ACCEPTABILITY AND IMPLEMENTATION EXPERIENCES OF THE “TEST AND TREAT” ANTIRETROVIRAL THERAPY POLICY GUIDELINE AMONG PATIENTS AND HEALTHCARE WORKERS IN LUSAKA DISTRICT OF ZAMBIA

BY

MWEEMBA B MULINDA

A dissertation submitted to the University of Zambia in partial fulfillment of the requirements for the award of the degree of Master of Public Health in Health Policy and Management

UNIVERSTY OF ZAMBIA

LUSAKA

2019

COPYRIGHT

DECLARATION

I ***Mweemba B Mulinda*** **,** declare that this dissertation hereby submitted for the award of Masters degree of Public Health in Health Policy and Management is my own work and has not been submitted either wholly or in part for another degree to this University or any other or to any Institution of higher learning.

Signed……………………………………………….Date……………………………

APPROVAL

This dissertation of **MWEEMBA B MULINDA** has been approved as partial fulfilment of the requirements for the award of the degree of Master of Public Health in Health Policy and Management by the University of Zambia

Examiner 1……………..………………………..Signed………………..Date…………..

Examiner 2………………………………………Signed ………………..Date………….

Examiner 3 ……………………………………..Signed ………………..Date………….

Chairperson Board of examiners………………...Signed………………...Date…………

Principal Supervisor……………………………Signed………………….Date……

.

ACKNOWLEDGEMENTS

I wish to express my heartfelt gratitude to many people whom I shared my thoughts among them my colleagues, friends, and fellow students who helped me during the preparation of this document. Special gratitude goes to Dr.Wilbroad Mutale, my supervising Lecturer for guidance throughout the period when the document was being generated and perfected. He greatly assisted me in editing the in-texts of the main document and helped to clarify my thinking by discussion and amicable arguments where need arose, and made a number of suggestions about the arrangement of materials from which this document has greatly benefited. His courtesy and patience was amazing and I am greatly indebted.

I want to also thank Mr. Chris Mweemba the Co-supervisor, for the assistance in every way possible. Without him the document could not be completed on time as well.

I am grateful to colleagues; Nelia Langa Mulambya and Patrick Sakubita who helped me in various ways in arranging the final product of this document.

Finally, I thank the ever caring and loving God for good health and energy given throughout this research project. Indeed glory is to Him.

.

ABSTRACT

The World Health Organization stated that there is now sufficient proof that earlier use of antiretroviral therapy results in better clinical outcomes for people living with human immunodeficiency virus compared with delayed treatment and thus recommended immediate antiretroviral therapy initiation irrespective of the stage of the disease or Cluster of Differentiation 4+ count for adults, adolescents and children. The new antiretroviral therapy policy is dubbed “Test and Treat” whose implementation started in October 2016 in Lusaka District of Zambia by the Ministry of health and cooperating partners. Test and Treat has since been rolled out to other districts. This is all to further accelerate efforts to meet the ambitious Fast-Track target for 2020, including achieving major reductions in the number of people dying from HIV-related causes. The main purpose of the study was to explore acceptability and implementation experiences of “Test and Treat” as a new antiretroviral therapy policy guideline among healthcare workers and patients in Lusaka District. The study further sought to investigate the health system’s capacity to support the policy in Lusaka District.

This was a qualitative study that used exploratory case study. The research was undertaken in five Anti-retroviral therapy healthcare centres in Lusaka District, between July 2017 and May 2018. Five focus group discussions were conducted with individuals who were human immuno-deficiency virus positive and were on anti-retroviral therapy. Five In-depth interviews were held with at least two Psychosocial Counselors at each centre and twenty five key informant interviews with healthcare professionals involved in implementing the program. All interviews were audio-recorded and were conducted within the healthcare facility. From the information recorded in each discussion, major themes and sub-themes were identified which were linked to direct quotes from the respondents. Interviews were transcribed and accuracy was checked. Software called Nvivo 10 was used to analyze data and for easy information management.

The findings of the study revealed that, there was high acceptability of “Test and Treat” among the patients and healthcare workers. They observed that the implementation of this policy has resulted in; improved health outcomes, no advancement to acquired immune-deficiency syndrome stage, higher productivity at work places and reduced hospital visits among the patients who were receiving treatment. The study however observed that; difficult disclosure; cultural implications; ethical implications; lack of initial physiological baseline parameters such as CD4 Count and Liver function test results and stigmatization and discrimination were major hindrances to acceptability and smooth implementation of the policy.

“Test and Treat” was viewed to have relative advantage over other previous HIV/AIDS intervention strategies as it has been observed to be largely compatible with other health systems operations available in most healthcare facilities. It has been tried elsewhere with positive results according to literature reviewed as such there is no much complexities reported. Observed outcomes of clinical trials done so far reveal programme simplicity leading to high acceptability and smooth implementation.

Key words; ***Acceptability, Test and Treat, antiretroviral therapy, Healthcare workers patients.***

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

ABBREVIATIONS

AIDS	Acquired immune-deficiency syndrome
ART	Anti-retroviral therapy
AMSR	Assessment of Multiple Systematic Reviews
CD4	Cluster of Differentiation 4
CIDRZ	Centre for Infectious Disease Research in Zambia
GARPR	Global AIDS Response Progress Reporting
FGD	Focus Group Discussion
HBC	Home Based Care programmes
HCWs	Health Care Workers
HIV	Human immuno-deficiency virus
HIVST	Human Immuno-deficiency Virus Self-Testing
MDG	Millennium Development Goals.
MoH	Ministry of Health
NACO	National AIDS Council Organization
PEPFAR	President’s Emergency Plan for AIDS Relief
PITC	Provider-Initiated HIV Testing and Counseling
PLHIV	People Living with Human immuno-deficiency Virus
PMTCT	Prevention of Mother to Child Transmission
PWID	People Who Inject Drugs

RDTs	Rapid Diagnostic Tests
SDG	Sustainable Development Goals
UNICEF	United Nations Children’s Fund
UNAIDS	Joint United Nations Programme on HIV/AIDS
WHO	World Health Organization
ZAMPHIA	Population Based HIV Impact Assessment

LIST OF APPENDICES

CHAPTER ONE

INTRODUCTION

1.1 Background information

Human immunodeficiency virus (HIV) has infected 76 million people and killed an estimated 35 million. During its 40-year history, remarkable progress has been made on antiretroviral drugs. Progress toward a vaccine has also been made, although this has yet to deliver a licensed product (Robinson, 2018).In sub-Saharan Africa, where the HIV pandemic has been most devastating, more than 25 million people are HIV-infected, about 70 percent of the global total (Del Rio, 2017). As of 2014, only about 11 million people infected with the virus in Africa were receiving treatment with antiretroviral therapy (ART) medications, which can stop the progression of disease and reduce the risk of HIV transmission. That leaves 14 million people with HIV in sub-Saharan Africa untreated. This is partly because, until recently, most countries have provided ART only for patients who reached a specific threshold in HIV disease progression. Starting ART can be a lengthy and complicated process, leading many patients to drop out of care before they even begin treatment. Availability and access to cluster of differentiation 4 (CD4) count testing has been identified as a major barrier for increasing access to ART particularly in low-resource settings where laboratory based CD4 monitoring is not always available or easy to access. The lack of reliable and affordable tests in these settings leads to missed opportunities of early ART initiation and significant patient loss-to-follow up (Pham et al., 2016).

'Test and treat' is a strategy in which widespread screening for human immunodeficiency virus is followed by immediate antiretroviral therapy for those testing positive, thereby potentially reducing infectiousness in larger cohorts of infected patients (Nichols et al., 2011). It involves offering HIV voluntary counseling and testing to the entire population, and offering immediate ART to all those testing HIV-positive irrespective of clinical stage or CD4 count (Hayes et al., 2017). Mathematical modeling has shown that “Test and Treat” could lead to steep reductions in HIV incidence and might potentially eliminate HIV as a public health problem over a period of 15-20 years, as well as reducing HIV-related morbidity and mortality (Hayes et al., 2017).For many years, CD4 count testing has been a key diagnostic tool to identify HIV positive patients eligible for antiretroviral therapy and monitoring patient responses to treatment. Recently, in light of new evidence supporting early treatment, there has been a movement in policy recommendation and practice towards CD4-independent ART initiation and a number of countries have already approved treatment for all HIV infected individuals regardless of their CD4 count (Pham et al., 2016). In many places in sub-Saharan Africa, health system procedures impose long waits and multiple clinic visits on patients. For instance, a patient may visit a clinic for a CD4 count, and have to come back again to get the results. Older forms of ART were more expensive and harder to tolerate, so patients often made additional clinic visits for counseling and education before receiving medication (Rosen et al., 2016).

In 2015, the World Health Organization (WHO) recommended that all people living with HIV (PLWH) should start antiretroviral therapy (ART) irrespective of clinical or immune status (Ford et al., 2017). Among the benefits expected by WHO are significant increases in ART uptake and linkage to care, reduction in the time between HIV diagnosis and ART initiation regardless of baseline CD4 cell count and an increase in the median CD4 value at ART initiation (Rosen et al., 2016). The recommendations signal an important global policy shift, enabling countries to work toward meeting the 90-90-90 targets set by the Joint United Nations Programme on HIV/AIDS. The 90-90-90 targets aim to diagnose 90% of PLHIV, place 90% of those diagnosed on treatment, and achieve viral suppression in 90% of those on ART by 2020 to end the HIV epidemic by 2030 (Forhan et al., 2017).

The figure below shows the current situation in Zambia in terms of 90-90-90 progress among the population aged 15 to 59 years.

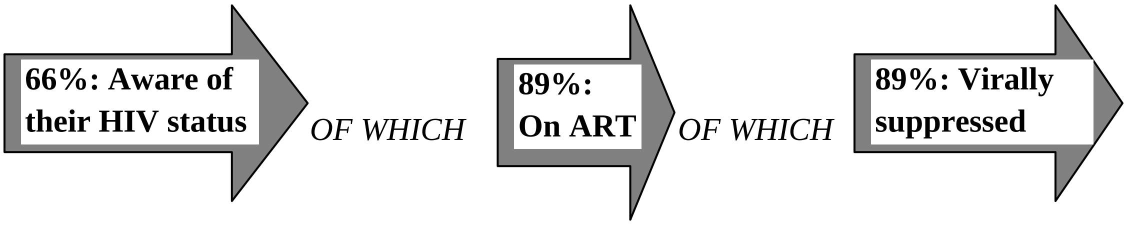

Figure 1: Zambia progress towards 90/90/90 target among adult aged 15- 59 Years

Source: UNAIDS data 2017

Evidence is growing that ART can be used to prevent HIV transmission and that earlier initiation of treatment is beneficial for those infected with HIV (Johnstone-Robertson et al., 2011). However, the full benefits of this strategy will probably need universal access to very early ART and excellent adherence to treatment. The implementation of "Test and Treat" in Zambia began in October 2016 in some selected ART centres in Lusaka District. Considering the huge increase in the number of people eligible for treatment under these new guidelines, Zambia would need robust health care support mechanisms and commitment in increasing ART coverage.

1.2 Statement of the Problem

The WHO recommendation for universal ART for all people living with HIV came after two randomized controlled trials revealed lower rates of mortality and serious illnesses among people living with HIV receiving immediate ART compared with those receiving deferred ART. Many countries in sub-Saharan Africa rapidly adopted this guidance and are implementing 'test and start' programs (Forhan et al., 2017). Previously, there was Option B+ approach that involved initiation of lifelong treatment for all HIV-infected pregnant and breastfeeding women. Despite the overall success of the Option B+ universal lifelong treatment approach, program and operational research data highlight the need for additional focus on strategies to retain women in care (Forhan et al., 2017). Although the 'test and start' approach of Option B+ has increased uptake of ART among HIV-infected pregnant and breastfeeding women, routine program data have exposed patient retention as a major challenge, thus threatening the long-term individual and public health impact of expanded ART coverage. Loss to follow-up, especially during the first few months of treatment, is of particular concern (Forhan et al., 2017). There will be rapidly growing number of HIV-infected individuals initiating treatment leading to practical challenges on health systems such as congestion, long waiting time for patients and limited time to provide quality services to patients (Faturiyele et al., 2018).

Compliance with the guidelines will lead to upfront increases in the costs of healthcare delivery given the goal of treating all those now newly eligible for ART, a number that approaches 22 million people living with HIV globally. There are also concerns regarding the sustainability of such treatment programs for decades due to lost to follow up and insufficient adherence and the danger of a large increase of resistant HIV which jeopardize the effectiveness of affordable treatments (Ha et al., 2014). Challenges to this approach are substantial. First, not all HIV-infected persons can be located, especially people with acute and early infection that are most contagious (Cohen et al., 2013). High quality research to assess the feasibility, acceptability, impact, safety, and cost of innovations such as universal voluntary testing and immediate treatment in real world settings is crucial at this juncture in time, and broad collaborations are urgently needed to address community, human rights, ethical, and political concerns (Bigna, et al ., 2016).

According to the 2015- Zambia Population-Based HIV Impact Assessment **(**ZAMPHIA) Report, over 1.2 million Zambians are living with the HIV virus and not all of them are receiving antiretroviral therapy. Sixty-seven percent (67%) of the adults and fifty-two percent (52%) of the children living with HIV are currently on anti-retroviral therapy in Zambia. Furthermore, there are significantly low rates of HIV knowledge among the general population (UNAIDS 2017). This calls for massive population sensitization in order to improve the knowledge of the population so that they can respond favorably to “Test and Treat” campaign.

The “Test and Treat” policy guideline implementation started in some selected ART centres in Lusaka District in October, 2016. This new policy was being implemented in environments where it had not been tested to get people’s responses. The new policy also invoked socio-economic and ethical issues that needed to be addressed. The principle of respect for autonomy remained the main ethical issue that could easily be breached with the current provider initiated opts – out screening approach (Bain et al., 2015). With only half the population of HIV-positive individuals on treatment, containing the spread of HIV remains a challenge with only small declines in incidence. However, more evidence is becoming available on the benefits of undetectable viral load and early ART initiation on mortality and morbidity and on lowering the risk of transmission, bringing hope on how further spreading of the disease can be contained through a “test and treat” approach (Chihana et al., 2018). There was need to explore policy acceptability and implementation experiences among the patients and healthcare workers in Lusaka District, as these might have direct effect on ART uptake. The study sought to explore the experiences of implementing the new policy from the healthcare provider perspectives with regard to health systems support..

1.2.1 Factors influencing the problem

Delays in initiating treatment can result in the attrition of some patients before they start ART. We found a number of barriers and facilitators to ART adherence among PWID at the individual, interpersonal, and structural levels. Individual barriers to ART adherence include misperceptions about ART, forgetfulness due to the effects of illicit drug use, and medication side effects. Interpersonal facilitators of ART adherence include social support and good relationships with healthcare providers. Structural barriers include poverty, legal challenges, disruptions in the ART supply, and stigma and discrimination (Davis et al., 2018).

The schematic diagram below shows a summary of the factors influencing acceptability and implementation experiences of “Test and Treat”. These are; socio-economic, service related and patient centred factors.

SOCIO-ECONOMIC FACTORS SERVICE RELATED FACTORS

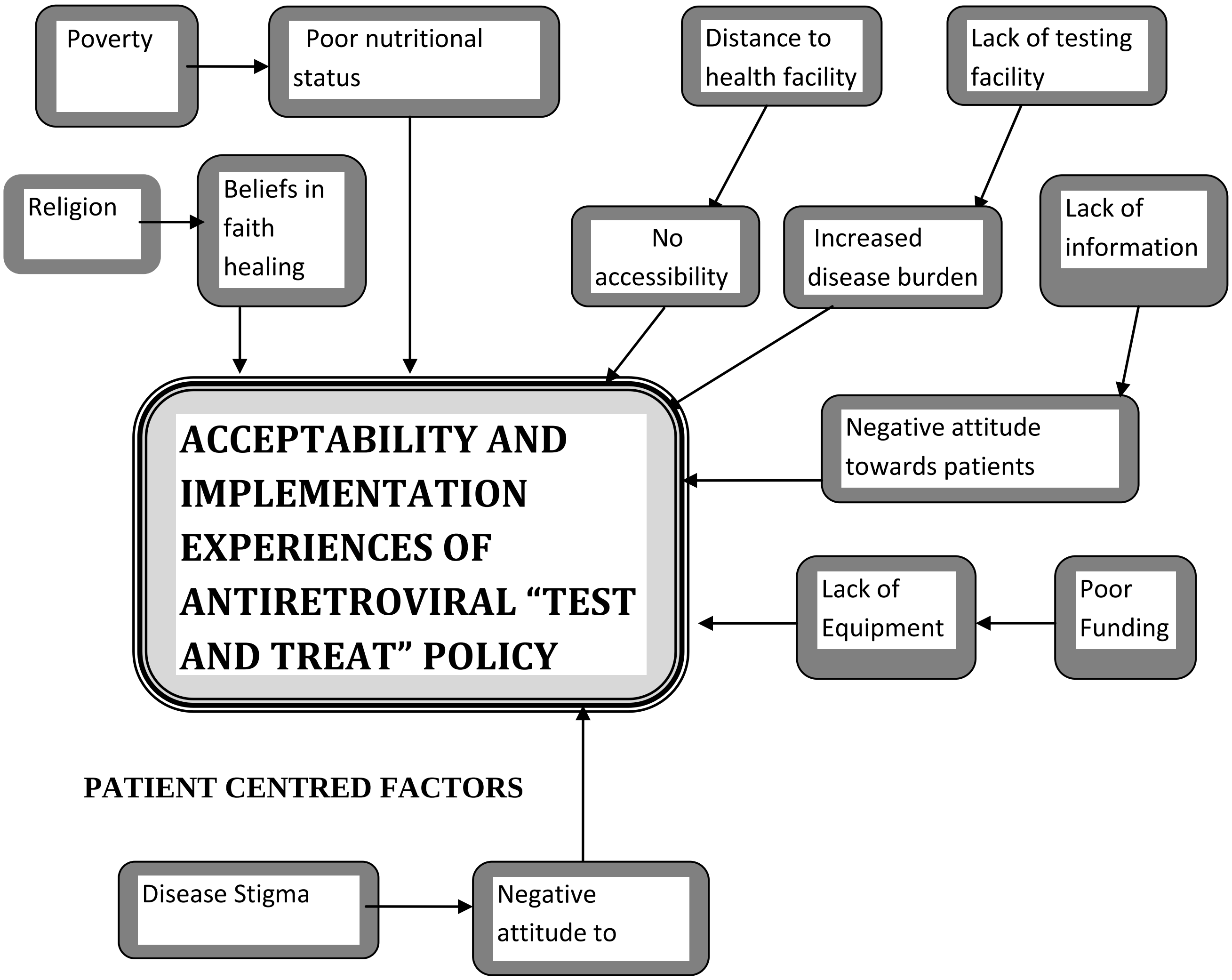

Figure 2: Schematic diagram of problem analysis

1.3 Justification

This study would bring out information about how patients and healthcare workers perceive the “Test and Treat” policy in Lusaka District healthcare facilities. The study intended to assess the capacity of the health systems in supporting the smooth implementation of the new policy. There are reports of ethical and cultural issues being invoked by the new policy in its implementation in some parts of the world (Bigna, et al ., 2016). Reports of gender based violence against spouses who test HIV positive are some of the cultural issues that can hinder free disclosure of the results in families and escalate HIV transmission (Jones et al., 2013). A thorough research was needed to bring out information on how and at what stage of care these problems are encountered by both healthcare workers and patients in the Zambian setting. These findings would help (Jones et al., 2013)the policy makers to formulate policies in line with research findings so that any hindrances to smooth implementation could be resolved as the programme was being scaled up to the rural districts of Zambia. The findings of the study would also be used by other researchers in future to explore more information concerning the subject matter.

1.4 Research Question

How have patients and healthcare workers received the “Test and Treat“ policy guideline for Anti-Retroviral Therapy in Lusaka District?

1.5.0 General objective

To explore acceptability and implementation experiences of “Test and Treat” as a new MOH Anti-Retroviral Therapy (ART) policy guideline by patients and healthcare workers in Lusaka District.

1.5.1 Specific objectives

1. To explore acceptability of the ‘Test and Treat’ Anti-retroviral therapy policy guidelines by patients and healthcare workers in Lusaka District.
2. To identify factors affecting implementation of the ‘Test and Treat’ Anti-retroviral therapy policy guidelines in Lusaka District.
3. To assess health systems capacity to support implementation of the ‘Test and Treat’ Anti-retroviral therapy policy guidelines in Lusaka District.

1.6 Theoretical Framework

Roger’s theory of diffusion of innovations was used in this study to explore the implementation and acceptability. This theory is based on the notion that individuals will adopt an innovation if they perceive that the innovation has the following attributes; Firstly, the innovation must have some relative advantage over an existing innovation or the status quo. Secondly, it is important that the innovation be compatible with existing values and practices. Thirdly, the innovation cannot be too complex. Fourthly, the innovation must have trialability. This means the innovation can be tested for a limited time without adoption. Fifth, the innovation must offer observable results (Rogers, 1995). Rogers identified five key attributes of an innovation which are likely to facilitate its acceptability by the adopting systems.

Table 1 shows how the five attributes of Roger's diffusion of innovation theory were operationalised in the study to explore acceptability and implementation experiences of "Test and Treat" in Lusaka District.

Table 1: Key Attributes of Roger's Diffusion of Innovation

Attribute	**Explanation of Attributes**
Relative Advantage	Innovations that have a clear, unambiguous advantage in either effectiveness or cost-effectiveness are more easily adopted and implemented.
Compatibility	Innovations that are compatible with the intended adopters' values, norms, and perceived needs are more readily adopted.
Complexity	Innovations that are perceived by key players as simple to use are more easily adopted.
Trialability	Innovations with which the intended users can experiment on a limited basis are adopted and assimilated more easily.
Observability	If the benefits of an innovation are visible to intended adopters, it will be adopted more easily.

Source: Rodgers (1995).

1.7.0 Definitions of terms

1.7.1 Conceptual definition of terms

HIV Testing- HIV testing services refers to the full range of services that should be provided with HIV testing, including counseling (pre-test information and post-test counseling); linkage to appropriate HIV prevention, treatment, and care, and other clinical services; and coordination with laboratory services to support quality assurance and the delivery of accurate results.

HIV Treatment refers to development of a structured laboratory investigations and drug administration plan designed to improve and maintain health of people living with HIV/AIDS.

Acceptability- satisfactoriness by virtue of conforming to approved standards (https://www.thefreedictionary.com/acceptability).

Implementation - the process of making something active or effective (Webster, 1828)

1.7.2 Operational definitions

Acceptability: acceptability is the ability by health care workers to correctly perform an HIV test, their willingness to carry out the test when necessary as part of their daily work and their belief that the test is relevant to their work and test result is accurate. From patient's perspective, acceptability is influenced by their willingness to have the test performed on them, their belief that the test is convenient to take and relevant in determining their treatment and well being.

Implementation is the carrying out, execution, or practice of a testing and treating programme for people living with HIV/AIDS. As such, implementation is the action that must follow any preliminary thinking in order for HIV test and treat programme to actually happen in health care centres.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter presents a review of literature related to acceptability and implementation of test and treat in the management of HIV infection from global, regional and local perspectives. It highlights related works done by some researchers on how the health systems are organized in implementing ART programmes following diagnosis of HIV infection among the population.

2.1.1 Global Perspectives

Operational challenges such as, frequent device failures and operator errors, quality of training for test operators and supervisors, and increased staff workload are some of frequent identified problems in "Test and Treat" related programmes where blood samples were collected (Pham et al., 2016). Evidence of healthcare workers facing difficulties in conducting HIV test and appropriately communicating results to their clients are well documented (Navaza et al., 2016). Scientific experts and community stakeholders have suggested that the success of treatment as prevention of HIV at the population level will require overcoming a set of complex and population-specific implementation challenges. Population sensitization, enhanced awareness regarding treatments including awareness of the universal availability of treatment would be a necessary (Knight et al., 2016). However, the results of the study also showed that young men generally had a high receptiveness to Treatment as Prevention of HIV infection.

Counseling before and after testing for HIV is an integral aspect of "Test and Treat" policy and there should be no compromise in providing this service to clients (Pal et al., (2016. Other researchers also reported that clients are more likely to accept the HIV test when they have a health seeking condition which they consider serious than when they do not see it as a life threatening (Ha et al., 2014).

Evidence of no progression to AIDS when one starts ARVs early has been reported by Herout et al., (2016) in a study conducted to determine the Impact of Early Initiation of Antiretroviral Therapy in Patients with Acute HIV Infection in Vienna, Austria. The results of the study indicated that ART during acute HIV infection leads to a significant reduction of the frequency of clinical progression to a CDC stage B or C manifestation and an enhanced increase of CD4+ T cell counts in the first 2 years. These findings suggest, that the initiation of ART during acute infection may decrease the risk of clinical progression and preserve the immune function. Furthermore, Wang et tal., (2015) stated that Simulations of the models showed that cytokine induced T cell movement can explain the very slow decline of CD4+ T cells within untreated patients.. Highly active antiretroviral therapy has the potential to restore the CD4+ T cell population but CD4+ response depends on the effectiveness of the therapy, when the therapy is initiated, and whether there are drug sanctuary sites.

Furthermore, long waiting times for patients are commonly seen in outpatient facilities, and this difficulty contributes to a range of public health issues, including impaired access to care, interruption of hospital work patterns, and patient dissatisfaction. These findings are reported by the research conducted by Xie and Or (2017) who investigated the associations between Waiting Times, Service Times, and Patient Satisfaction in China. Observational studies have consistently found that starting HIV therapy at higher CD4 counts is associated with greater long-term increases in CD4 count (Stirrup et al., 2017). Patients who are HIV infected and are on ARVs therefore require regular monitoring of these parameters .This study however did not find this happening in almost all ART centres of Lusaka District.

2.1.2 Regional Perspective

Other researchers observed multiple barriers to engagement in care of HIV related cases. HIV-related stigma across dimensions of anticipated, internalized and enacted stigma manifested in denial and fears of disclosure, and influenced lapses in care engagement across multiple steps in the cascade. Poverty (lack of food and transport), lack of social support, work interference, prior negative experiences with health services, drug side effects, and treatment fatigue also negatively affected ART adherence and viral suppression. Gender differences were observed, with work interference and denial disproportionately affecting men compared to women (Ayieko et al., 2018).

Cultural influence plays a role on how some women view an HIV test and subsequent disclosure of the results to their partners. In Malawi, it was observed that women reported difficulty around learning their HIV status and initiating ART on the same day. They were overwhelmed with the information, needed time to think about ART initiation and wanted to first discuss with their partners before committing to lifelong treatment (Katirayi et al., 2016). Furthermore, the study suggests that emotional adjustment to new health status required a lot of time for clients to stabilize and reach acceptance or rejection of the test results.

Same-day initiation into treatment, long queues and space limitation were among the challenges identified in the provision of Option B+ programme in Kenya (Helova et al., 2017). This study highlights important challenges at the health facility level related to Option B+ rollout in western Kenya. The study also reported lack of integration of services and identified leadership problems as impediments to smooth implementation of the programme.

Furthermore,” Test and Treat’ approach was feasible and successful in getting newly HIV-infected people initiated early on ART. This is confirmed by a cross sectional study which was conducted in Zimbabwe (Rufu et al., 2018). Where patients are diagnosed early of HIV positive status and are receiving the full ART package on time, acceptability tends to be high as opposed to areas where there is poor diagnostic and referral system. Evidence of the influence of education level and the type of health seeking behaviour on acceptability of test and treat is well documented. Testing for HIV at a point of care increases acceptability and patients with low education levels tend to have higher acceptability than those with high educational levels (Bello et al., 2011).

Acceptability of routine HIV counselling and testing faced some challenges in Kampala-Uganda as some patients were reported to have declined to be tested for HIV until their current health problem improved (Wanyenze, 2008). Provider initiated testing and counseling appeared to increase testing rates and would be helpful in prevention and early access to treatment. Acceptability of PITC was very high and that patient's rights were never violated. While implementing PITC, patients should be given an option to decline testing; it should not be a medical decision compromising patient's autonomy (Kayigamba et al., 2014). These findings are in agreement to the study in South Africa where the uptake of HIV testing compared with referral to onsite VCT, and patients reported a positive response to PITC (Dalal et al., 2011).

Many reports point to the beneficial effect of male partner involvement in programs for the prevention of mother-to-child-transmission (PMTCT) of HIV in curbing pediatric HIV infections (Morfaw et al., 2013). Male involvement in HIV testing and treatment has been a major barrier in many countries. This was reported in a study conducted by Jaiantilal et al., (2015) in Mozambique. The study also reports that resistance to disclosing HIV test results for fear of stigma and discrimination and staff workload as major barriers to acceptability and implementation. Male participation has been described to be both supportive and non-supportive. Supportive male participation such as a partner's willingness to be tested for HIV and spousal communication about reproductive matters has increased pregnant women's commitment to PMTCT programs. Non-supportive descriptions of male participation have included lack of discussion, HIV-related intimacy violence, and abandonment or fear of abandonment (Auvinen et al., 2014).

In Cameroon, lack of required financial resources for HIV programs, increase in healthcare workers' workload without corresponding increase in manpower, inadequate stocks of antiretroviral therapy as well as limited supportive health system infrastructures in resource limited settings were among the challenges reported in ART care (Bigna et al., 2016). In South Africa, nurses perceived HIVST as an acceptable option for HIV testing and most were willing to self-test (Madiba and Mokgatle, 2015).

2.1.3 Local Perspective

Good health services provided at a health facility promotes adherence and client retention. In a study done by Mukumbang, et al., (2017) in Kabwe District of Zambia, it is reported that individual level barriers to retention in care included side effects, gaining weight, belief in faith healing, and use of herbal remedies and alcohol. Interpersonal barriers such as stigma and nondisclosure of HIV status were reported. At the institutional level, inadequate space in the clinic, long waiting times, long travel distances, and shortage of third-line drugs presented barriers to retention in care. Food shortages and patient mobility were reported as community barriers to retention in care. Furthermore**,** perceived psychological burden of living with HIV, modulated by lay belief that knowledge of HIV-positive status led to rapid physical deterioration of health in Zambia. Self-stigma, which manifested itself through fear of blame and a need to maintain moral credibility in marital relationships, also undermined uptake of HIV testing (Musheke et al., 2013).

Social support plays an important role in reducing stigmatization of patients taking ARVs. Negative social support was associated with abuse and abandonment by family members. The social context of gender-based power dynamics, e.g., women's subordinate social and economic status and financial dependence, resulted in problems for some women. Most often, it was domestic violence and abandonment experienced by their sexual partners after HIV status disclosure(Jones et al., 2013).

From the early days of the HIV/AIDS pandemic, it has been acknowledged that strong leadership is crucial in mounting an effective response at the community, national, and global levels. Although strong leadership may not always guarantee success for specific HIV/AIDS prevention, care, or policy programmes, it has become clear that, without effective leadership, progress and success is almost impossible (Szekeres et al., 2008). Concurrently, countries with good governance appear to have low, stable HIV prevalence rates with stronger health systems. Putting these broad causes and effects together weaves the basic story that developing stronger health systems and good governance will lead to a lower more stable HIV prevalence rate (Kar, 2014). The National AIDS Council Organization in India realized early that the western model of specialist physician management and advanced laboratory monitoring was not feasible in India and they devised their own that achieved tremendous decline in HIV infection cases (Palchaudhuri et al., 2016).

Political factors such as the local and global agenda for health, political tenure and party affiliations, and institutional factors such as consolidation of decision-making power and improvements in career trajectories, influence role-players support for decentralization of HIV and AIDS treatment services. It is feasible and acceptable to decentralize HIV and AIDS treatment services to primary healthcare facilities, to help improve coverage. However, role-players' support largely depends on how well the reform aligns with political structures and current institutional practices (Mbachu et al., 2016).

CHAPTER THREE

METHODOLOGY

3.1 Research Design

This was a qualitative study that used exploratory case study. Exploratory case study design was used in this research because the "Test and Treat" policy was being implemented for the first time and people's responses were not known. Focus group discussions were used to gain an understanding of the underlying reasons and motivations for people's attitudes, preferences or behaviors.

3.2 Study Setting

The study was conducted at five (5) randomly selected Healthcare Centres in Lusaka Urban District out of fifteen where "Test and Treat" was being implemented. These sites were as follows; Chelston, Kabwata, Chawama, Kanyama and Matero healthcare facilities. The Lusaka urban District was chosen because of its high number of HIV infections as reported by Zambia Population-Based HIV Impact Assessment (ZAMPHIA Report 2016) and because this was where the Ministry of Health and its partners started implementing "Test and Treat" policy from.

3.3 Study Population

The study population included all the healthcare providers employed by the Ministry of health or any nongovernmental organization and were working at the study sites. The patients who underwent HIV counseling and testing within the healthcare facility and were on treatment were part of the study population.

3.3.1 Target Population

The target population of the study included Medical doctors, Nurses, Pharmacy staff and Laboratory staff employed by the Ministry of Health or non-governmental organization and were working at the study site. These healthcare professionals were selected because they were the ones rendering care to the patients in the study settings and were implementing the "Test and Treat" innovation. It also included patients who underwent voluntary counseling and testing (VCT) in the program. The patients were included in the study because they were the ones who had experience and perception of the innovation of “Test and Treat”. Psychosocial Counselors were included in the target population group because they were the ones patients confided with information that border on their perception of HIV “Test and Treat” as a policy.

3.3.2 Accessible population

The accessible population for this study was all healthcare providers who were officially on duty at a time of data collection and selected patients who had been enrolled in the program at the selected ART Centres in Lusaka District.

3.4 Sample Selection

In this study, non- probability sampling was used for sample selection. The sampling method which was used is convenient sampling as the researcher selected the respondents who were available during the data collection process of the study**.** Selection of focused group discussion participants were done on” first comes first choice” basis. Patients who arrived first were selected first and then informed about the study and its aims. Appointment dates were set after the information was given and phone numbers were recorded for easy contacts. These clients were receiving ARVs every after two (2) weeks so their next visits were taken as interview dates. For members of staff, sampling method was selected based on the duty roasters. The study used staff members who were available working and immediately interviews were conducted. No formal appointments were made for both IDIs and FGDs as long as they met the inclusion criteria. No participant was interviewed more than once during the data collection period.

3.5 Lusaka Urban ART Centres Sampling

The Lusaka district ART Centres were conveniently selected for the study because of the high number of HIV prevalence compared to other districts in the country. The sites for study were conveniently selected based on the duration of policy implementation and because of the higher number of patients who were on ART in these centres.

3.6 Eligibility Criteria

All healthcare workers working at the ART centres as employees were eligible to be respondents. All patients who are enrolled in the program and live in Lusaka District were eligible to participate in the study.

3.7 Inclusion Criteria

In this study the eligible participants were Medical doctors, Nurses, Pharmacy staff, Laboratory staff and Counselors working at ART centres and have experience in the implementation of "Test and Treat" policy. The patients who were enrolled in the programme were those who were counseled for HIV and tested positive and started receiving treatment at the health facility and were strong enough to come for interviews on the date of appointment.

3.8 Exclusion Criteria

In this study, the exclusion criteria included all health workers working on the study sites on part-time basis. The part-time healthcare providers and those not working in ART section were not included in the study because they might not have been well oriented to the routine works of these ART centres. Patients who were enrolled in the program but were unwell or were very old were excluded from the study as their mobility to the health facility during this period would be compromised.

3.9 Data Collection Tools and Techniques

Centre In charges were sent a pre-notification letters by the researcher, informing them of the study and requesting their participation. Their responses were all positive and data collection process began. Digital voice recorder and field notes were among the tools that were used to collect data. One focus group discussion (FGDs) was conducted by the researcher and Research Assistant at each ART centre. Five (5) Key informant interviews were conducted by the researcher involving healthcare professionals at each ART centre (i.e. doctors, nurses, pharmacists and laboratory staff) who were conveniently selected. One in-depth interview (IDIs) was conducted by the researcher and Assistant involving psychosocial counselors who were also conveniently selected at each centre.

3.9.1 Roger’s Theory of Diffusion of Innovations

Diffusion of innovation theory provides a useful framework for studying the adoption process. Diffusion studies have found that the way targeted adopters perceive the attributes of an innovation is critical and that these perceptions account for 49–87% of the variance in whether or not they adopt (Rogers, 1995). In order for “Test and Treat” policy innovation to be adopted by the population it should have relative advantages to previous methods such as VCT or Option B+ and it should be easy to use without violating ethical and cultural aspects of the population. Furthermore, it should be used without difficulties and should have traceable results of implementation elsewhere with good outcomes from both the implementers and consumer perspectives.

Table 2 shows how Roger’s Theory of diffusion of innovation was used in data collection, analysis and results interpretations of the “Test and Treat” policy. Table 3 shows the number of interview discussions conducted by the researcher and assistant during the study period and the number of participants that took part in data collections.

Table 2: Data Collection Using Roger's Theory of Diffusion of Innovation

Test and Treat Attributes	**Definition (Roger's)**	**Examples of Questions**
Relative advantage	The degree to which an innovation is perceived as being better than preceding ideas.	How different is the test and treat method from previous Voluntary Counseling and Testing. What do you consider to be good or bad about test and treat? How would you describe ***test and treat*** acceptability by clients and Counselors at this ART centre?
Compatibility	The degree to which an innovation is perceived as being consistent with values, needs, and experiences of an adopting society.	What would you consider to be good about ***test and treat*** implementation from the health care provider perspective point of view? Are there ethical and cultural issues that come with test and treat? If any how do you address them?
Complexity	The degree to which an innovation is perceived as being difficult to use and understand.	What are some of the challenges you are facing in implementing ***test and treat*** at this centre? In your opinion, what are some of the difficulties clients have for not taking ARVs after testing positive for HIV?
Trialability	The degree to which an innovation may be experimented within a limited basis.	In your opinion can the implementation of test and treat innovation be done on a small number of patients and produce reliable results which could be scaled to the larger population?
Observability	The degree to which the results of the innovation are visible to others	What would you consider to be good about ***test and treat*** implementation from the health care provider perspective point of view? What do you consider to be good about the ***test and treat*** form of care for HIV management from patient point of view?

Table 3: Data Collection Tools

Data Collection Tool	**Total Number Done**
Focused group discussions (FGD)	Five (05)
In-depth Interviews (IDIs)	Five (05)
Key informant interviews (KIIs)	Twenty-five (25)

3.10 Focus Group Discussions (FGD)

The researcher and the assistant welcomed and greeted the participants and the purpose of the study was explained to them while their safety and observance of confidentiality were guaranteed. Background information of the participants was obtained such as their age, marital status, educational level residential address, occupation and number of years they have lived with HIV status. Then the subject matter of discussion was read out and participants were asked to introduce themselves. The languages used were English and Nyanja though participants were free to express themselves in any other languages they were comfortable with. The discussions centred on the key issues that answered the specific objectives of the study. Participants were encouraged to give their views freely. A trained rapporteur was engaged (Assistant researcher) to capture the discussion in writing and also to note non-verbal cues of participants. A Digital voice recorder was used to record the conversations. A quiet place within the healthcare facility was secured for these discussions to promote free expression and minimize interruptions.

3.11 Key Informants Interviews (KII)

Health care professionals involved in the implementation of the “Test and Treat” programme were interviewed by the researcher to give their views and experiences. This category of participants was purposively selected based on their duration and work experience. Interviews were conducted at different times in their respective work places as appointments were made on short notices.

3.12 In-depth Interviews (IDI)

At least two psychosocial counselors were interviewed by the researcher to get their experiences with patient’s challenges in accepting the status and the initiation of ART.

These counselors were selected based on their knowledge as well as number of years worked as a counselor.

3.13 Data Processing and Analysis

A digital voice recorder was used to record the interviews and focused group discussions; recorded files were downloaded on the computer to prepare for transcribing. All transcripts were imported into Nvivo10 for analysis. The information obtained was transcribed verbatim. As data were being coded, memos were continually written about the themes. Memos of key statements, ideas and non verbal cues were noted down using as much as possible the words in the text and body language. Quotes of participants' actual words on each theme were linked to appropriate memos. Similar codes were grouped together to create nodes which became sources of codes.

Thematic analysis was performed through the process of coding in six phases in order to create recognized, meaningful patterns. These phases were: familiarization with data, generated initial codes, searched for themes among codes, reviewed themes, defined and named themes, and finally produced the final report (Braun and Clarke, 2006). Data were familiarized by reading and re-reading the same data while attention was particularly paid to patterns and occurrences. At this point, the researcher focused on data that addressed the research question and specific objectives.

3.14 Results Dissemination Plan

The results obtained from the study would be shared through the presentations at the Graduate Forum, School of Public Health, the Lusaka District Medical Office and the five ART Centres which were the study sites. The findings would also be published in the international Journal.

3.15 Ethical Considerations

This study involved issues of testing for HIV and disclosing of results immediately to clients and family members for the purpose of commencing anti-retro-viral therapy. This test is very sensitive, as cases of stigma are still prevalent in most families and communities especially that it involved married people and young adolescents who are school going pupils at the same time. Talking to them on their situation could cause anxiety and shame upon them. Furthermore, patients reserve the right to either accept or refuse a medical test or interview, therefore the nature of study interviews were somehow a violation of patient’s rights. The needs of the participants were the priority of this study. In order to ensure the safety and rights of the participants, approval and clearance was sought from the Biomedical Research Ethics Committee reference number; 048-06-17. The request to undertake this research was also granted by the National Health Research Authority reference number, MH/101/23/10/1. Written permission was also sought from Lusaka District Health Office following the approval by both University of Zambia-Biomedical Research Ethics Committee and the National Health Research Authority and was granted on 4th December, 2017.

Written informed consents were obtained from all participants after a clear explanation of the purpose, risks and benefits and how the data was to be utilized after research. In this case the researcher ensured that when selecting respondents, the process was based on research requirements and not on the vulnerability or socio-economic status of subjects in the study setting.

3.16. Disposing off the Research Materials

All research materials that contained participants’ responses would be destroyed after seven years in line with ethical approval standards. All voice recordings were deleted immediately after completion of transcription.

3.17 Strengths of the study

The purposive sampling used to select participants in key informants and in-depth interviews is the framework on which this study drew its strength and trust worthiness as these participants spoke from experience for they are on the ground in implementing the policy. Therefore the results of this study remain a solid foundation for any future research to be conducted in the similar field.HIV related topics are usually very sensitive as such respondents may not be very conformable to give information. Multiple methods were used in gathering data to enhance trust worthiness of the findings and also to capture unique feeling of each participant. The inquiry approach the study used in data collection was more focused on using and learning content as a means to develop information-processing and problem-solving skills which was more client centered, with the researcher as a facilitator of learning.

3.18 Limitations of the Study

Purposive sampling method which was used in key informants and in-depth interviews decreases generalizability of the study findings as well as convenient sampling used for focus group discussions sampling method of "first comes first choice" basis which resulted in gender imbalance in some cases. Non-availability of participants who opted to refuse to start medication after testing positive to HIV made it difficult for the study to establish the truth on the reasons why they made the decisions. Related secondary data about "Test and Treat" in Zambia were not available or were difficult to access as the policy was the newest recommendation from WHO as such not many research studies had been done and published to serve as references.

CHAPTER FOUR

FINDINGS

4.1 Introduction

This section presents the findings on the respondent's views on acceptability and implementation experiences of the "Test and Treat" policy in Lusaka District. The findings highlight the feelings of patients and their families on the latest policy implementation "Test and Treat". The findings also give the views from healthcare professional perspectives on the acceptability and implementation of the policy. The chapter has been broadly organized into five topics as per Roger's Theory of diffusion of innovation (DOI). Table 4 shows demographic characteristics of participants that took part in data collection interviews during the study.

Table 4: Demographic Characteristics of Patients

Number of patients	**(n=25)**
Age ranges in years	
16-25	10
26-35	11
36-45	02
46 -55	02
Gender	
Male	12
Female	13

Table 5 shows the demographic characteristics of healthcare workers that participated in data collection interviews during the study period.

Table 5: Demographic Characteristics of Healthcare Professionals

Healthcare Providers	**(n=30)**
Psychosocial counselors	10
Clinical Officers	03
Pharmacy Technologists	05
Nurses	02
Medical doctors	02
Laboratory Technicians	03
ART Centre In-charges (Registered Nurses)	05

Table 6 shows the themes and levels that emerged during the interviews which were used in data analysis and interpretation using Roger's theory of diffusion of innovation attributes.

Table 6: Major and Sub-Themes Identified From Data Collection

Major Themes (as per framework)	**Sub-Themes(Level 1)**	**Sub-Themes(Level 2)**
Relative advantage	• Advantages of 'Test and Treat'	• Early treatment • No advancement to AIDs stage • Improved health
Compatibility	• Quality of health services	• Accessibility of ART services (Time, space, counselling, etc.) • Infrastructure to provide ART services • Trained Human resources to provide ART • Commodities and supplies for ART services
	• Readiness to Implement 'Test and Treat'	• Organizational culture • Leadership and commitment • Facilitation and training
Complexity	• Emotional adjustment	• Self-Stigma • Defaulting on ART
	• Cultural implications	• Divorce /separation
	• Ethical implications	• Violation of Autonomous principle
	• Difficult disclosure • Lack of physiological baseline parameters • Stigma and discrimination • Slow admission process	• Treatment compliance • Monitoring health outcome • Shunning services • Congestion and fatigue
Trialability	• services being offered	• Willingness to offer and access services
Observability	• Reduced opportunistic infections • Reduced healthcare expenditure • Improved productivity • Increased male involvement • Reduced hospital visits	

4.2 Relative Advantage of Test and treat

Relative advantage could be defined in this study as ―the degree to which the "test and treat" is perceived as being better than previous methods of managing HIV infections. Test and Treat has the following relative advantages;

4.2.1 Early Treatment

Participants observed that the new policy of test and treat allows patients to receive treatment the same day they are diagnosed with HIV infection. This has led to reduced waiting period of getting drugs as was the case in the VCT where patients had to undergo a series of appointments with clinicians before accessing ARVs. They said this was cost effective in terms of time and money as one visit was enough for both testing and commencing treatment. This is in contrast with the previous way where people could leave specimen for some time in order for their CD4 count to be known before receiving medication. ***"****The time I brought my nephew here for treatment previously and currently, there is a difference, previously you could go to VCT then they would counsel you and test you, after that they would tell you to come the next day it would maybe take two weeks for one to get their results and then get initiated on treatment. But this time around everything is done immediately you test positive which is a good thing"* **FGD #04-Chelston.**

4.2.2 Disease advancement to AIDs stage

In comparing VCT and "Test and Treat" most of the participants observed that, test and treat was good as the health of the patients did not deteriorate to the point of helplessness at home before treatment was commenced,

"*There is a difference between the current way and the old way in that in the old time they never used to give treatment there and then when a person tests positive, but now it's there and then. Previously they used to give chance for CD4 to drop, some used to go and never returned until their health deteriorated and they ended up being brought on a wheel barrow, some never even used to survive.*" **FGD #04-Kanyama.**

4.2.3 Improved health outcomes

Some clinicians interviewed revealed that commencing patients on ARVs early led to improved health outcomes. When CD4 count is still high and patients are initiated on treatment, they easily pick up health wise as opposed to when the CD4 Count is low.

"It's a good thing we don't have to wait until patients start developing opportunistic infections then we start treating, so this is good even in terms of CD4 count results if we start patients with high CD4 pick up is very good than it's very low. So it's a good thing, it's something we should have been doing way back". **KII Kabwata.**

4.3. Compatibility

The degree to which test and treat is perceived as consistent with existing values, past experiences, and needs of patients and healthcare workers. In exploring compatibility of test and treat, participants were asked to give their views. In all communities, caregivers would normally opt for health services that meet their usual expectations of healthcare. The actions of the health system should be responsive and financially fair, while treating people respectably.

4.3.1. Quality of health services

A health system needs staff, funds, information, supplies, transport, communications and overall guidance and direction to function.

4.3.2 Accessibility of ART services

The large numbers of clients seeking health services in most ART centres have created congestion as the infrastructure has remained the same despite the increase in client's in-flow. This was reportedly putting patients and healthcare workers at risk of contracting airborne diseases from these ART centres. This problem was echoed by participants in all the centres where focus group discussions were held.

"The problem here is that the place is small and chairs are few and we are squeezing when sitting. So infrastructure needs to be looked into see the way we are seated in here, no ventilation there is need for expansion here" **FGD #4 Matero.**

The long waiting time was a concern to both patients and healthcare workers in all centres visited resulting in patients missing out other activities such as work and businesses

"Mostly the problem is with the process of accessing health services. when we come here it is difficult to come out of the health facility due to long queues and as a result people fail to go for work or do business as they leave the health facility late and are usually tired" **FGD #01 Kabwata.**

Participants observed that enough time is needed to talk to patients at every stage of care delivery to enhance compliance and also to create rapport with health care staff during enrolment process. Increase in patient in flow compromises the care given to patients when health care workers are understaffed. This makes counseling sessions short and inadequate. Consequently, patients do not get enough information to make informed decisions. *"You need some time to talk to patients, there isn't adequate time to talk to the patients because the numbers are more than the human resource also, so the inflow of patients is just over whelming such that you don't have time to talk to the patient about side effects and how to take the medication properly so we leave that to the adherence counselors, so I think there is a gap somewhere ."* **KII Chawama.**

4.3.3. Infrastructure to provide ART services

Participants observed that there was inadequate infrastructure in most ART centres. This led to congestion and unconducive environment for both care givers and patients making the process of receiving health services long and tiresome to some patients.

*"Infrastructure is not able to accommodate us when we are being seen by the doctor the rooms are not properly ventilated and very small such that the doctor may end up getting infected with other illnesses, the other thing is the workers are failing because of the number of people who come to access treatment here. I came at 8.00 and I have not been attended to and this 13hrs"***FGD #02 Kanyama.**

4.3.4 Trained Human resources to provide ART

Participants identified shortage of trained human resource as a reason for their delay in accessing ART services. Some of them complained of having gone back home the previous day without being attended to as time ran out and the centre was closed.

"The bad thing is that we delay here and the workers are few, I would suggest that maybe health posts are created to reduce congestion here at the health facility the other thing is the workers are failing because of the number of people who come to access treatment here. I came at 8.00 and I have not been attended to. I came yesterday in the morning at 8.00 and left around 17.00 without being attended, today I came same time but I'm still here. This is almost 15hrs." **FGD #03 Matero.**

4.3.5 Commodities and supplies for ART services

Participants in some health centres reported that they had challenges to meet the patient's demands in terms of some laboratory products due to increasing numbers of patients enrolled to ART programme. Some centres reported break down of their CD4 count machine and that sometimes they had to use facilities outside the station to obtain CD4 count of their patients.

"The challenges are that because of the increasing numbers we are facing shortages of stocks, so we need Determine and bioline and also our CD4 machine which is down needs to be worked on so that we can cope up with the huge pending tests. Currently we are relying on other facilities to do the tests for us" **KII Kanyama.**

4.3.6 Readiness to Implement 'Test and Treat'

Services were likely to be perceived as compatible if they were easily accessible in terms of distance from the home, if the facility had an adequate supply of the right drugs and diagnostic tools, if the services were perceived as prompt and good quality, and if professionalism or good customer care was observed. The centres where participants were interviewed were ready to implement the "Test and Treat" policy. The following were assessed for health systems capacity to implement the new policy.

4.3.7 Organizational culture

Many stakeholders in partner have identified an interest or need for greater integration of HIV services into the general health system. The best practices for integrating services—such as those for HIV and tuberculosis, reproductive health, and primary care—need to be identified, evaluated, and scaled up. Participants observed that without integration of HIV services, stigma will remain unresolved in many health facilities.

"This service is not supposed to be in isolation like the way it is. Look at it, this is called an ART clinic but this is the whole clinic why are we secluded from those people who are pregnant, those with malaria and these other ailments why are we separated from the rest of the clinic, that's why stigmatization will never end. **FGD #02 Chelston.**

4.3.8 Leadership and commitment

Intergovernmental planning among partner country governments, other national stakeholders, and external donors is a critical activity that is needed for the current and future responses to HIV/AIDS. Implementation of "Test and Treat" is done by professional health workers employed by the ministry of health. There is a strong leadership in policy implementation though patients expressed some dissatisfaction in some areas.

"I think the government should look at the issue of shortage of staff here. You can imagine all these people have come for ARVs but the process of getting medicines is long. The place is also small and the patient population keeps increasing but the infrastructure remains the same for years now hence compromising privacy" **FGD#03 Matero.**

4.3.9 Facilitation and training

Cooperating partners such as PEPFAR have supported training for management and leadership to build capacity for improved functioning of health systems with a variety of activities, including curriculum development, mentorship, and shorter-term trainings and workshops. However, the focus and outputs of these training efforts are varied, and it was difficult for the study to determine the impact of these efforts from the data currently available**.** Participants appealed government to train more clinicians and Psychosocial Counselors in order to overcome congestion in most healthcare facilities.

"We need to train more health workers in ARVs actually everybody should be trained whether I am operating from here or outpatient so that even from there we can start initiating from outpatients especially during the night. I think what we need is training so that everybody is updated." **KII Matero.**

4.4 Complexity

Programme simplicity and complexity and access to Health care is cardinal. Any innovation quickly gains a reputation as to its ease or difficulty of use, being classified on the complexity-simplicity continuum. Various factors were identified as influencing "Test and Treat" implementation either positively or negatively. Most of these factors are mainly service and patient related in nature.

4.4.1 Emotional adjustment

Maintenance of emotional equilibrium in the face of internal and external stressors leads to poor acceptance and adaptation (Patel, 2017). This capacity is an important aspect of mental health and where it is compromised or not developed, an individual fails to make sound judgments. This was cited by participants as a major cause of refusal by patients to accept ART after the diagnosis.

"*Like I said some clients come with different conditions and for them to accept that they are HIV positive and they have to go back home with ARVs it's something very had because this person did not expect that. He/She is healthy it's just a toothache, so they will decline."***KII Matero.**

Being a newly diagnosed of HIV is not an easy situation to accept to many people especially that stigmatization is still present in communities and work places. Some participants observed that there is need for clients to be given enough time to think about being tested so that their mind can be prepared before they are started on ARVs.

*I think the bad part is that you are not given an option or chance to think after testing positive you are just told you are starting medication because we have found you with a virus.***FGD #03 Matero**.

4.4.2 Self-stigmatization

Participants observed that self stigma was a hindrance to some clients to reach full acceptance in test and treat programme of care and monitoring for HIV infection.

"I think what I have seen is stigma although stigma has reduced, I think self-stigma by the clients. Like an individual will start thinking that if I go to the clinic everyone will be seeing me, it's almost like, others feel it's like the end of the world especially when

*you even tell them that these drugs are for life, so I will just be taking these drugs for life every day? That defeats them individually.”***KII Chawama.**

4.4.3 Defaulting on ART

Stigmatization was also cited by the participants as a hindrance to treatment acceptability by clients and family members. Where stigma was still present the acceptance to take and adhere to treatment remained a problem but where there was no stigma patients accepted treatment and there was adherence with good health outcomes.

*“I think self-stigma by the clients is still present. A person will start thinking that if I go to the clinic everyone will be seeing me, others feel it’s like the end of the world especially when you even tell them that these drugs are for life, so I will just be taking these drugs for life every day? That defeats them”***KII Chawama.**

4.4.4. Difficult disclosure

Where disclosure of the HIV status was willingly made by the patient to others, accepting treatment usually was without problems and patients tend to have good health outcomes. On the other hand where disclosure is a problem, acceptance of treatment is difficult and patients tend to have poor health outcomes.

“I think the main thing which is there is disclosure, imagine someone comes with a condition of headache and is asked to do a test after testing they are found to be HIV positive, do you think it is going to be easy for them to go and disclose to their husband or wife at home that I have been found with a virus?. So disclosure is very critical, this is the challenge that our clients have” **KII Matero.**

4.4.5 Cultural implications

The position of women in decision making in some families affects their ability to freely undertake an HIV test and communicate the positive results to their partners without consequences. The study identified this cultural aspect as a huge hindrance to acceptability of the test and treat by women as some men threaten them with divorces if they are found to be HIV positive.

“ *I had one last week where the woman was told that they are going to divorce because she is HIV positive, the man could not come to terms he was telling her that she will go and take the ARVs from her mother’s place- telling the woman.*” **KII Matero.**

4.4.6 Ethical implications

Coercion was observed to be a big concern by some clients and it was attributed to be a contributing factor to lack of acceptability and compliance to treatment by some patients. The fact that test and treat is part of the investigative process for all health seeking behaviors at public health facilities, some participants viewed this as coercion and just accepted to be tested because they needed to have their current health problem attended to by clinicians.

*“The current method is like they force people whether you want or not once you test positive you have to be initiated on drugs.”***FGD #01Chawama.**

Participants observed that, for someone to visit the health care facility, it means that something was not well in their body and it was causing pain and discomfort. Therefore they had a view that it was wrong for healthcare workers to give preference to HIV test to the problems patients came with to the healthcare facility as most of them were not emotionally ready to know their HIV status when still in pain.

“*The current method is like maybe I have come to the clinic with a toothache but before I receive treatment for the tooth I am asked to take an HIV test, we have nothing to say we are told to a test before we access treatment ”* **FGD #03- Chawama.**

Healthcare workers recognized the fact that there were some ethical violations in the implementation of the “Test and Treat” policy as clients were not given choices whether to accept or refuse tests as well as treatment for any ailment they are found.

“Obviously the autonomous right of a patient is taken away by the state the moment you make certain tests and treatment compulsory in public Health facilities” **KII – Kabwata.**

4.4.7 Physiological baseline parameters

The practice of initiating patients on ARVs without knowing the baseline of the physiological parameters such as CD4 count, liver function test and viral load was feared to cause adverse effects to their bodies by some participants. Those who hold this view feared that some patients would suffer drug effects as there was no pretest treatment to ascertain their hypersensitivity to the drugs they were given at the initial visit to the facility.

"I was given a drug immediately after testing. And right now I have not received my CD4 results I don't know whether I am performing under par or what as long as one has tested positive then they put you on medication. I was thinking the old system is okay though they used to take long if they can just improve on time to initiate someone then it can be fine." **FGD #02 Chelston.**

4.4.8 Stigma and discrimination

Some participants cited institutional induced stigmatization and discrimination as a hindrance towards acceptability of "Test and Treat" policy in all ART Centres in Lusaka District. The structural designs of ART Centres were viewed by some clients as discriminatory in nature as they were separated from the general services of health facilities.*"This service of HIV/AIDS is not supposed to be in isolation like the way it is. Look at it, this is called an ART clinic but this is the whole clinic why are we secluded from those people who are pregnant, those with malaria and these other ailments why are we you know…, separated from the rest of the clinic, that's why stigmatization will never end.* **FGD #02 Chelston.**

Collection time for medication was a concern for most participants as it was restricted in the mornings only making people miss work and other daily appointments outside health.

"*I think collection of medication should not only be done in the morning but should continue in the afternoon maybe up to 20.00hrs or they can just leave it open 24hrs. 90% of us Zambians work in the morning so it can be a good idea to let the clinic open the collection of medication to go on in the night.* **FGD #03 Chelston.**

4.4.9 Admission process

Reports of slow admission process to ART programme were received from all the Centres visited. Opening files for new ART clients was cited as one of the reasons the facilities were congested as this was done manually and reportedly time consuming as maps had to be drawn before the file was opened. This was frustrating to new patients as they were spending long hours at the facility before getting medication.

"That one is a problem because opening of a file for a new client takes some time; there is a lot of paper work which goes with it considering that it is done manually. You have to draw a map and these other details. ***IDI, Chelston.***

4.4.10 Information storage

The filing system is key to storage of patient information. Participants observed that in some cases some files went missing and their previous health information became inaccessible. This was attributed to poor filing system as well as shortage of staff.

" *The work load has now increased so when it comes to pulling out files in the morning there are so many patients while staff members are few, so a lot of them end up with temporal files, when files go missing, so I think also the filling system needs some improvements"* **KII, Kabwata.**

4.4.10 Counseling

It was observed that where counseling is adequately done, acceptance to the condition and status is easy and leads to good health outcome. Lack of adequate counseling on the other hand leads to difficult in acceptance and hence poor health outcome of patients.

"If there isn't adequate counselling done to that client then chances of that patient or the client accepting are very slim but if they are counseled adequately most of them they do accept and they go on ahead to take the drugs" **KII Chawama**

4.5.0 Trialability

A trial period for an innovation helps potential adopters answer their own questions about how an innovation might work in their particular situation. New ideas that can be tested for a limited time are ―generally adopted more rapidly than innovations that are not divisible‖ Overall; trialability was not a problematic attribute of the "Test and Treat" policy in Lusaka District.

4.5.0 Test and Treat Services offered as trials

At a time when this research was being conducted, some selected healthcare centres were already implementing the program under Centre for Infectious Diseases Control in Zambia (CIDRZ). The healthcare workers explained that, "Test and Treat" was well received in their centres and the fact that services were free of charge; people were willing to visit the Centres to utilize the services.

"Obviously the trials we are doing here are going on well and I am positive that we can spread the services throughout Lusaka District even countrywide without difficulties. The only challenge which I foresee is infrastructural in nature and human resource. We are not adequately prepared in these two areas" **KII Chelston.**

4.6.0 Observability

The "Test and Treat" program, when fully functional, was associated with highly visible or quick tangible rewards that were observable at the community and health facility levels of the healthcare system in Lusaka District. The following were the observables;

4.6.1 Opportunistic infections

Participants during key informant interviews reported that they had observed reduced cases of opportunistic infections from patients at their centres.

"The good part about this program is that people are tested and initiated while they are still looking healthy, meaning they have no opportunistic infections, so for our pharmacy we are making savings as drugs which could be used are being reserved for more severe patients. People are receiving the treatment there and then thereby preventing the spread of the disease." **Kanyama KII.**

4.6.2 Healthcare expenditure

When patients are initiated early on ARVs, it has been observed that their medical bills reduce as they will not spend much on buying drugs and paying for investigations as well as transport to and from the health facility. One participant explained how this observation she noticed in her family;

"More and more people are coming to the hospital to receive the medicine. This never used to happen long time which is part of good thing as our lives are improving. My child and I are now okey. We don't usually have health problems and she goes to school without me worrying that she will come back sick." **FGD #05 Chawama.**

4.6.3 Productivity

One key informant participant observed that when patients are living healthy as a result of taking ARVs, there is improved productivity as they spend more time concentrating on their works.

"There is improvement in the quality of life for the clients when they are on medication and there is also productivity as people are able to do same things that those who are not infected with the virus do when they are on medication "**KII Chelston.**

4.6.4 Male involvement

Increased male involved was observed as a good thing by health care workers during the key informant interviews. Previously it was mostly women who were utilizing the ART services through antenatal routine testing of all pregnant women for HIV. With the coming of test and treat more men visiting the health facilities are being tested and those found to be HIV positive are commenced on treatment immediately.

"One point that I have liked about test and treat myself, is that there are lots of males coming forward, because males usually don't come and ask for the VCT Services" **KII Chawama.**

4.6.5 Reduced hospital visits

Health care workers observed that there was reduced patient traffic involving patients who commenced treatment early as they have better health outcomes.**"***Again, I have observed that those patients that come under test and treat most of them come whilst they are still asymptomatic and just require medication or starting on treatment unlike when someone would come on serious ill and dehydrated. Commencing drugs early results in reduced visits to the health facility related to ill health."* **KII Chawama.**

CHAPTER FIVE

DISCUSSION OF FINDINGS

5.1 Summary of findings

Acceptability and implementation of the “Test and Treat” policy guide line was largely influenced by the information patients had on HIV transmission and prevention as well as the available human and material resources the health facilities had. Among the study findings; early treatment, no advancement to AIDs stage and improved health outcomes were the relative advantages of “Test and Treat”. Furthermore, reduced opportunistic infections as a result of early treatment were observed with corresponding reduction in hospital visits and healthcare expenditure. Increased male involvement in ART programmes were also identified from some centres. However, implementational challenges such as accessibility of ART services related to time, space and inadequate counseling were also reported. Lack of adequate infrastructure and shortage of trained clinicians in ART programmes as well were reported. Other observations are; inadequate commodities and supplies especially the laboratory supplies leading to lack of physiological parameters such as CD4 count, liver function test and viral load results. Stigmatization and discrimination were identified as hindrance to treatment adherence as it resulted in difficulty disclosure of results to social support systems such as families. Most of these findings have ethical and cultural implications that call for change in organizational culture in ART management coupled with strong and committed leadership at all levels of treatment and care.

5.2 Relative Advantages of Test and Treat

Although ‘Test and Treat” was seen as an effective intervention, for managing HIV infection and treatment, its acceptability and adoption were driven by context-specific factors. From the healthcare provider perspectives, health systems together with expectations of standard of healthcare services available at the facilities determine the choice of the innovation. There was a disconnection between the community support system and healthcare facility as some clients opted not to report to family members their new diagnosis and treatment making follow up to communities by healthcare workers difficult, and posing a challenge for program acceptability and adoption. This was attributed to stigmatization that made results disclosure difficult to family members by some patients. Over all, “Test and Treat” has more advantages than disadvantages which made acceptability and adoption easy.

Good health outcomes when clients were diagnosed with HIV early and commenced on ARVs before the CD4 counts were very low, were the main perceived advantages of ‘Test and Treat” identified by healthcare workers. Their perception was based on frequency of patient visitation to the healthcare facility. They observed that patients who were initiated early on ARVs had reduced HIV related health seeking behaviours observed at health facility. This perception by healthcare workers and patients is consistent with the clinical evidence reported by Herout et al., (2016) who reported that the initiation of ART during acute infection may decrease the risk of clinical progression and preserve the immune function. This outcome leads to improved health status of patients and if properly sustained subsequently, reduces their chances of transmitting the virus to their sexual partners. Development of many antiretroviral drugs has made HIV infection a treatable chronic disease. Initiation of antiretroviral therapy soon after infection offers near normal quality of life and lifespan. Early ART is also associated with a reduced latent viral reservoir, reduced viral DNA, and normalization of some immune markers (Cohen et al., 2013).

Furthermore, when patients are initiated on treatment the same day they visit, there is reduced cost in terms of time and financial implications on transportation as they would not have several appointments with clinicians as was required previously. The implication to practice of the above mentioned observations is that, since patients are starting ARVs early and viral suppression is achieved within reasonable period, there would be reduced chances of getting opportunistic infections. This reduces the number of hospital visitations patients make in a given period. Where there are few patients visiting the health facility there is reduced work load by healthcare workers.

Contrary to the above, commencing the clients on ARVs the same day of testing was viewed as coercion by some patients as they were not ready in many cases. The ethical implication of this was that ‘Test and Treat” violated the autonomous rights of patients as they seemed to have no choice whether to refuse or accept testing and treatment of the HIV infection. The primary objective of ART should always be to treat the person living with HIV; prevention is an important, additional benefit. ART should be provided only with informed consent. The preventive benefits of treatment must not be used as a pretext for failure to provide other necessary HIV programming for key populations, including comprehensive harm reduction and other prevention interventions tailored to meet the needs of key populations (Grubb et al., 2014).

5.3 Compatibility

A standardized system with high emphasis on counselling and a multidisciplinary approach present within the public HIV healthcare system would have a positive impact on adherence levels and virological suppression among patients. According to Nanyonjo (2016), services were likely to be perceived as compatible if they were easily accessible in terms of distance from the home, if the facility had an adequate supply of the right drugs and diagnostic tools, if the services were perceived as prompt and good quality, and if professionalism or good customer care was observed. Participants in the study outlined the challenges they were facing in accessing quality health services in their respective ART Centres. Accessibility to ART services was proving to be difficult among participants who explained that they had no problems with “Test and Treat” as a programme except that the process of getting drugs was long and exhausting owing to many people being enrolled on daily basis. This observation made by participants requires urgent attention as it has potential to discourage both new and old patients. People who are tired and frustrated are potentially vulnerable and can easily stay away from a health service. The study observed that increase in the number of patients enrolled in ART programmes on daily basis without corresponding infrastructural capacity has resulted in shortage of space for clinicians and Psychosocial counselors to attend to their clients in privacy and this was compromising confidentiality during counseling. The ethical implication of this was that, a client whose confidentiality was being compromised was more likely to stay away from a service and would have poor acceptability of the new innovation of “Test and Treat”.

The study by Zhenzhen et al., (2017) examined the associations between actual waiting time, perceived acceptability of waiting time, actual service time, and perceived acceptability of service time, actual visit duration, and the level of patient satisfaction with care China. This was found to be a concern in a range of public health issues. This report however, suggested that it is not always possible to prevent dissatisfaction with waiting, or to actually reduce waiting times by increasing resources such as increased staffing. Similar findings from the previous studies reported long waiting hours at health facilities due to high patient loads which affected patient access to treatment. Moreover, Mukumbang et al., (2017) reported that, inadequate space in the clinic, long waiting times, long travel distances, and shortage of third-line drugs presented barriers to retention in care. The implication to practice of dissatisfaction by clients could affect acceptability and implementation of “Test and Treat” in any given health facility as either patients will abandon the treatment or continue enduring long queues in congestion which was detrimental to safe practice by healthcare workers. Significant improvements in accessibility for patients waiting for service may be achieved by applying unsophisticated methods and analyses and without increasing resources. Engagement of clinical management and involvement of front line personnel are important factors for improvement (Johannessen and Alexandersen, 2018).

Inadequate infrastructure and shortage of trained health care service providers were observed almost at all ART centres. According to WHO (2010), the ability of a country to meet its health goals depends largely on the knowledge, skills, motivation and deployment of the people responsible for organizing and delivering health care services. Numerous studies show evidence of a direct and positive link between the numbers of health workers and population health outcomes. Human resource shortage is a major factor that influences feasibility and acceptability of point-of-care CD4 in field settings (Pham et al., 2015). Reports of shortage of trained human resource personnel at all ART centres in Lusaka District were received from the key informant interviews. Lack of trained human resource potentially compromises care delivery and puts the lives of patients at risk as comprehensive care and information may not be given to patients. Additionally Pham et al., (2015) in Canada cited, quality of training for test operators and supervisors, and increased staff workload as some of frequent identified problems in “Test and Treat” related programmes where blood samples were collected. The study conducted by Jaiantilal et al.,(2015) in Mozambique identified several barriers to smooth health services provision..Providers also identified work environment barriers including high patient load, time constraints, and frequent staff turnover. The study made a recommendation that recognizing positive prevention as an important intervention, healthcare providers should be trained to provide comprehensive prevention, care and treatment for People Living with HIV. Furthermore, the study noted that work is needed to explore the complex social dynamics and cultural challenges such as gender inequalities, stigma and discrimination which hinder the full impact of positive prevention interventions in this context. These tendencies keep patients (vulnerable groups) away from seeking healthcare and negatively affect prevention of transmission of the virus as these patients may not be adhering to treatment. The implication on policy is that acceptability by patients would be low while implication on practice would be more patients would be treated for opportunistic infections that result from poor adherence leading to treatment failure.

The ability of the health system to carry out effective and sustainable “Test and Treat” largely depends on the organizational culture, leadership and commitment as well as the capacity to facilitate training. Concurrently, countries with good governance appear to have low, stable HIV prevalence rates with stronger health systems. According to Kar (2014), putting these broad causes and effects together weaves the basic story that developing stronger health systems and good governance will lead to a lower and more stable HIV prevalence rate.

In contrast, strengthening the health system is accomplished by more comprehensive changes to policies and regulations, organizational structures, and relationships across the health system building blocks that motivate changes in behavior, and/or allow more effective use of resources to improve multiple health services. Both, supporting and strengthening, are important and necessary, and the balance must be driven by the country context (Chee et al., 2013). The implication to practice where there is inadequate support from the leadership and organizational culture would be poor infrastructural development and supplies of essential drugs and equipment. These would hinder smooth implementation of the policy leading to low acceptability.

5.4 Complexity

According to Palchaudhuri et al., (2016), the magnitude and nature of the HIV and AIDS epidemic require an environment free of stigma and discrimination to reach the zero goals. Some countries, in particular Australia, are effectively working towards achieving this goal. Australia's strength lies in its public education and management of HIV and AIDS as a public health issue and the understanding and response by all levels of society to the epidemic. Complexity of the policy can affect acceptability and adoption process. Most of the participants revealed that they face challenges in disclosing their HIV status to family members because of stigma. The fact that they left home with known complaints such as headache, flue or cough which they share with family members, they were also expected to report back what treatment they were given after visiting the healthcare facility. The testing of HIV at every health centre and subsequent commencement of treatment as they went back home made it difficult for them to disclose their new diagnosis. The cultural implication of this was rejection by spouses and divorce especially if the wife was the one to disclose the HIV status to the husband (Katirayi et al., 2013). This compromised compliance to medical instructions and affected adherence to drug treatment as well as acceptability by some patients.

The compulsory nature of the " Test and Treat" innovation coupled with lack of adequate psychosocial counseling has not been received well by some participants who felt they were doing it against their will hence violating their rights of accepting or refusing a medical test or treatment. The ethical implication was that the client's autonomous rights were clearly being violated by clinicians implementing the policy. Participants were of the view that that primary health seeking behaviour could first be attended to, before they were asked to do an HIV test. They observed that compliance could be higher if the patient's current health problems were attended to first and then HIV test became the last station to visit as they left the health care facility, than starting with HIV test before their pain was alleviated up on arrival to the healthcare facility.

The implication to policy and practice is that where the population is not sensitized about the new policy and its benefits to them, the acceptability would become difficult and consequently this would impact negatively on practice as the beneficiaries don’t see any advantages. This would be the contributing factor to treatment default and also to shunning away from a health service.

Lack of adequate sensitization on” Test and Treat” in communities has been cited as the main reason why patients fail to adjust emotionally to new HIV diagnoses in healthcare facilities. Where people have been fully sensitized and given full knowledge about the disease and treatment, negative reactions and stigmatization are minimized. When patients lack knowledge about the disease and its treatment, their acceptance would also be compromised as they cannot make a good judgement for actions they take. Self stigmatization has been reported in in-depth interviews conducted by this study as a contributing factor for most ARVs defaulters as most clients lack capacity to adjust emotionally on being diagnosed with HIV. Stigmatization and difficulty disclosure were also attributed by Mukumbang et al., (2017) as some of the barrier hindering client retention in ART programmes.

Participants observed that integration of ART services to other healthcare services such as Reproductive Health and Outpatient Services would go a long way in fighting institutional instigated stigma the people living with HIV/AIDS are subjected to. They explained that, while it was a good idea to have specialized health care setting for ART services as it promotes efficiency, it was also observed that the setting contributed to stigmatization of those seeking ART healthcare services as they were easily identified by fellow patients from other departments such as Out Patient Department. There were some suggestions from some participants to incorporate ART Services to the main Outpatient services to minimize stigmatization. They observed that, if ART services were incorporated in the main services, this would address not only the problem of stigma but also would address the congestion problems as patients will not be restricted to work days only to get their ARVs as the case was at present. The ethical implication of this would be that HIV would be taken as just like any other infection which may not need intensive counseling there by reducing incidents of patient’s rights violation.

Strong clinical evidence is available linking physiological parameters such as liver function test; CD4 count and Viral load to mandatory practice in monitoring patients as baseline data before initiation on ARVs. According to Wang et al., (2013), HIV infection leads to immune system collapse, following a gradual destruction of $CD4^{+}T$ lymphocytes that causes a severe immune suppression and consequently a high risk of opportunistic infections. All HIV-infected patients should have a baseline CD4 count measured at entry into care. These findings are in conformity with those of Stirrup et al., (2017) who found that the most important predictors of recovery in CD4 counts in patients with well-established dates of seroconversion following the initiation of cART are the CD4 count and viral load at time of treatment initiation. The study revealed that most of the patients initiated on ARVs have had no healthcare baseline data for the essential investigations. This practice was attributed to lack of essential laboratory equipment in most healthcare facilities. This practice was also in sharp contrast with Wang etal.,(2015) who observed that the CD4 count is the major laboratory indicator of immune function in HIV-infected patients. It is a useful tool to guide the initiation of ART and prophylaxis for opportunistic infections, and it is the strongest predictor of subsequent disease progression and survival.

Slow admission processes were evident almost in all ART Centres and this was largely attributed to the long procedures healthcare workers had to carry out on patients including locating their residential area by the use of maps. This manual system was reportedly long and laborious to healthcare workers. As observed by Mukumbang et al., (2017) this long process could lead to long waiting time by patients which would be a barrier to retention of patients to treatment and care. This assumption is in agreement with the findings of by Zhenzhen et al (2017) as well. Healthcare workers also attributed the slow admission process to congestion in health centres related to undiagnosed HIV status of most patients that mimics other infections due to lowered immunity of clients. Most ART services were established for voluntary counseling and testing (VCT) had just started and the number of clients was small and manageable. Now that all patients are tested for HIV and are enrolled to ART services if found to be positive, the number of patients seeking such health care services has tremendously increased without a corresponding increase in infrastructural developments. The implication to practice of this would be congestion and work overload by healthcare providers.

According to WHO (2013) Health systems framework, “a well-functioning health system ensures equitable access to essential medical products, vaccines and technologies of assured quality, safety, efficacy and cost-effectiveness, and their scientifically sound and cost-effective use”. The shortage of essential medical and laboratory supplies needed in the day to day operations in the “Test and Treat” programme in some health care centres have negative motivational effect to the workers as some spend time moving from one healthcare facility to another in search of the medical and laboratory supplies. This trend increased exhaustion to the healthcare workers who were already overwhelmed with client workload at their centres and reduced levels of policy acceptability among them.

5.5 Trialability

Trying out parts of a program or having the opportunity to watch others using a new program is a component model of this study. Trialability in this study was positively related to the likelihood of adoption of the policy. Healthcare workers were often open to trying out health services whose results they considered better than the current innovation. “Test and Treat” was being tried out in selected healthcare facilities of Lusaka District by CIDRZ at a time of data collection. PMTCT and VCT programmes were the ones predominantly being implemented countrywide as policies to manage HIV infections to new born babies and adults respectively. Patients were attracted by the free access to effective drugs and by the fact that “Test and Treat” was officially authorized by the Ministry of Health. Patients who had tried the services of “Test and Treat” were even willing to recommend them to others as heard from FGDs as well as from the number of spouses that followed their partners in joining the ART programme in some healthcare facilities. Trialability was more likely to be influenced by recommendation of a significant others from within the communities as well as by the willingness of the healthcare professionals to carry out the services in their respective facilities.

5.6 Observability

Participants in the study were able to report the observable attributes of “Test and Treat”. At a personal level, some patients reported that from the time they started taking ARVs, they had seen great improvements on their health status. They reported that they were able to do their normal businesses without falling sick as they used to feel before they started taking ARVs. This improved their productivity at work places and businesses as they were not falling sick frequently. Others reported that their children who used to miss classes due to ill health were now attending classes without problems. This outcome explains the scientific clinical report made by Wang et al., (2013), who observed the correlation between taking ARVs and the subsequent improvements in immune system of the patient making policy acceptability and adoption easy. The opposite of these findings is that” HIV infection leads to immune system collapse, following a gradual destruction of $CD4^{+}T$ lymphocytes that causes a severe immune suppression and consequently a high risk of opportunistic infections” Wang et al., (2013). The financial implications to these observations are that families would be saving their money or use it for other domestic needs instead of spending it on transport to and from the health facilities or buying drugs to fight opportunistic infections. Furthermore, as the patient’s immune system is restored to normal function, the individual becomes strong and regains his high productivity hence reduced poverty in the homes. This has an implication to practice as the health facilities are likely to record remarkable reductions to the current congestion they are experiencing. Where there is reduced congestion, the workload by healthcare workers also reduces leading to safe practice.

There is enough evidence documenting the impact of men’s involvement on the various components of PMTCT programmes (Falnes et al., 2011): men play an important role in terms of women’s risk of acquiring HIV (Msuya et al., 2006), and prevention, in terms of condom use in the couple relationship (Farquhar et al., 2007,). The World Health Organization (WHO) also observed the low number of men receiving ART. “Men and key populations, in particular, are not being reached sufficiently with HIV testing and treatment services. Only 40% of men living with HIV receive treatment, and only 30% of the HIV tests performed are among men. Men need to be reached outside health facilities, including with HIV self-testing (WHO, 2016). Increase in male involvement in ART and care programme was one interesting findings of the study. There was a sharp contrast between the extent to which males were involved in PMTCT to their current involvement in “Test and Treat”. Tayali (2015), reports that male involvement in PMTCT was one of the major challenges in her study at Chelston Clinic of Lusaka District. This could be the reason why the HIV transmission from mother to child could not be controlled as males who are also the drivers of the infection transmission were not fully involved and some openly showed negative attitude. There are reports that men psychologically and even physically abused their spouses who communicated HIV positive status from a health facility(Katirayi et al., 2016). Additionally some women ended up being divorced after being told that they were HIV positive. They also suffered family rejection and were ridiculed as having brought a shameful disease in the family Mukumbang et al., (2017). The coming of “Test and Treat” has now widened the scope of understanding of ART programme as males were also tested for HIV when they visited the health facility for any medical condition they have. The male patients were able to experience what it means to test positive to HIV and also the challenges associated with results communication to spouses. One male participant said

“*When I tested HIV positive, I was so devastated and didn’t know how to tell my wife. Until one day I suggested that we go and test together at the clinic. My wife was very happy about it and when we tested, I was found with the virus and herself was negative but up to now she is very supportive and we come together to collect drugs*” **Matero FGD #04.**

The implication for policy of this observation is that, since men are also tested when they are sick and are expected to communicate the results to their spouses the problem of difficulty disclosure would be reduced and both men and women are likely to support the policy and eventually, this could lead to high acceptability by families and communities at large.

5.6 Summary

From the studies carried out as outlined above, there is evidence that acceptability of the universal testing and treatment of all HIV positive clients play an important role in expanding coverage of ART administration. Where the acceptance is low, there is also low coverage and subsequently higher infection transmission. The health care support system also plays a key role in ensuring smooth implementation of the programme. Where the health care system is dysfunctional, acceptability is negatively influenced and the coverage is low leading to higher rates of infection transmission

CHAPTER SIX

CONCLUSIONS AND RECOMMENDATIONS

6.1 Conclusions

"Test and Treat" is viewed to have relative advantage over other previous HIV/AIDS intervention strategies as it has been observed to be largely compatible with other health systems operations available in most health care facilities. It has been tried elsewhere with positive results according to literature reviewed as such there is no much complexities reported. Observed outcomes of clinical trials done so far reveals programme simplicity leading to high acceptability among health care workers with smooth implementation. The patients have mostly spoken positively about this new approach to treatment and have also pointed out few concerns on the negative aspect of it. 'Test and Treat" was well received by healthcare workers and the patients in Lusaka District healthcare facilities; however, there were some negative concerns which the policy makers and implementers need to address.

Rapidly changing information 'landscapes' pose significant challenges to clinical discussions and demand a high level of commitment to staying current and remaining open to change as new evidence emerges regarding best clinical practice. For example, while some have expressed concern that early initiation of ARVs may lead to an increase in potential side effects, including reduced bone density and kidney damage as well as the potential for an individual's virus to develop resistance to ARVs, emerging evidence indicates the individual benefits (e.g., decreased incidence of primary and secondary infections) associated with early uptake may outweigh the negative side effects

6.2 Recommendations

1. Stigmatization needs to be addressed both at Health Care Facility and Community levels in order to ensure that people aren't uncomfortable and worried about going to the clinic as well as to make disclosure of the results easy among clients who utilize the "Test and Treat" health care services. This

will call for a strong social solidarity to enhance both organic and mechanical social cohesion in societies as well as strengthening communication ties between the community and the Healthcare facility staff as well as work place members.

2. A stronger leadership voice at all levels of humanity in population sensitization of “Test and Treat” as well as a strong political will and commitment in allocating adequate resources to the sectors that are involved in implementing this programme is needed so that indeed by 2030 the threat of HIV/AIDS will be completely eradicated. A sustained commitment and action to address the scale of challenges ahead is required by all stake holders.
3. Particular attention should be given to those populations who are at risk and impacted the most, such as those who are socio-economically marginalized, including women, young girls and children. There is also an urgent need to overcome social injustices which increase the risk and vulnerability of these populations.
4. “Test and Treat” will require a sophisticated set of clinical communication strategies-even in settings where ARVs and laboratory services are available universally-thereby underscoring the extent to which “Test and Treat” educational and communication efforts should not be based solely at populations visiting the health facility but also to strengthening the door-to-door campaigns in communities. Those tasked with implementing “Test and Treat” at the patient-clinician interface for example, clinicians require the resources and skill sets to provide knowledge that patients require to make informed decisions regarding “Test and Treat” including the side effects associated with initiating ARVs and their capacity to reduce onward disease transmission. Excellent communication strategies are particularly salient given that new evidence regarding the risks and benefits of ‘early’ initiation of treatment (i.e., immediately following seroconversion) is rapidly unfolding.

REFERENCES

Auvinen, J., Kylmä, J., Välimäki, M., Bweupe, M., Suominen, T., 2014. Midwives' perspectives on male participation in PMTCT of HIV and how they can support it in Lusaka, Zambia. Midwifery 30, 17–27. https://doi.org/10.1016/j.midw.2013.01.010

Ayieko, J., Brown, L., Anthierens, S., Van Rie, A., Getahun, M., Charlebois, E.D., Petersen, M.L., Clark, T.D., Kamya, M.R., Cohen, C.R., Bukusi, E.A., Havlir, D.V., Camlin, C.S., 2018. "Hurdles on the path to 90-90-90 and beyond": Qualitative analysis of barriers to engagement in HIV care among individuals in rural East Africa in the context of test-and-treat. PloS One 13, e0202990. https://doi.org/10.1371/journal.pone.0202990

Bello, F.A., Ogunbode, O.O., Adesina, O.A., Olayemi, O., Awonuga, O.M., Adewole, I.F., 2011. Acceptability of counselling and testing for HIV infection in women in labour at the University College Hospital, Ibadan, Nigeria. Afr. Health Sci. 11, 30–35.

Bigna, J.J.R., Plottel, C.S., Koulla-Shiro, S., 2016. Challenges in initiating antiretroviral therapy for all HIV-infected people regardless of CD4 cell count. Infect. Dis. Poverty 5, 85. https://doi.org/10.1186/s40249-016-0179-9

Braun, V., Clarke, V., 2006. Using thematic analysis in psychology. Qual. Res. Psychol. 3, 77–101. https://doi.org/10.1191/1478088706qp063oa

Chihana, M.L., Huerga, H., Van Cutsem, G., Ellman, T., Wanjala, S., Masiku, C., Szumilin, E., Etard, J.F., Davies, M.-A., Maman, D., 2018. Impact of "test and treat" recommendations on eligibility for antiretroviral treatment: Cross sectional population survey data from three high HIV prevalence countries. PloS One 13, e0207656. https://doi.org/10.1371/journal.pone.0207656

Cohen, M.S., Smith, M.K., Muessig, K.E., Hallett, T.B., Powers, K.A., Kashuba, A.D., 2013. Antiretroviral treatment of HIV-1 prevents transmission of HIV-1: where do we go from here? Lancet Lond. Engl. 382, 1515–1524. https://doi.org/10.1016/S0140-6736(13)61998-4

Dalal, S., Lee, C., Farirai, T., Schilsky, A., Goldman, T., Moore, J., Bock, N.N., 2011. Provider-initiated HIV testing and counseling: increased uptake in two public community health centers in South Africa and implications for scale-up. PloS One 6, e27293. https://doi.org/10.1371/journal.pone.0027293

Davis, A., McCrimmon, T., Dasgupta, A., Gilbert, L., Terlikbayeva, A., Hunt, T., Primbetova, S., Wu, E., Darisheva, M., El-Bassel, N., 2018. Individual, social, and structural factors affecting antiretroviral therapy adherence among HIV-positive people who inject drugs in Kazakhstan. Int. J. Drug Policy 62, 43–50. https://doi.org/10.1016/j.drugpo.2018.08.014

Del Rio, C., 2017. The global HIV epidemic: What the pathologist needs to know. Semin. Diagn. Pathol. 34, 314–317. https://doi.org/10.1053/j.semdp.2017.05.001

Faturiyele, I.O., Appolinare, T., Ngorima-Mabhena, N., Fatti, G., Tshabalala, I., Tukei, V.J., Pisa, P.T., 2018. Outcomes of community-based differentiated models of multi-month dispensing of antiretroviral medication among stable HIV-infected patients in Lesotho: a cluster randomised non-inferiority trial protocol. BMC Public Health 18, 1069. https://doi.org/10.1186/s12889-018-5961-0

Ford, N., Meintjes, G., Vitoria, M., Greene, G., Chiller, T., 2017. The evolving role of CD4 cell counts in HIV care. Curr. Opin. HIV AIDS 12, 123–128. https://doi.org/10.1097/COH.0000000000000348

Forhan, S.E., Modi, S., Houston, J.C., Broyles, L.N., 2017. Moving toward test and start: learning from the experience of universal antiretroviral therapy programs for HIV-infected pregnant/ breastfeeding women. AIDS Lond. Engl. 31, 1489–1493. https://doi.org/10.1097/QAD.0000000000001498

Grubb, I.R., Beckham, S.W., Kazatchkine, M., Thomas, R.M., Albers, E.R., Cabral, M., Lange, J., Vella, S., Kurian, M., Beyrer, C., IAS Treatment for Key Affected Populations Working Group, 2014. Maximizing the benefits of antiretroviral therapy for key affected populations. J. Int. AIDS Soc. 17, 19320. https://doi.org/10.7448/IAS.17.1.19320

Ha, S., Foley, S., Paquette, D., Seto, J., 2014. A review of Human Immunodeficiency Virus (HIV) rapid testing. Can. Commun. Dis. Rep. Releve Mal. Transm. Au Can. 40, 408–419.

Hayes, R., Floyd, S., Schaap, A., Shanaube, K., Bock, P., Sabapathy, K., Griffith, S., Donnell, D., Piwowar-Manning, E., El-Sadr, W., Beyers, N., Ayles, H., Fidler, S., HPTN 071 (PopART) Study Team, 2017. A universal testing and treatment intervention to improve HIV control: One-year results from intervention communities in Zambia in the HPTN 071 (PopART) cluster-randomised trial. PLoS Med. 14, e1002292. https://doi.org/10.1371/journal.pmed.1002292

Helova, A., Akama, E., Bukusi, E.A., Musoke, P., Nalwa, W.Z., Odeny, T.A., Onono, M., Spangler, S.A., Turan, J.M., Wanga, I., Abuogi, L.L., 2017. Health facility challenges to the provision of Option B+ in western Kenya: a qualitative study. Health Policy Plan. 32, 283–291. https://doi.org/10.1093/heapol/czw122

Johannessen, K.A., Alexandersen, N., 2018. Improving accessibility for outpatients in specialist clinics: reducing long waiting times and waiting lists with a simple analytic approach. BMC Health Serv. Res. 18, 827. https://doi.org/10.1186/s12913-018-3635-3

Johnstone-Robertson, S.P., Hargrove, J., Williams, B.G., 2011. Antiretroviral therapy initiated soon after HIV diagnosis as standard care: potential to save lives? HIVAIDS Auckl. NZ 3, 9–17. https://doi.org/10.2147/HIV.S7278

Jones, D.L., Zulu, I., Vamos, S., Cook, R., Chitalu, N., Weiss, S.M., 2013. Determinants of engagement in HIV treatment and care among Zambians new to antiretroviral therapy. J. Assoc. Nurses AIDS Care JANAC 24, e1-12. https://doi.org/10.1016/j.jana.2012.06.009

Kar, M., 2014. Governance of HIV/AIDS: implications for health sector response. Int. J. Health Policy Manag. 2, 39–44. https://doi.org/10.15171/ijhpm.2014.07

Katirayi, L., Namadingo, H., Phiri, M., Bobrow, E.A., Ahimbisibwe, A., Berhan, A.Y., Buono, N., Moland, K.M., Tylleskär, T., 2016. HIV-positive pregnant and postpartum women’s perspectives about Option B+ in Malawi: a qualitative study. J. Int. AIDS Soc. 19, 20919. https://doi.org/10.7448/IAS.19.1.20919

Kayigamba, F.R., Bakker, M.I., Lammers, J., Mugisha, V., Bagiruwigize, E., Asiimwe, A., van der Loeff, M.F.S., 2014. Provider-initiated HIV testing and counselling in Rwanda: acceptability among clinic attendees and workers, reasons for testing and predictors of testing. PloS One 9, e95459. https://doi.org/10.1371/journal.pone.0095459

Knight, R., Small, W., Thomson, K., Gilbert, M., Shoveller, J., 2016. Implementation challenges and opportunities for HIV Treatment as Prevention (TasP) among young men in Vancouver, Canada: a qualitative study. BMC Public Health 16, 262. https://doi.org/10.1186/s12889-016-2943-y

Madiba, S., Mokgatle, M., 2015. "Students want HIV testing in schools" a formative evaluation of the acceptability of HIV testing and counselling at schools in Gauteng and North West provinces in South Africa. BMC Public Health 15, 388. https://doi.org/10.1186/s12889-015-1746-x

Mbachu, C., Onwujekwe, O., Ezumah, N., Ajayi, O., Sanwo, O., Uzochukwu, B., 2016. Political economy of decentralising HIV and AIDS treatment services to primary healthcare facilities in three Nigerian states. Afr. J. AIDS Res. AJAR 15, 293–300. https://doi.org/10.2989/16085906.2016.1205112

Morfaw, F., Mbuagbaw, L., Thabane, L., Rodrigues, C., Wunderlich, A.-P., Nana, P., Kunda, J., 2013. Male involvement in prevention programs of mother to child transmission of HIV: a systematic review to identify barriers and facilitators. Syst. Rev. 2, 5. https://doi.org/10.1186/2046-4053-2-5

Musheke, M., Ntalasha, H., Gari, S., McKenzie, O., Bond, V., Martin-Hilber, A., Merten, S., 2013. A systematic review of qualitative findings on factors enabling and deterring uptake of HIV testing in Sub-Saharan Africa. BMC Public Health 13, 220. https://doi.org/10.1186/1471-2458-13-220

Navaza, B., Abarca, B., Bisoffi, F., Pool, R., Roura, M., 2016. Provider-Initiated HIV Testing for Migrants in Spain: A Qualitative Study with Health Care Workers and Foreign-Born Sexual Minorities. PloS One 11, e0150223. https://doi.org/10.1371/journal.pone.0150223

Nichols, B.E., Boucher, C. a. B., van de Vijver, D. a. M.C., 2011. HIV testing and antiretroviral treatment strategies for prevention of HIV infection: impact on antiretroviral drug resistance. J. Intern. Med. 270, 532–549. https://doi.org/10.1111/j.1365-2796.2011.02456.x

Palchaudhuri, R., Niggl, M., Palmer, C.S., 2016. Eliminating HIV & AIDS in India: A roadmap to zero new HIV infections, zero discrimination & zero AIDS-related deaths. Indian J. Med. Res. 144, 789–792. https://doi.org/10.4103/ijmr.IJMR_1902_16

Patel, A., 2017. Person of the Month: Josef Breuer (1842-1925). Int. J. Indian Psychol. https://doi.org/10.25215/0403.001

Pham, M.D., Agius, P.A., Romero, L., McGlynn, P., Anderson, D., Crowe, S.M., Luchters, S., 2016. Acceptability and feasibility of point-of-care CD4 testing on HIV continuum of care in low and middle income countries: a systematic review. BMC Health Serv. Res. 16, 343. https://doi.org/10.1186/s12913-016-1588-y

Robinson, H.L., 2018. HIV/AIDS Vaccines: 2018. Clin. Pharmacol. Ther. 104, 1062–1073. https://doi.org/10.1002/cpt.1208

Rosen, S., Maskew, M., Fox, M.P., Nyoni, C., Mongwenyana, C., Malete, G., Sanne, I., Bokaba, D., Sauls, C., Rohr, J., Long, L., 2016. Initiating Antiretroviral Therapy for HIV at a Patient’s First Clinic Visit: The RapIT Randomized Controlled Trial. PLoS Med. 13, e1002015. https://doi.org/10.1371/journal.pmed.1002015

Rufu, A., Chitimbire, V.T.S., Nzou, C., Timire, C., Owiti, P., Harries, A.D., Apollo, T., 2018. Implementation of the “Test and Treat” policy for newly diagnosed people living with HIV in Zimbabwe in 2017. Public Health Action 8, 145–150. https://doi.org/10.5588/pha.18.0030

Szekeres, G., Coates, T.J., Ehrhardt, A.A., 2008. Leadership development and HIV/AIDS. AIDS Lond. Engl. 22 Suppl 2, S19-26. https://doi.org/10.1097/01.aids.0000327433.90419.61

Wanyenze, R., 2008. Acceptability of routine HIV counselling and testing, and HIV seroprevalence in Ugandan hospitals. Bull. World Health Organ. 86, 302–309. https://doi.org/10.2471/BLT.07.042580

Xie, Z., Or, C., 2017. Associations Between Waiting Times, Service Times, and Patient Satisfaction in an Endocrinology Outpatient Department: A Time Study and Questionnaire Survey. Inq. J. Med. Care Organ. Provis. Financ. 54, 46958017739527. https://doi.org/10.1177/0046958017739527

APPENDICES

(i) Information Sheet for Research Participants

Title: Acceptability and implementation experiences of the “Test and Treat”
Antiretroviral therapy policy guideline among patients and healthcare workers in
Lusaka District of Zambia.

Introduction

Welcome dear participants, my name is Mweemba Mulinda; a masters degree student from the University of Zambia, School of Public Health. I am doing a research on the new approach of managing HIV/AIDS called “Test and Treat” and I am specifically interested to hear your views on this new programme.

You are invited to join a research study to look at how patients and healthcare workers have accepted and implementing the new policy taking place in selected sites of Lusaka District. Please take whatever time you need to discuss the study with your family and friends, or anyone else you wish to. The decision to join, or not to join, is entirely up to you. In this research, we are exploring acceptability and implementation experiences of test and treat all HIV positive clients by the patients themselves as well as the health care team members who are involved in the programme in various Anti-retroviral therapy centres of Lusaka District. Previously the WHO guideline for ART initiation criteria was by the level of CD4 count of below 500 cells/mm^3 and the disease stage of a patient. Research has found that this was not yielding desired results as some patients couldn’t pick up after late initiation of treatment. The rate of infection also increased during this period as patient continued infecting others with unsuppressed viral load. We hope to learn how the patients and health workers have embraced this new policy and also the opportunities and challenges of implementing it.

If you decide to participate you will be asked to come to a health centre to join other participants in focus group discussions concerning the subject matter. There will be two sessions of focus group discussions that will be conducted at different schedules. One group will involve Health Care Workers who will be explaining their personal experiences regarding the implementation of the test and treat innovation and their interactions with patients. This group will also talk about the Health Care Support System with regard to implementation of the programme and challenges which they are facing. The second group will involve clients who are enrolled into the programme. The clients will be discussing the advantages and disadvantages they have noticed in this new programme including challenges they have in accessing and utilizing the services. These discussions will be audio tape recorded and may last for an hour or so depending on the available number of participants and the volume of information they have to give out. Please if you feel uncomfortable about audio tape recordings don’t hesitate to mention it before the programme commences. The investigators may stop the research or take you out of the research at any time they judge it is in your best interest. They may also remove you from the research for various other reasons. They can do this without your consent. On the other hand, you are free to make your own choices during the research without influence from any one. You can stop participating at any time. If you stop you will not lose any benefits.

This research involves risks such as loss of privacy as you will be giving your personal experiences regarding your medical treatment and loss. The Non-physical risks may include social, psychological, or economic harm such as loss of man hours from your usual business or work places. Other risk involved in the research is unguaranteed confidentiality from other participant as some of them you will not know as they are drawn from various places of Lusaka District. There may also be other risks that we cannot predict that may occur during or after the research.

It is reasonable to expect the following benefits from this research: as a participant, you will broaden your knowledge on the subject matter through interaction with others in the discussion; the outcome of research will enable policy makers and cooperating partners to scale up ART Services to meet the needs of every patient in Lusaka District. However, we can’t guarantee that you will personally receive monetary benefits from participating in this research. Others may benefit in the future from the information we find in this research.

Confidentiality

We will take the following steps to keep information about you confidential, and to protect it from unauthorized disclosure, tampering, or damage: your names will not be used during the discussion and all the recordings will not be given to any other person apart from those directly involved in the research. The data will be translated in words other than direct quotes which could be traced to an individual before sharing with other stake holders. The storage of data will be in the computer whose access will require a pass word to get into the system. Only the investigator will have access to the data to protect your information.

Incentives and benefits for participation

Participants will be given transport refund and some refreshments will be provided during discussions.

Participation in this study is voluntary. You have the right not to participate at all or to leave the study at any time. Deciding not to participate or choosing to leave the study will not result in any penalty or loss of benefits to which you are entitled, and it will not harm your relationship with the investigators or any member of the health care staff.

Contact information

Call the Research Ethics Committee Chairperson (UNZABREC) **on** 260-1-256067 or unzarec@unza.zm or Mr.Mweemba Mulinda (investigator) at 0963679262 0r 0977781316 email mweemba.mulinda@yahoo.com if you have questions about the study, any problems, unexpected physical or psychological discomforts, any injuries, or think that something unusual or unexpected is happening.

Consent of Subject (or Legally Authorized Representative)

Signature of Subject or Representative Date………………………

(ii) Participant's Informed Consent

I……(Participant's identity number) as a participant in the research has read the material in the information sheet for informed consent and everything has been explained to me. I understand that taking part in the research is voluntary and that my privacy will be respected. All questions I had have been answered to my satisfaction. I chose to take part freely and voluntarily.

I have therefore given consent to take part in the research based on the information I have been given and to the best of my understanding.

Signature or thumb print ……………………………Witness's signature………………

Date …………………………………………………

(iii) Focus Group Discussion Guide

Introduction (10 minutes)

Part 1

1. As participants arrive, the facilitator should set the tone for a comfortable, enjoyable discussion by welcoming them just as would any gracious host.
2. Welcoming and thanking the participants for coming. Introduce yourself and the co-facilitator, if used
3. Explaining the specific objectives of the research to the participants clearly
4. Explain the means to record the session. *Make sure the session is recorded and obtain consent for recording participants!*
5. Reassurance of the participants of their safety and information confidentialities
6. Ask for the consent of participants to take part in the research and remind them that it is a voluntary move taken by each one of them
7. Set the tone; participants should have fun and feel good about the session. Start with warm up questions to set the climate.

8. Date ……………………………….ID Number……………………………

9. Place ……………………………………………………………………

10. Language used during discussion…………………………………………

Part 2 (45 minutes)

Discussion questions (a) compliant to taking treatment

1. What do you understand by the new way of managing HIV called ***'Test and Treat'***?
2. How different is ***test and treat***from the previous methods?
3. How were you recruited in the ***test and treat*** programme of HIV treatment and care?
4. How easy was it for you to join the ***test and treat*** programme at the beginning?
5. What do you consider to be good about the ***test and treat*** form of care for HIV management?

6. What do you consider to be bad about the ***test and treat*** form of care for HIV management?
7. In your opinion, why are some people refusing to start taking ARVs even when they are found to be HIV positive in the test and treat programme at this health facility?
8. What do you think the government should do to make sure that all people living with HIV access treatment freely at the health facility where you seek health care

Discussion questions (b) Non compliant to treatment

1. What do you understand by the new way of managing HIV called ***'Test and Treat'***?
2. How different is ***test and treat*** from the previous methods?
3. What are some of the difficulties which you have in being enrolled in the ***test and treat*** programme of HIV treatment and care?
4. What are some of the good things that you have heard from people taking ARVs in ***test and treat*** programme if any?
5. What do you consider to be bad about the ***test and treat*** form of care for HIV management?
6. In your opinion, why are some people refusing to start taking ARVs even when they are found to be HIV positive in the test and treat programme at health facilities?
7. What do you think the government should do to make sure that all people living with HIV access treatment freely at the health facility where you seek healthcare.

(iv) Key Informant Interview Guide

Part 1 (15 minutes)

1. Welcoming and thanking the participants for coming. Introduce yourself and the co-facilitator, if used
2. Explaining the specific objectives of the research to the participants clearly
3. Explain the means to record the session. (*Make sure the session is recorded!)*
4. Reassurance of the participants of their safety and information confidentialities
5. Ask for the consent of participants to take part in the research and remind them that it is a voluntary move taken by each one of them
6. Set the tone; Start with warm up questions to set the climate.
7. Date …………………………………………………………………………..
8. Place……………………………………………………………………………….
9. Language used during discussion………………………………………………
10. ID number …………Interviewer………………………………………………
11. Professions of interviewees……………………………………………………..

Part 2 (45 minutes)

1. What is your role in ART case management at this Centre?
2. How would you describe the patient in flow to your ART centre from the time ***test and treat*** started?
3. How does this inflow affect the implementation of ***test and treat*** programme at this centre?
4. What would you consider to be good about ***test and treat*** implementation from the health care provider perspective point of view?
5. In your opinion can the implementation of test and treat innovation be done on a small scale of patient and produce reliable results which can be attributed to the larger community?
6. What are some of the challenges you are facing in implementing ***test and treat*** at this centre?
7. In your opinion, what are some of the difficulties clients have in taking ARVs immediately after testing HIV positive?

8. In your opinion can the implementation of test and treat innovation be done on a small number of patients and produce reliable results which could be scaled to the larger population?
9. What are some of your recommendations to policy makers and stake holders concerning implementation of ***test and treat*** at your health care facility?
10. We have exhausted the questions we needed to answer for this study. Since there are no more questions or concerns, I would like to take this opportunity to thank you all for coming and more importantly, for your participation in the discussion.

(v) In-Depth Interview Guide

Identity number……………………………………………….Interviewer………

Number of Psychosocial Counselors interviewed…………………………………

Time: 45 minutes

1. What are your roles in ***test and treat*** programme at this Health care facility?
2. How would you describe the response of clients from the time **test and treat** started?
3. In your opinion, what are some of the difficulties clients have for not taking ARVs after testing positive for HIV?
4. How would you describe ***test and treat*** acceptability by clients and Counselors at this ART centre?
5. What would you recommend to the government in order to improve acceptability ***of test and treat*** by clients and psychosocial Counselors in Lusaka district?

We have come to the end of our interview and since there are no more questions, I would like to take this opportunity to thank you all for your time and more importantly, for your participation in this interview. I hope to communicate to you the outcome of this study as soon as publication of the results is authorized. Thank you so very much!