the respondents**

Variable	Category	Response	
		Frequency	Percentage
Gender	Male	32	53
	Female	29	47
	Total	61	100
Age (years)	Below 30	9	15
	31-40	21	34
	41-50	20	33
	Over 50	11	18

According to the table above majority (53%, 34%) of the respondents were middle aged men. Out of all respondents 53% were male while with 67% aged between 31 and 50 years. Despite there being more men than women in the study, the men to women ratio was considerably fair having in mind that women are still marginalized in job opportunities in many sectors of our economy. The age distribution presents a paradigm shift in the administrative culture where more and more young people are being considered for administrative posts.

#### 4.1.2 Education level

The table below represents distribution of the respondents by their academic qualifications.

**Table 4.2: Highest academic qualification achieved**

Item	Category	Frequency	Percentage
Education	O-level	2	3.3
	A-level	0	0
	Certificate	0	0
	Diploma	23	37.7
	Bachelor's degree	33	54.1
	Master's degree	3	4.9
	PhD	0	0
	Total	61	100

Overall, the respondents in the study had achieved high academic qualifications. According to Table 4.2, over half of the respondents had graduated with a bachelor's degree while 34% held a diploma.

The researcher attributed this to the high academic qualifications required for one to work in health facilities. To be employed in a health facility, the government requires that you have a minimum of a diploma in the different areas of health care such as nursing or clinical medicine. Many NGOs which are heavily involved in HIV care requires one to hold a bachelor's degree in their respective fields.

#### 4.1.3 Department.

The following are departments of the health facilities in which the respondents were attached to.

**Table 4.3: Department of health providers**

Item	Category	Responses	Percentage
Departments	Pharmacy	9	21
	CCC	4	9
	MCH	7	18
	Records	1	2
	OPD	8	18
	VCT/HTC	6	16
	Maternity	6	16
	Total	41	100

The table above reveals that the respondents were fairly distributed in all the departments involved in HIV care. The core of the operations is the Comprehensive Care Centre (CCC) which is the point of delivery of most services related to HIV care and treatment, the department is assisted by the pharmacy for dispensation of drugs, Mother to Child Health (MCH) to take care of the infected

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expectant mothers through the (PMTCT) program and the maternity. Finally there are records for all the filing and information keeping

#### 4.1.4 Working experience

The researcher assessed the experience of the respondents in their respective positions while in this region.

**Table 4.4 Working Experience**

Item	Category	Responses	%
Experience (years)	<2	11	26.8%
	3-5	22	53.7%
	6-8	3	7.3%
	9-11	5	12.4%
	11-14	0	0%
	>15	0	0%
	Total	41	100%

The respondents in the study had relatively few years of experience while working in this region. The table above shows that majority (54%) had between 3 and 5 years. The researcher attributed this to the high number of respondents sampled from satellite sites most of which were new (3-5 years old) and also high staff turnover experienced in the government institutions. The more experienced respondents in the study were mainly members of the District Health Management Team of whom a relative number of years in terms of experience were expected for them to be appointed to posts within this region.

## Site/Health facilities Characteristics

The following section looks into the characteristics of the sites in the study in terms of ART or Non-ART, satellite, stand alone or central site, number of staff as well as the number of PLWHIV attended to daily in this sites.

### 4.1.5 Type of site

The researcher collected data from two types of healthy facilities: ART and Non-ART facilities as represented in the table.

**Table 4.5 Type of site**

Item	Category	Frequency	Percentage
Type of site	ART	15	36
	Non-ART	26	64
	Total	41	100

Majority (64%) of the sites sampled were Non-ART sites because they comprise the highest number in the targeted population. Only 15 (36.6%) were ART sites.



#### 4.1.6 Category of ART site

ART sites are further categorized into: Central, satellite and standalone sites.

**Table 4.6 Category of ART site**

Item	Category	Frequency	Percentage
Type of site	Central	2	13
	Stand alone	1	7
	Satellite	12	80
	Total	15	100

Majority (80%) of the ART facilities in the study were satellite sites. Only 2 (13%) were central sites while 1 (7%) was a standalone site. Satellite sites are equivalent to branches of the central site and they report to and receive supplies from the latter. Standalone sites are independent they order and report directly to their suppliers like central site which is either KEMSA or PEPFAR program.

#### 4.1.7 Number of satellite sites supported by central sites

There were only two central sites in the study, one supported 11 satellite sites while the other supported 20 satellite sites.

#### 4.1.8 PLWHIV attended to per day

The following is a representation of the number of clients attended to in a day in the ART sites sampled. This was to assist in measuring the health personnel's workload in relation to HIV/AIDs care and treatment in Nyeri County.

**Table 4.7 PLWHIV attended to per day**

Variable	Category	Response	
		Frequency	Percentage
Number	0-25	10	67
	26-50	2	13
	51-75	3	20
	76-100	0	0
	Over 100	0	0
	Total	15	100

Majority (67%) of the sites in the study attended 25 or less clients in a day. Facilities that attended less than 25 patients in a day were mostly the satellite sites which attended to a minimum number of patients. Central sites and stand-alone sites attended to relatively large number of clients; between 51 and 75 patients per day. This is because the central sites have their patients and also receive referrals from stand alone and satellite sites.

#### **4.1.9 Number of staff trained on ART management**

The following is the distribution of the sampled staff in the ART sites that were trained on ART management.

**Table 4.8: Number of staff trained on ART management**

Item	Category	Frequency	Percentage
Number of staff trained on ART	1-3	11	73
	4-6	2	13.5
	7-10	2	13.5
	Total	15	100

The study revealed that majority of the sites had relatively low number of staff trained on ART management. Out of the 15 ART sites in the study, 11 sites the majority had only between 1 and 3 staff trained on ART management, 2 sites had between 4 and 6 trained staff and another two had between 7 and 10 staff. The sites with few staff were mainly the satellite sites which attended to relatively less number of clients per day and therefore had few trained health staff on ART management.

#### **4.2 Decentralization policies**

This section looks into the decentralization policies developed to manage the antiretroviral treatment in Nyeri County.

##### **4.2.1 Policies awareness**

The researcher sought to find out from the respondents whether they were aware of the government policies and controls involved in the management of the antiretroviral treatment and decentralization process. This table illustrates the level of awareness of the respondents on decentralization policies.

**Table 4.9 Level of awareness**

Item	Category	ART Sites		Non-ART		Mean
		N	Percentage	N	Percentage	
Awareness of decentralization policies	Yes	14	93	13	50	86
	No	1	7	13	50	14
	Total	15	100	26	100	100

An overwhelming 85.9% confirmed that they were aware of such policies. This means that a majority of the respondents were in a position to give relevant and valid information about the influence of decentralization policies on the quality of ART care and service delivery in Nyeri County.

#### 4.2.2 Effectiveness of the policies in Nyeri County

The following is a representation of the effectiveness of the decentralization policies as rated by the study participants.

**Table 4.10: Effectiveness of the policies**

Item	Category	Frequency	Percentage
Effectiveness of policies	Very effective	0	0
	Effective	7	18.5
	Moderately effective	17	41
	Less effective	17	41
	Ineffective	0	0
	Total		41

The general opinion was that the policies were fairly effective. A share of 41% of the respondents said they were moderately effective while an equal number said they were less effective. Only 18.5% thought the policies were effective. This shows that the current policies need to be revised or fully implemented so as to provide higher quality of services and also increase treatment coverage.

#### 4.2.3 Present policies

The following is the appropriateness of the present decentralization policies as rated by the study participants.

**Table 4.11 Appropriateness of current policies**

Item	Category	Frequency	Percentage
Response	Yes	9	20
	No	32	80
	Total	41	100

The majority (80%) of the respondents were of the opinion that the policies were inappropriate while only 9 (20%) opined that the policies were appropriate. This further shows that on top of the policies being less effective they were also not appropriate for the goals of ART management in the region.

#### 4.2.4 Challenges in implementation of ART policies

The following is a representation of the major challenges facing implementation of the decentralization policies. The responses were obtained from members of the District Health Management Team who are responsible for implementing the decentralization policies in question in this region.

**Table 4.12 Challenges in implementation of ART decentralization policies**

Variable	Category	Response	
		Frequency	Percentage
Challenges	Inadequate funds	7	30
	Quality of patient data	1	5
	Few Central and standalone sites	3	15
	Inadequate health providers in HF	3	15
	Communication channels with national team	2	10
	Lack of clear responsibilities to decentralize ART services	2	10
	Over dependence on donor funding	2	10
	Inadequate collaboration with donor funded programs	1	5
Total		20	100

The major challenges that arose were inadequate funds (30%), few central and standalone sites (15%) and inadequate health providers in the health facilities (15%).

#### 4.2.5 Sustainability of the ART decentralization

The District Health Management Team respondents proposed strategies for the sustainability of the ART decentralization process in the region.

**Table 4.13 Sustainability of ART decentralization.**

Item	Category	Frequency	Percentage
Response	Increasing government funding	13	65
	Employ more health providers	17	85
	Training many health staff on ART treatment	11	55
	Reduced dependency on NGOs	16	80
	More collaborations	10	50

\* Respondents could select one or more options

Employing more health workers (85%) and reducing dependency on donor funds (80%) were the most popular methods proposed by the DHMT respondents as the best mechanism to ensure the sustainability of the ART decentralization systems in the region.

### 4.3 Quality of health care services in the region

In the face of ineffective decentralization policies, the researcher assessed the quality of services being offered at the available ART sites. This was by assessing such elements as distance travelled by patients for the drug refill, patient retention and length of waiting time

#### 4.3.1 Distance covered by patients

The researcher assessed whether there were patients who covered long distances to visit the health facility for antiretroviral treatment services.

**Table 4.14 Patients cover long distances**

Item	Category	N	Frequency
Response	Yes	12	80
	No	3	20
	Total	15	100

Majority (80%) of the respondents confirmed that there were patients covering long distances to collect their routine refill. This showed that quality of services being offered at the site in question was high. However, it could also be that the clients were running away from stigma in the sites closer to them or no nearby health facility was offering ART services.

### 4.3.2 Patient retention

The following is a representation of the patient retention figures from the ART sites in the study.

**Table 4.15: Patient retention**

Item	Category (percentage)	Frequency	Percentage
Patient retention	100	0	0
	95-99	11	27
	90-94	14	33
	85-89	8	20
	80-89	5	13
	80-84	3	7
	75-79	0	0
	Below 74	0	0
	Total	41	100

The findings reveal that the facilities had high patient retention rates. According to the table above, 60% of the facilities had a patient retention of 90% and above. If clients are not satisfied with the quality of services being offered to them, they will transfer to another facility or default from the care and treatment all the same.

### 4.3.3 Management of satellite site.

It was of interest to the study whether the number of satellite sites supported by the facility were manageable. Responses from the two central sites unanimously (100%) replied no. This means that the number of satellite sites managed by central sites were overwhelming.

### 4.3.4 General quality of services

The following is a representation of the quality of services offered by the sampled ART and Non-ART sites as rated by the respondents



**Table 4.16 General quality of services**

Statement	Response			
	Yes		No	
	N	Percentage	N	Percentage
Customer satisfaction survey carried out	27	67	14	33
Presence of a triage/waiting bay	36	87	5	13
Availability of required services and adequate drugs	33	80	8	20
Proper referral system	36	87	5	13
Health care worker has enough time with the patient	41	100	0	0
Difficulties in accessing health services from this HF	19	47	22	53
Adequate staff	8	20	25	60
Ambulance services available	38	93	3	7
Privacy during examination	38	93	3	7
Presence of a patient complaint procedure.	33	80	8	20

Majority of the health facilities (67%) confirmed that they had at one time conducted a customer satisfactory survey. Such surveys are important as they assist the facility receive feedback from their own clients. 87% of the facilities had a waiting bay being a health facility; a waiting bay is an important element of care since patients would prefer a waiting bay than waiting outside.

According to 80% of participants, the patients got all the services they required at the facility and if some services were not available they were appropriately referred to other facilities where they would access the services. The respondents unanimously confirmed that they got enough time with each client for them to discuss their needs. However, 47% of the respondents confirmed that clients had some problems in accessing the facilities such as lack of bus fare since ART sites are unevenly distributed and they have to cover long distances for the drug refill and also lack of support from family members. 93% said patient was offered privacy and there were patient complaint procedures

in 80% of the sampled health facilities. Findings further revealed that, 93% of the facilities had an access to ambulance services but had inadequate staff according to 60% of respondents.

#### 4.3.5 Customer satisfaction

The following are the findings of customer satisfaction survey conducted by the various sites in the study as pertains to the quality of services in their health facility.

**Table 4.17: Customer satisfactory surveys**

Item	Category	Frequency	Percentage
Customer satisfaction survey	Satisfying	8	20
	Fairly satisfying	25	60
	Unsatisfied	8	20
	Total	41	100

The feedback received by most (60%) of the sites was that the services were fairly satisfying. This shows that the patients were satisfied with the services but there was need for improvement for the facilities.

#### 4.3.6 Interventional approaches

The following are some interventional approaches proposed by the study participants to improve quality of services to PLWHIV in their facility.

**Table 4.18 Interventional approaches**

Item	Category	N	Percentage
Approach	Increase the number of health personnel	11	73
	Adequate funding	11	73
	Adequate drug supplies	11	73
	Improved Reporting mechanisms	5	33
	Improved communication systems	10	67

\* Respondents could select one or more of the options

According to respondents from ART sites the best interventional approaches to improve quality of services to PLWHIV in the facility were to increase the number of health personnel (73%), have adequate funding (73%) and adequate drug supplies (73%).

#### **4.4 Infrastructural capacity in Nyeri County for ART management**

The researcher assessed the infrastructural quality in the ART sites and the infrastructural capacity of the Non-ART sites.

##### **4.4.1 General Infrastructure**

The following is the quality, availability and lack thereof of infrastructural capacities of the facilities in the study as rated by the sampled respondents.

**Table 4.19 Infrastructural capacity**

Item	Response			
	Yes		No	
	N	Percentage	N	Percentage
Availability of adequate storage area	22	53	19	47
Availability of adequate patient consultation rooms	27	67	14	33
Interest of offering ART services (For Non-ART sites)	38	93	3	7
HF is near to central site (For satellite sites)	16	40	25	60
Inaccessibility of HF due to weather or other factors	8	20	27	67
Drug Shortages	11	27	30	73
Adequate equipment to support ART program	30	73	11	27

Generally, the researcher found the infrastructural capacity of the facilities in the study to be relatively inadequate. Only 53% of the facilities had adequate storage area to accommodate ART drugs and other essential commodities while 33% said they did not have adequate patient consultation rooms. A share of 60% of the satellite site they were nowhere near the central site and that at many times the centres became inaccessible due to weather or other factors such as funds to collect their drug consignments from the central sites leading to shortages of drugs. Facility had adequate equipment to support the quality of care expected by patients, according to 73%. The ART sites were moderately computerized and were well equipped with other essential equipment such as fridges, pallets, shelves, weighing machines for determining patients Basal Metabolic Index (BMI) and furniture used in triage. A majority (92%) of the respondents from Non-ART sites said they were ready to start offering ART services.

#### 4.4.2 Adequacy of infrastructure

The table below is a representation of the adequacy of the current infrastructure as rated by the sampled respondents.

**Table 4.20: Adequacy of infrastructure**

Item	Category	Frequency	Percentage
Adequacy of infrastructure	Very adequate	1	2
	Adequate	8	19
	Fairly adequate	27	67
	Inadequate	4	10
	Very inadequate	1	2
	Total		41

According to the table above, the general feeling was that the infrastructure was fairly adequate according to 67%, while for 10% of the respondents infrastructure was said to be inadequate to achieve the scale up of ART services in Nyeri County.

#### 4.5 Availability of financial support

The researcher assessed the financial aspects of ART management in a bid to establish the extent into which the availability of financial support influences implementation of decentralized ART services in health facilities within Nyeri County.

#### 4.5.1 Source of funds for Antiretroviral treatment

The following were found to be the sources of funds for the ART sites in the study.

**Table 4.21 Source of funds**

Item	Category	Frequency	Percentage
Source of funds	FIF	13	30.7
	GoK	9	23.2
	NGOs	19	46.2
	Total	41	100

According to the table above, NGOs were the major source of funding to the ART sites followed by facility improvement funds and finally the government. However the researcher noted that some facilities received support from two or more of the above bodies. However, majority of respondents 46.2% said that the Antiretroviral treatment services are highly support by NGOs, services provided by this funder included, ART trainings, communication (airtime and internet), renovation of health facilities houses, computerization, employment of staff, supportive supervision, procurement and distributions of ART commodities among other support.

#### 4.5.2 Training of staff on ART management.

The study aimed to find out whether the staffs in the sampled ART sites were trained in ART management.

**Table 4.22 Training of staff**

Item	Category	Frequency	Percentage
Response	Yes	5	23
	No	10	67
	Total	15	100

Research finding showed that 67% staffs were trained on ART management in several health facilities. Such trainings are important as they improve the personnel's skills which mostly result in better service delivery. However, such trainings require funds and this may explain why not many staff in the facilities received such trainings. This shows that the financial support is limited to offer expected training to all health providers offering ART services.

#### 4.5.3 Social programs

The study assessed the existence and funding of social programs in the health facilities and their impact to the livelihood of PLWHIV.

**Table 4.23 Social programs**

Item	Response			
	Yes		No	
	N	Percentage	N	Percentage
Presence of social programs	38	93	3	7
Financial support for social programs	40	99	1	1

On top of the normal medical services and care offered to patients, ART management involves social programs such as psychosocial groups which are meant to increase patient participation in the care

and treatment services, reduce the defaulter rate while promoting adherence levels. Such programs are aimed in educating patients on HIV treatment to reduce stigma associated with HIV and allowing patients to interact and form income generating projects. However, just like staff training, social programs require extra funding. Findings revealed that 93.3% had such programs and 99% of them got financial support from NGOs, such as ICAP and APHIA plus Kamili, Facility Improvement Funds (FIF) as well as the government of Kenya. This shows that the financers placed a lot of emphasis on such programs.

#### 4.5.4 Funding of central sites

Level of funding and support to the satellite sites by central site is presented in the following Table

**Table 4.24: Funding of central sites**

Support area	DHMT (Y/N)		Partners/NGOs(Y/)	
	Yes (%)	No (%)	Yes (%)	No (%)
Submission of satellite sites reports to the central site	0	100	0	100
Distribution of ARVs/OIs/Tools to satellites	50	0	0	50
Communication e.g. Air time	0	50	50	0
Internet Connectivity	0	100	0	100
Supportive Supervision/mentorship to satellite sites	100	0	100	0

The researcher looked into the funding of the two central sites in Nyeri County. According to the table above the only area where the central sites got funding from both the DHMT and the NGOs was in supportive supervision. No site was funded for internet connectivity and the submission of



reports to the central sites from the satellite sites. The Table above further reveals that supportive supervision to the ART sites is adequately supported by both DHMT and NGOs in Nyeri County.

#### 4.5.5 General State of current funding

The following is the general state of current funding of ART sites as rated by the sampled respondents.

**Table 4.25: General state of current funding**

Item	Category	Frequency	Percentage
Current funding	Excellent	0	0
	Good	9	21.1
	Fair	21	52.6
	Poor	11	26.3
	Total	41	100

When asked to rate the current state of funding for ART management in Nyeri County, majority (52.6%) said it was fair with 26.3% saying it was poor. This shows that more needs to be done as pertains to the funding of ART services if are to be scaled up through decentralized systems while increasing access to this essential services in this region.

#### 4.5.6 Overcoming funding challenges

In the face of poor funding for the ART management program, the researcher sought to find out how the District Health Management team overcame these challenges. According to the DHMT responses the major way in which they overcame the financial challenges was through, increasing collaborative activities with NGOs such as ICAP, Kenya Pharma and APHIA plus projects and continuous On Job

Trainings (OJT) to the health providers on antiretroviral treatment service provision, monitoring and evaluation of the patient trends and reporting systems required for data capture since the government is unable to meet all the financial demands required to adequately support ART management not only in this region but all round the country.

## CHAPTER FIVE

### SUMMARY OF THE FINDINGS, DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS

#### 5.1 Introduction

This chapter presents a summary of the results and the conclusions made from the research findings. The chapter also presents recommendations proposed by the researcher. This was guided by the objectives of the study.

#### 5.2 Summary of the study

The purpose of this study was to establish the factors influencing decentralization of antiretroviral treatment (ART) services in Nyeri County. Using a descriptive survey design, purposive and stratified sampling researcher sampled 61 respondents to represent the DHMT, ART sites as well as Non-ART sites. Data was collected using a structured questionnaire and analyzed using SPSS version 20 for windows. The findings of the study were:

A share of 80% of the respondents said the policies were not appropriate at all. When asked to rate the current decentralization policies, 41% said they were moderately effective while an equal number said they were less effective. The major challenge in implementing these policies was inadequate funds according to 33.8% of respondents.

The quality of health was found to be high. 80% said that patients travelled from far to come to the facilities. 60% of the facilities had a patient retention of 90% and above. According to 80%, the patients got all the services they required at the facility and if some services were not available in the health facility they were appropriately referred to other facilities where they would access the services. The respondents unanimously confirmed that they got enough time with each client for them to discuss their needs.

The infrastructural capacity was also found to be wanting. Only 53.3% of the facilities had adequate storage area to accommodate ART commodities while 33.3% said they did not have adequate patient consultation rooms. 60% of the satellite site they were nowhere near the central site and that at many times the centres became inaccessible due to weather or other factors leading to shortages of drug. The majority (67%) said the infrastructure was inadequate to achieve the goals of ART management in the region.

Generally the financial capability was poor. Staff trainings were held in only 66.7% of the facilities while 6.7% could not afford to have social programs for the clients. When asked to rate the current state of funding for ART management, majority (52.6%) said it was fair with 26.3% saying it was poor and was highly funded by NGOs than ministry of health.

### **5.3 Discussion**

The findings of the study revealed that decentralization policies of ART management were in place and awareness of the same was high. However, the appropriateness of the policies as well as their adequacy was found to be low. A strong policy framework is a prerequisite for proper decentralization of the ART programme especially at this time when the country is heading into devolved government. The major impediment that came out as a barrier to proper implementation was the lack of or inadequate funding. Inadequate funding brings with it many problems such as insufficient staff and inadequate equipment. These findings are in line with a report by the Ministry of health, 2005 on AIDs in Kenya which revealed that in the health sector major challenges remain to provide the more intensive services required by HIV care and treatment throughout the country, to integrate these services into existing programmes, and to attain high levels of quality care, accountability and reporting. All this must be achieved with a limited workforce of health workers, who must acquire new knowledge and skills to deliver the new and more intensive level of services.

The quality of health care provided to PLWHIV was found to be high. Despite major challenges faced by the facilities, customer satisfaction was found to be high. This is probably due to more sites being opened up and reduced stigma. These two factors have provided confidence in the clients something which was not the case a few years back. These findings are in tandem with a similar study conducted in South Africa; Edwin Wouters et al. (2008) in a study on primary health care facilities in South Africa revealed that with respect to both general services and the services provided by nurses, high overall satisfaction among Free State patients receiving public-sector ART. Another study conducted in Nyeri District by Ngure-Ndonga, et al. (2007) showed that public hospitals were the preferred source of care (45.8%). Contrary to the current perception about the quality of health care in public facilities being poor, the results of this study indicate that demand is high at these facilities despite the unfavourable attitude of patients about medical personnel.

The infrastructural capacity of the sites under study was found to be insufficient. Some of the facilities were underequipped and did not have some rooms such as a storage area or a waiting bay. Infrastructure is important to ensure a smooth implementation of the decentralization policies. Adequate infrastructure also improves customer satisfaction. Many similar studies on the continent have arrived at the conclusion that the infrastructural capacities of many ART facilities are low. There are a myriad of reasons why this is the case; According to a 2004 report by the WHO the biggest problems have been identified as very limited geographical, financial and cultural access; poor quality of services; the shortage of human resources in both quality and quantity; low motivation of health workers and huge gaps in both initial and continuing professional training; weak institutional capacity for the management of the health system; and insufficient support structures at central, regional and local levels (World Health Organization, 2004).

Among all the factors under investigation, the current state of funding was found to be the most wanting. The funding was found to be insufficient to meet the goals of ART treatment in the study area. This was manifested by inadequate staffing and under equipment of facilities in the study.

Another problem that came out on the issue of funding was the over dependence of donor aid which was delivered through various NGOs. This situation is not unique to Kenya alone, In 27 countries for which accurate data is available, 84% of expenditures for antiretroviral therapy in sub-Saharan Africa originated from international sources. In the same report, the current funding decline may result in an increase in new infections, due both to downturns in effective prevention programming and a stagnation or decline in treatment access.

#### **5.4 Conclusions**

The first research question sought to find out how the decentralization policies influenced ART services in health facilities within Nyeri County. The researcher concluded that the influence was positive. This is because the available ART sites were able to offer services to a fair number of clients per day without any problems. However, these sites were not able to offer all the services due to high number of patients they support and there is a need to open more ART sites to cater for increasing number of clients in the region.

On the question as to how what extent decentralization influenced the quality of health services in ART, the researcher concluded that the latter did not seem to have any influence on the quality of the services. Despite the decentralization policies being found to be ineffective and inadequate they did not affect the quality of services. The quality of services offered to the customers was still found to be high. The researcher attributed this to the motivation and commitment of the employed staff that overlooked the challenges and made the best of what was available.

On the question as to what extent the decentralization policies had on infrastructural capacity in health facilities in Nyeri County, the researcher found that the former had a negative influence. This is because the available sites were found to have inadequate infrastructure. However the researcher noted that the implementing authority was short on funds to improve the infrastructure.

On how did the availability of financial support influence implementation of decentralized ART service in Nyeri County, the researcher concluded that the influence was negative. This was because the available sites were not well funded such that not all of them were able to train their staff or afford social programs for their clients, while others facilities were understaffed.

### **5.5 Recommendations**

Based on the research findings the following recommendations are made:

The DHMT should convert more standalone sites to central sites to ease the pressure on the available central sites. This will also ease the decentralization process as the country moves into devolved government.

The government should employ more health providers to ease the process of decentralization of ART services. Additional staff has the advantage of smoother and faster services and will in the long run cut down on unemployment figures.

Government needs to improve the current infrastructure in terms of equipment and housing to improve quality of health care and create space to accommodate more ART drugs needed by patients by sourcing more funds from donors and available HIV/AIDS implementing partners.

HIV/AIDS implementing Non- Governmental Organization in collaboration with Government of Kenya should increase funding facilitate further decentralization and employment of more health providers that support ART services.

All activities started by HIV/AIDS supporting projects (NGOs) should be sustainable to the government on withdrawal.

Ministry of Health needs to open more ART sites to decongest sites overloaded with ART patients thus reducing the staff workload while improving quality of services.

## **5.6 Suggestions for further research**

The current research concentrated on the decentralization of the ART services. The impact of the current services in the fight against HIV/AIDS was not studied; therefore the researcher recommends that more research should be carried out on;

1. Establishing the sustainability of HIV/AIDS support programs in Nyeri County on withdrawal of funders.
2. Investigating the HIV/AIDSs and behaviour change in Nyeri County.



## REFERENCES

- AIDSTAR-ONE/USAID (2010). *Decentralizing antiretroviral treatment Services at Primary Health Care Facilities*. USA.
- Alemayehu Amberbir1, K. W. (2008). *Predictors of adherence to antiretroviral therapy among HIV-infected persons: a prospective study in Southwest Ethiopia*. *BMC Public Health*. Retrieved March 12, 2012, from <http://www.biomedcentral.com/1471-2458/8/265>
- Allport, G.W (1935). Attitudes in C. Murchism [Ed.], *Handbook of social psychology*. Worcester Mass, Clark University Press
- CDC' s (2011). *HIV/AIDS Care and Treatment Programs in South Africa: Publishing Group Ltd and the Health Foundation*. South Africa
- Charles .F. Gilks and Siobhan Crowley (2006). *The WHO public-health approach to antiretroviral treatment against HIV in resource-limited settings*. University of Gent.
- Cooper, R.D. and Schindler, S.P. (2003). *Business research methods*. (8<sup>th</sup> ed). Mc Graw- Hill Irwin, New York.
- District health records office (DHRO, 2011)
- Edwin Wouters and Christo. H (2008). *Patient satisfaction with antiretroviral services at primary health-care facilities in the Free State, South Africa*. *BMC Public Health*., Retrieved May 30, 2012, from <http://www.biomedcentral.com/1472-6963/8/210>.

Fain, J. A. (1999). *Reading, understanding, and applying nursing research*. Philadelphia, USA:

F.A. Davis Company .

Federal Democratic Republic of Ethiopia (2010) *Report on progress towards implementation of the UN Declaration of Commitment on HIV/AIDS*. Ethiopia

Jan, D.M. and Maaiké, F. (2010). *Health care seeking behavior in Webuye, Kenya. Faculty against HIV in resource-limited settings* .Geneva

Joints AIDS Program Review Report, National Aids Control Council (NACC, 2008)

Joint United Nation on HIV and AIDS (2009), Kenya Country Situation 2009. Kenya

Journal of the International AIDS Society (2009), *lessons learned during down referral of antiretroviral treatment in Tete, Mozambique*. Bio Med Central Ltd.

Katharina Hermann<sup>1</sup>, W. V. (2009). *Community health workers for ART in sub-Saharan Africa*.

*learning from experience – capitalizing on new opportunities*. *Human Resources for*

*Health*, 31. Retrieved from <http://www.human-resources-health.com/content/7/1/31>

Kenya Aids Indicator Survey Report,(2008) *National Aids and STD Control Program and National* .

*Aids Control Council*, Nairobi

Kenya Demographic and Health Survey (2003).

Kenya HIV Service Provision Assessment Survey (2004)

Kenya Ministry of Health, National AIDS and STI Control Programme (2005).

*AIDS in Kenya trends, interventions and impact (7th edition, 2005)*.Kenya

Kenya National Bureau of statistics (2009), *Kenya demographic and health survey*

(2008-09). Kenya

Martha Bedelu, Nathan Ford (2007). *Implementing antiretroviral therapy in rural communities:*

*the Lusikisiki model of decentralized HIV/AIDS care.* J Infect Dis. 2007 .

Mugenda, O. M and Mugenda, A. G. (2003). *Research methods: Quantitative and qualitative*

*approaches.* Nairobi: African Centre for Technology Studies.

Mugenda, O.M & Mugenda. A.G (1999). *Research methods. quantitative and qualitative Mukora,*

*approaches.*(pp. 46 - 48). ACTS Press. Nairobi, Kenya

Mukora S. (2011). *A study of patient attitude toward decentralisation of HIV care in an urban*

*clinic in south Africa.* BMC Health Service Research. Retrieved March 11, 2012, from

<http://www.biomedcentral.com/content/pdf/1472-6963-11-205.pdf>

Murrah W.M and Kiarie W.N. (2001), *HIV and AIDS: Facts that could change your Life.*

*English Press Ltd .Nairobi. Kenya.*

National AIDS Control Council (2010). *United Nations General Assembly Special Session on*

*HIV and AIDS Country Report.* Kenya.

National AIDS Control Council (2003), *Spreading the fight against HIV/AIDS in Kenya.*

National AIDS and STI's Control Program, NASCOP (2009). *HIV/AIDS Decentralization*

*Guidelines.* Kenya

National Coordinating Agency for Population and Development (2005), National Health Sector

*Nyeri District Strategic plan 2005 - 2010 .Kenya*

National Health Strategic Plan II (2005-2010)

Ngure-Ndonga, et al., (2007). *Quality of health care services in Nyeri Districts, Kenya:*

*Patients reception and their effects on service utilization. Kenya*

Nyeri District Health Management Team (DHMT, 2011). Kenya

Orner, P. (2006, April), '*Psychosocial impacts on caregivers of people living with AIDS*', *AIDS*

*Care, Published by Circuit city Limited. Nairobi, Kenya.*

Robin et al., (2009). *Behavioral Interventions to reduce incidence of HIV, STD and*

*Pregnancy among adolescents: a decade in review. Journal of Adolescent Health,*

*34 (11) 3-26*

Tom Decroo, Kathryn Chu et al. (2009), *Journal of the International AIDS Society on lessons*

*learned during down referral of antiretroviral treatment in Tete, Mozambique. licensee*

*Bio Med Central Ltd.*

Trochim W.M (1996). *Research Methods Knowledge Base. New York: cornell University*

UNAIDS (2011). *AIDS dependency crisis sourcing African solution. Kenya*

UNAIDS (2008). *Annual Report on AIDS toward Universal Access. Joint United Nations*

*Program on HIV/AIDS, Geneva.*

UNAIDS (2004). *Joint United Nation Program in HIV/AIDS Report. New York*

UNAIDS/WHO (2006). *AIDS Epidemic Update December 2006, Joint United Nations Program on HIV/AIDS*, Geneva .

UNAID (2011). Joint United Nations Program on HIV and AIDS World AIDS day report 2011.

UNDP (2010). *The Millennium Development Goals Eight Goals for 2015*. Retrieved March 15, 2012, from <http://www.undp.org/content/undp/en/home/mdgoverview.html>

Walley and Radnor (2008). Clinical systems improvement [www.hsrc.ac.za/Research/Publication-22502.phtml](http://www.hsrc.ac.za/Research/Publication-22502.phtml)

World Health Organization (2011). *Global Health Sector Strategy on HIV/AIDS 2011-2015*.

WHO. (2011). *worldaidscampaign*. Retrieved 2 15, 2012, from <http://www.worldaidscampaign.org/2011/11/unaidsworldaids>

World Health Organization (2004). *Scaling up HIV/AIDS care: Service delivery and human resources perspectives*. Geneva

## APPENDICES

### Appendix I. Letter of introduction to the respondents

Bonventure Musyoki,

P.O Box 24107 – 00100,

Nairobi.

Cell phone: 0722445878

Date.....

Dear Respondent,

**RE: A Study on factors influencing decentralization of antiretroviral treatment services in health sector, Nyeri County.**

I am a post-graduate student in the University of Nairobi pursuing a master's degree in project Planning and Management. I am carrying out a study on the above subject. You have been selected to take part in the study as a respondent.

Attached is a questionnaire aimed at gathering information, which will be vital for the above research. I am kindly requesting you to respond to the questionnaire items as honestly as you can and to the best of your knowledge. The questionnaire is for the purpose of research only and therefore the responses shall be absolutely confidential and anonymously given.

In case the study will be of interest to your organization it can be availed once the study is complete.

Your participation in this survey is highly appreciated.

Yours faithfully,

Musyoki Bonventure Mutuku.

## Appendix II. Questionnaire for ART sites and Non - ART sites

### General information

This questionnaire is designed to gather data about your health facility to be used in the study of factors influencing decentralization of Antiretroviral Treatment in health sector within Nyeri County. Your response will be accorded total confidentiality.

### SECTION A:

Kindly respond to all questionnaire items by putting a tick or writing in the space provided. Thank you.

1. District \_\_\_\_\_
2. Date of interview \_\_\_\_\_
3. Gender            (a) Male    [   ]            (b) Female [   ]
4. What is your designation in this Health facility? \_\_\_\_\_
5. Highest academic qualification attained  
  
(a) 'O' - Level (KCSE) | (b) Professional certificate    (c) Diploma    (d) Bachelors Degree  
  
(e) Master Degree    (f) PHD            (g) Any other (please Specify) \_\_\_\_\_
6. What is your area of specialization? \_\_\_\_\_
7. Which department do you work in?  
  
a) Pharmacy    b) CCC    (c) MCH    d) Records    e) OPD    f) VCT/HTC  
  
g) Others (please specify) \_\_\_\_\_

8. How long have you been in this department? \_\_\_\_\_

- a) Less than 2 years
- b) 3 - 5 years
- c) 6 - 8 years
- d) 9 -11 years
- e) 11 – 14 years
- f) More than 15 years

9. What area of HIV intervention in your facility are you involved in? \_\_\_\_\_

- a) VCT/HTC
- b) Data entry
- c) Dispensing of ARV/OI drugs
- d) Reporting
- e) Consultation and prescribing
- f) Others (please specify) \_\_\_\_\_

**SECTION B: DECENTRALIZATION POLICIES ON ART**

10. a) Are you aware of ART decentralization guideline/policies in Kenya?

- a) Yes
- b) No

b) If yes? How do you rank the level of effectiveness?

- 1. Ineffective
- 2. Less effective
- 3. Moderately effective
- 4. Effective
- 5. Very effective

c) Do you find the policy appropriate?

- a) Yes
- b) No

d) If Non-ART, does your health facility have capacity to start offering ART services?

- a) Yes
- b) No

e) Has your HF ever been assessed to start offering ART services? (Non ART sites)

- a) Yes
- b) No

11. Is this health facility an ART or Non- ART site?

- a) ART
- b) Non - ART



12. a). If an ART site, What is the category of your health facility in regard to ART services?

- a) Central site      b) Standalone      c) Satellite site

b). If a non- ART site, does your health facility have capacity to support the ART program?

- a) Yes      b) No

13. If, you are an ART site do you have a standardized reporting and ordering tool for ARV/Oppportunistic Infection drugs?

- a) Yes      b) No

14. What is your opinion on the number of HIV patients you support?

1. Very few      2. Few      3. Average      4. Many      5. Very Many

15. a) If a central site, how many satellite sites do you support?

- a) 1 – 5      b) 6 - 10      c) 11 –15      d) 16 – 20      e) more than 20

b). Is the number of satellite sites your facility supports manageable?

- a) Yes      b) No

c) If no, please state the reason \_\_\_\_\_

d) What challenges do you encounter as a central site in the management of satellite sites?

1. Human resource (staffing)      ( )

2. Number of ART site      ( )

3. Availability of ART commodities      ( )

- 4. Distance from satellite site to the central site ( )
- 5. Finances ( )
- 6. Storage space ( )
- 7. Late reporting , inaccurate reporting by satellite sites ( )
- 8. Others (please specify)\_\_\_\_\_ ( )

16. a) If an ART site do you get any support from the existing stakeholders?

- a) Yes
- b) No

b) If yes, which stakeholders?

- a) GOK/MOH
- b) NGOs (Please specify e.g. ICAP/CHS, APHIA plus, Kenya Pharma b)

FBOs c) Community d) Others (please specify)\_\_\_\_\_

c). which kind of support? (Please specify)\_\_\_\_\_

d). Do you think this support is adequate to facilitate decentralization of ART process in this county?

- a) Yes
- b) No

#### **SECTION B: QUALITY OF HEALTH SERVICES ON DECENTRALIZATION OF ART**

17. a) Does your health facility offer ART services?

- a) Yes
- b) No

b) Are there patients that cover long distances to come for treatment in this centres leaving a facility within his/her resident?

a) Yes      b) No

d) If yes, which reasons do they give?

1) Stigma for ART   2) Poor services from other HF   3) Occupation   3) Others (specify)\_

e) If poor service please explain (briefly).\_\_\_\_\_

18. What is the level of patient retention in this HF? (For HIV patients Tick and other patients circle or all for both)

a) 100%   b) 95 - 99%   c) 90 - 94%   d) 85 - 89%   e) 80 - 84%   f) Below 79%

19. What do you think would be some useful interventional approaches to improve quality of services to PLWHIV in this clinic?

1. Increase the number of health staff   2. Adequate funding   3 adequate drug supplies

4. Reporting mechanism   5. Improved communication system   6. Others (specify)\_\_\_\_\_

20. What would these suggested interventions address?

21. On averagely how long does a patient take to be in treated in this HF between arrival and departure time?

a) Less than 1hr ( )   b) 2-3hrs ( )   c) 3-4hrs ( )   d) 4-5hrs ( )   e) more than 5hrs ( )

22. a) Have you ever conducted a customer satisfactory survey in this HF? (Yes/No)\_\_\_\_\_

b) If yes, what was the average rating?

a) satisfying ( )   b) fairly satisfying ( )   c) unsatisfied ( )

23. Does this HF have triage/waiting bay? (yes/No)\_\_\_\_\_

24. When patients visit the clinic do they get all the required services and adequate drugs? (Yes /No)\_\_\_\_\_

25. In case they don't get all the services do you refer them? And if referred do they get the required services after referral (both ART and other services)? (Yes /No indicate) \_\_\_\_\_

26. Do you have adequate time with patients to discuss treatment needs? (Yes /No)\_\_\_

27. Generally how is the quality of health services in this HF?

a)Excellent ( ) b) Good ( ) c) Below average ( ) d) Poor

28. Do patients get difficulties in accessing health services from this HF? (Yes /No)

29. If yes, what are these difficulties?

a)Long distances ( ) b) cost of services ( ) d) poor quality of health services ( )

e) Lack of enough ARVs and other drugs stock ( ) f) attitude of health workers ( )

g) Others please specify ( )

30. Do you think this HF respond to the ART and other patient's needs adequately? (Yes/No)

31. Are there enough staff in this HF? (Yes /No/ not sure, indicate)\_\_\_\_\_

32. Does this HF access ambulance services for emergencies? (Yes/No,)\_\_\_

33. Do patients have privacy during examination? (Yes /No,)\_\_\_

### **SECTION C: INFRASTRUCTURAL CAPACITY ON DECENTRALIZATION OF ART**

34. a) Does this facility have adequate storage area to accommodate ART commodities and other essential drugs? a) Yes b) No

b)) Is there adequate patients consultation rooms

a) Yes b) No

35. a) In your opinion how do you rank the accessibility of the ART commodities?

a) Accessible      b) Difficult to access      c) Inaccessible

b) If you are satellite site, is this HF near to central site?

a) Yes      b) No

c) Are there times of the year that the centre becomes inaccessible due to weather or other factors?

a) Yes      b) No

If yes please explain? \_\_\_\_\_

36. a) Does this HF have adequate equipments to support the quality of care expected by the patients?

a) Yes

b) No

b) If yes, please indicate the available equipments available to support ART program and other treatment programs in this HF

a) Computer      b) Fridge      c) Drug shelves/cabinets      d) CD4 count machine

e) Viral load machine      f) Pallets      g) Air conditioners      h) Others (please specify) \_\_\_\_\_

**D: AVAILABILITY OF FINANCIAL SUPPORT ON DECENTRALIZATION OF ART**

37. If ART, approximately how many PLWHIV does this facility attend to per day?

38. How many clinician/Pharmacy staffs do you have that support ART program? \_\_\_\_\_

Number of Clinician \_\_\_\_\_ pharmacy \_\_\_\_\_ staffs and are they enough (Yes/No) \_\_\_\_\_

39. What is the number of health personnel in this HF trained on ART management? \_\_\_\_\_

40. What is the source of financial support in this facility? (ART and Non ART site) \_\_\_\_\_ a)

NGOs (specify which ones \_\_\_\_\_ b) GOK c) FIF d) Others (specify) \_\_\_\_\_

41. How often are the staffs in this HF trained on ART's management? (ART and Non ART site) \_\_\_\_\_

42. If training is offered, is it adequate?

a) Yes b) No

43. a) Does this HF have social programs for patients? (Please state the name programme) \_\_\_\_\_

a) Yes b) No

b) If yes, do you get any financial support?

a) Yes b) No

c) For yes, who supports this program??

a) NGOs b) GOK c) Facility d) others

d) Is this support adequate and if adequate is it sustainable on withdrawal of funders in support?

(Explain briefly what is supported) \_\_\_\_\_

44. (For central site only) which support do you get from DHMT and NGOs (partners) in regards to management of your satellite sites? Please indicate Yes or No (Y–Yes and N–No)

Support area	DHMT (Y/N)	Partners/NGOs(Y/N)
Submission of satellite sites reports to the central site		
Distribution of ARVs/OIs/Tools to satellites		
Communication e.g. Air time		
Internet Connectivity		
Supportive Supervision/mentorship to satellite sites		
Others (specify)		

67. Have you received any refresher training on ART management from the Ministry of Health or any other stakeholder?

a) Yes ( ) b) No ( )

If yes, please rate?

a) Very sufficient b) sufficient c) insufficient

### Appendix III: Questionnaire for District Health Management Team.

#### General information

This questionnaire is designed to gather data about your supported District/region in Nyeri County to be used in study of factors influencing decentralization of Antiretroviral Treatment in health sector within Nyeri County. Your response will be accorded total confidentiality.

#### SECTION A:

Kindly respond to all questionnaire items by putting a tick or writing in the space provided. Thank you.

1. Name of the District/Region \_\_\_\_\_

2. Date of Interview \_\_\_\_\_

3. Gender            (a) Male            ( b) Female

4. What is your designation in this District/region? \_\_\_\_\_

5. Highest academic qualification attained?

a) 'O' - Level (KCSE)    b) Professional certificate    c) Diploma    d) Bachelors Degree e)  
Master Degree    f) Any other (please Specify) \_\_\_\_\_

6. What is your area of specialization? \_\_\_\_\_

a) Clinical (RCO)    b) Nutritional    c) Records    d) Medical (MOs)    e) Pharmaceutical

f) Administration    g) Others (please specify) \_\_\_\_\_

7. How long have you been in this District/region? \_\_\_\_\_

a) Less than 1 years ( )    b) 2- 5 years ( )    c) 6 - 9 years ( )    d) More than 9 years ( )

8. What area of HIV intervention in your region/District are you involved in?



- a) ART Management (care and treatment) ( ) b) Data entry (Records) ( )  
c) Reporting and ordering ( ) d) Administration ( ) e) Others (please specify)\_\_\_

## SECTION B: DECENTRALIZATION POLICIES

9. a) Are you aware of ART decentralization guideline/policies in Kenya?

- a) Yes                      b) No

b) If yes? How do you rank its level of effectiveness/implementation?

1. Ineffective      2. Less effective      3. Moderately effective  
4. Effective      5. Very effective

10. Has Kenya established an appropriate ART decentralization policy framework?

- a) Yes                      b) No

11. Do you have access to information on ART decentralization policies/guidelines developed by NASCOP?

- a) Yes ( )                  b) No ( )

12. What roles do you play in the ART management in this region?

- a) Decentralization ( ) b) Financing ( ) c) Supportive supervision ( )  
b) d) Administration ( ) e) Data management ( ) f) Others specify\_\_\_\_\_

13. Are there some of the challenges you encounter in the management of ART programme?

- a) Yes                      b) No

14. If yes, explain the setbacks encountered in implementation of ART decentralization policies in this region?

- a) Inadequate funds ( )                  b) quality of patient data ( )  
c) Few central and standalone sites ( )      d) Inadequate health providers in HF ( )

e) Communication channels with national team ( ) f) Others \_\_\_\_\_

15. How many eligible Health facilities (HF) offering ART have you opened in the last one year? Total number of eligible HF \_\_\_\_\_ Number opened \_\_\_\_\_

16. Are there health facilities offering ART that have many HIV patients that negatively affective the quality of ART services?

a) Yes ( ) b) No ( )

If yes, how can this quality of services be improved?

a) Increasing the number of ART sites ( ) b) increasing supportive supervision ( )

c) Increasing the number of health staff ( ) d) Others (please specify) \_\_\_\_\_

17. Are there satellite site that travel long distances to submit reports and obtain their supplies from central sites?

a) Yes b) No

18. What would you suggest as the way forward in relation to the sustainability of the ART decentralization process in this region? \_\_\_\_\_

a) Increasing government funding ( ) b) Employing more health providers ( )

c) Training many health staff on ART treatment ( ) d) reduced dependency on NGOs ( )

e) More collaborations d) others (please specify) \_\_\_\_\_

## **SECTION B: QUALITY OF HEALTH SERVICES ON DECENTRALIZATION OF ART**

19. Are there interventions put in place to promote quality of health care in this region?

a) Yes b) No

If yes, please give examples? \_\_\_\_\_

a) Collaboration ( ) b) employing more health providers c) Free medical camps ( )

d) Increased medical outreach activities ( ) e) others (please specify) \_\_\_\_

20. What do you think would be some useful intervention approaches to improve quality of health care in this county?

- a) Increased accessibility of ARVs and essential drugs ( )
- b) sourcing more funding ( )
- c) Increasing collaboration ( )
- d) increasing staff ( )
- e) Increased mentorship ( )
- f) Increasing ART sites ( )
- g) others (please specify) \_\_\_\_\_

21. What is the level of quality of health services to people of Nyeri County on ARTs and all other patients?

- a) Low ( )
- b) Medium ( )
- c) High ( )

22. Do you think some patients get difficulties in accessing health services in this region?

(Yes/No)

i). If yes, what are the difficulties?

- a) Long distances ( )
- b) cost of services ( )
- d) low quality of health services ( )
- e) Lack of enough ARVs and other drugs stock ( )
- f) altitude of health workers ( )
- g) Others please specify \_\_\_\_\_

23. Are there enough health providers in this regions health facility? (Yes/No/some)

24. For the staff available, how is the level o training (skills)? \_\_\_\_\_

- a) Highly skilled ( )
- b) averagely skilled ( )
- c) lowly skilled ( )

### SECTION C: INFRASTRUCTURAL CAPACITY ON DECENTRALIZATION OF ART

25. How is the accessibility of the ART sites by the patients in this region?

- a) Highly accessible ( )
- b) Accessible ( )
- c) Moderately accessible ( )
- c) Poorly accessible ( )

26. Do the ART sites have adequate staff to offer quality services to clients?

- a) Yes ( )                      b) No ( )

27. Does all HF in this region have adequate building infrastructures to support the ART commodities and other essential items in this region?

- a) Yes ( )      b) No ( )      c) some ( )      d) not sure ( )

What of, medical equipments to support ART patients in this region?

- a) Yes ( )      b) No ( )      c) some ( )      d) not sure ( )

28. Do you support ART Sites in terms of commodity management?

- a) Yes ( )                      b) No ( )

**SECTION D: AVAILABILITY OF FINANCIAL SUPPORT ON DECENTRALIZATION OF ART**

29. a) Do you get any facilitation/support for the ART sites that you serve in this region?

- a) Yes ( )                      b) No ( )

b) If yes, who offers this support?

- a) GoK/MOH ( )    b) HIV/AIDS partners (NGOs) ( )    c) HF generated funds ( )    d)

Others (please specify) \_\_\_\_\_

c) If yes, what kind of support?

- a) Transport facilitation ( )    b) trainings ( )    c) Communication (airtime, internet) ( )

- d) Renovation of HF houses ( )    e) Computerization of ART sites ( )

- f) Distribution of drugs    e) procurement of ART items ( )

g) Others (please specify) \_\_\_\_\_

30. Have you received any refresher training on ART management from the Ministry of Health or any other stakeholder?

- a) Yes ( )                      b) No ( )

If yes, please rate?

- a) Very sufficient ( )      b) Sufficient ( )      c) Insufficient

31. In your opinion indicate how you view the current funding towards ART program in Nyeri County?

- a) Excellent ( )      b) Good ( )      c) Fair ( )      d) poor ( )

32. The following are some of the reasons that influence implementation of decentralization of ART service in Nyeri County, to what extent do you agree with this assertion? Use the scale of 1 to 5 below.

1. Strongly agree      2. Agree      3. Neutral      4. Disagree      5. Strongly disagree

Reasons	1	2	3	4	5
Due to understaffing in the Health facilities					
Lack of adequate trained staff on ART management in the HF					
Inadequate supportive supervision					
Lack of clear responsibilities roles on decentralization of ART services					
Inadequate equipments, tools, housing infrastructures in the HF					
Inadequate funding from donors and MoH (GoK) to support ART program					
Inadequate collaboration between MoH staff and donor funded programs					
Due to poor communication channels with national ART team					
Due to attitude of people in leadership on decentralization of ART services					
Poor leadership and governance at the National level					
Inadequate collaborative consultations with all stakeholders when key decisions are made					
Over dependent on donor funding					
Others (please specify)					

33. How do you overcome the funding challenges in the ART program in this region?

- a) Increasing collaboration ( )
- b) Increasing On Job Training (OJT) ( )
- c) Training many staff on ART management in HFs ( )
- d) Others (please specify)\_\_\_\_\_

**Thank you for your Co-operation and honesty.**