HEALTH SYSTEM FACTORS INFLUENCING CLIENT SATISFACTION WITH ANTIRETROVIRAL THERAPY SERVICES IN PRIVATE HEALTH FACILITIES IN ABUJA, FCT

BY

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MPH/NFELTP/MED/36268/2012-13

A DISSERTATION SUBMITTED TO THE POSTGRADUATE SCHOOL, AHMADU BELLO UNIVERSITY ZARIA, IN PARTIAL FUFILMENT FOR THE AWARD OF MASTERS DEGREE IN PUBLIC HEALTH IN FIELD EPIDEMIOLOGY (MPH Field Epid) DEPARTMENT OF COMMUNITY MEDICINE FACULTY OF MEDICINE AHMADU BELLO UNIVERSITY ZARIA

JANUARY, 2016

ATTESTATION

I declare that the work in the thesis entitled Health System Factors Influencing Client Satisfaction with Antiretroviral Therapy Services in Private Health Facilities in FCT was performed by me in the Department of Community Medicine under the supervision of Dr Idris S.H. The information derived from the literature has been duly acknowledged and a list of references provided. No part of this project has been previously presented for another degree or diploma at any university.

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Name of student	Signature	Date

CERTIFICATION

I certify that the work of this dissertation entitled: health system factors influencing client satisfaction with Antiretroviral Therapy services in private health facilities in FCT by Oladejo Abiodun J. meets the regulations governing the award of the degree of Masters in Public Health Field Epidemiology of Ahmadu Bello University, Zaria and is approved for its contribution to knowledge and literary presentation.

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ACKNOWLEDGEMENT

First and foremost, my heartfelt gratitude goes to God for seeing me through this project.

I would also like to appreciate my husband, Mr Caleb Egwuenu and son, Hesedel Afomachukwu for their support throughout the project: commencement, field work and write-up. Your contribution is unquantifiable. I am also thankful to my parents Mr and Mrs Oladejo and the Oluwagbohuns for their encouragement.

I want to acknowledge the contributions of my supervisors in the Department of Community Medicine Ahmadu Bello University Zaria; especially Dr Idris S.H. for his expertise and guidance throughout this process.

I want to also thank Dr Aisha Abubakar for her encouragement, patience and time; she was always checking up on my progress.

I greatly appreciate the NFELTP programme for giving me this opportunity as a field epidemiologist; Dr Patrick Nguku, Professor Olayinka, Professor Gabrielle Pogensee, Dr S. Gidado and other members of the team. I am grateful to you all.

I also appreciate all my colleagues for their support. God bless you all.

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ACRONYMS

AIDS	Acquired Immune Deficiency Syndrome
ART	Antiretroviral Therapy
ARV	Antiretroviral drugs
CBO	Community Based Organization
CDC	Centers for Disease Control and Prevention
CHEW	Community Health Extension Worker
CTX	Cotrimoxazole
DOTS	Directly-Observed Short Course Therapy
FBO	Faith-Based Organization
FCT	Federal Capital Territory
HAART	Highly Active Antiretroviral Therapy
HCT	HIV Counseling and Testing
HIV	Human Immunodeficiency Virus
IEC	Information Education and Communication
IOM	Institute of Medicine
MARPs	Most At-Risk Populations
NACA	National Agency for the Control of AIDS
NARHS	National HIV/AIDS and Reproductive Health Survey
NASCP	National AIDS/STI Control Program
NGO	Non-governmental Organization
OI	Opportunistic Infection
PCV	Packed Cell Volume

PEP	Post Exposure Prophylaxis
PEPFAR	President’s Emergency Planfor AIDS Relief
PHCP	Primary HIV Care Provider
PLWHA	People Living with HIV/AIDS
PMTCT	Prevention of Mother-to-Child Transmission
PSP	Private Service Providers
QA	Quality Assurance
QI	Quality Improvement
STIs	Sexually Transmitted Infections
TB	Tuberculosis
WHO	World Health Organization

DEFINITION OF TERMS

1. Primary HIV Care Provider

A health worker thatistrained for first contact and continuing care for persons with HIV, not limited by problem origin, organ system, or diagnosis. It includes health promotion, disease prevention, health maintenance, counseling, patient education, diagnosis and treatment of HIV/AIDS and other associated illnesses. Primary care is performed and managed by a physician often collaborating with other health professionals, and utilizing consultation or referral as appropriate.[1]

2. ART Comprehensive Site

This is a health facility that provides HIV counselling and testing, manages sexually transmitted infections, conducts tuberculosis screening and treatment, provides reproductive health services, HIV care including antiretroviral therapy, and services to prevent mother to child transmission of HIV.

3. Antiretroviral Therapy refill centre

Health facilities that replenish the supply of ART based on prescription.

4. ART clinic infrastructure

This is the basic physical, organizational structures and facilities available to the ART clinic.

SUMMARY

Patient satisfaction is a personal evaluation of health care services provision. Clients who are not satisfied with health service may have worse outcomes. The potential number of people eligible for ART is set to increase in low and middle income countries and the private health sector has the capacity to meet this need. This study was conducted to determine which health system factors influence the clients' satisfaction with ART services in private health facilities.

From April to July 2015, a cross-sectional study design was used to collect data in F.C.T via quantitative methods. Client characteristics and health system factors associated with patient satisfaction was analyzed using Epi-info 7 and SPSS 18.

A total of 313 clients were interviewed.Clients' mean age was 35±7 years. Females were 64.9%, 56.2% were married, 19.7% earned less than 18000 naira and 23% earned 70000 naira or more monthly. About 2.2% of them were uneducated while 54.3% had up to tertiary level education. Half lived less than one hour from the health facility. Fifty-two percent had been on ART for 5 years or more and 53% had conducted at least two CD4 tests in the past year. The proportions of clients receiving financial support and in a support group were 5.8% and 14% respectively. About one-third of the clients chose a private facility because the staff was discrete about their ART intake. Two hundred and fifty-nine (82.7%) were satisfied overall with services. Majority (65%) of the health facilities were situated in urban wards. Twelve (60%) had at least one adherence counsellor and in 70% of the facilities, healthcare providers spent more than 10 hours in the ART clinic. Seventy-five percent collected clients' opinions on ART services and 85% has had supervisory visits. In 70% of the clinics, CD4 monitoring was conducted and all stocked Highly Active Antiretrovirals (HAART).

Being in a hospital that had at least one adherence counsellor (O.R.=3.2,p=0.000), that had commenced ART services at least 5 years ago (O.R.=3.3,p=0.000), that was located outside Abuja municipal(O.R.=3.8,p=0.000), where at least ten hours was spent in ART clinic per week(O.R.=2.8,p=0.003)and being on ART for at least 5 years (O.R.=2.4, $p<0.01$) were associated with patient satisfaction with ART services. Also, clients in private hospitals that worked with community ART health workers (O.R.= 3.3, p=0.000), where either suggestion box or survey (O.R.=5.5, p=0.01) was used to collect patients' opinions and in clinics where supervisors trained staff (O.R.=5.5, p=0.01) or collected data(O.R.=2.8, p=0.003) during visits, were satisfied with services. Clients that received cotrimoxazole prophylaxis (O.R.= 2.0, p=0.020), who had received financial support(O.R.= 4.3, p=0.005), that were in a support group(O.R.= 2.3, p=0.021) and in health facilities that referred patients(O.R.= 4.4, p=0.006) were dissatisfied with services. Following modelling; not receiving financial support, commencing antiretroviral therapy 5 years ago or more and being in a health facility that did not refer clients were predictors of patient satisfaction.

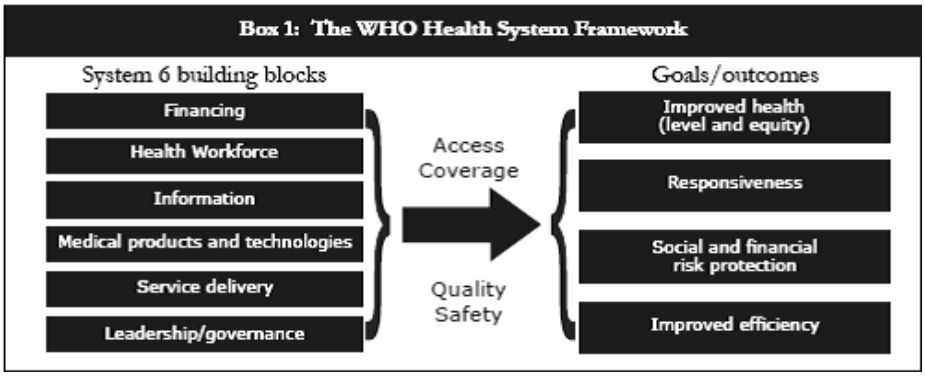
Involvement of ART clients in their care and increasing human resources in ART clinic can potentially improve patient satisfaction and impact retention in care. Private hospitals should improve the comprehensiveness of the ART services rendered.

CHAPTER ONE -INTRODUCTION

1.1 Background

New technologies in medicine offer the promise of increasing longevity, improving health and alleviating pain and suffering.[2] As medical science and technology have advanced, and patient management have become more complex,[2] there has been a concordant increase in the need for health care systems to provide consistently high quality care.Institute of Medicine(IOM) defined quality as "the degree to which health services for individuals and populations increase the likelihood of desired health outcomes and are consistent with current professional knowledge".[3]

The World Health Organization(WHO) 2007 Framework for Action for strengthening health systems in developing countries identified quality as one of the key drivers of improved health outcomes and greater efficiency in health service delivery.[4]It is characterized as one of the four mediators (along with access, coverage and safety) that connect the health system building blocks to the health system outputs.[4]Despite this acknowledgement of the critical role of quality of care in strengthening health systems, there are few descriptions of how to ensure high-quality health care in developing countries.[4]



Quality: a mediator of health system outputs[5]

The process of providing care in developing countries is often poor and varies widely.[6] Explanations for variation and low-quality care in the developing world include lack of resources, failure to align practitioner incentives and objectives, failure to measure clinical practice, or failure to link quality improvement to better health outcomes.[6]

Patient satisfaction has been defined as the patient's "personal evaluation of providers' ability to successfully deliver care that meets patients' expectations and needs".[7]Clients' satisfaction with treatment processes may influence and are influenced by treatment outcomes. Clients who are not satisfied with a service may have worse outcomes than others because they miss more appointments, leave against advice or fail to follow through on treatment plans.[8] Clients who do not do well after treatment may have less than favourable attitudes towards a treatment service, even if it was of high quality by other criteria.[8]

An IOM report specified six characteristics of a high quality medical care system:

i. safe – avoiding injuries to patients from the care that is supposed to help them,[9]
ii. effective – providing services based on scientific knowledge to all who could benefit and refraining from providing services to those not likely to benefit (avoiding underuse and overuse),[9]
iii. patient-centered – providing care that is respectful of and responsive to individual patient preferences, needs, and values and ensuring that patient values guide all clinical decisions,[9]
iv. timely – reducing waiting and sometimes harmful delays for both those who receive and those who give care,[9]

v. efficient – avoiding waste, in particular waste of equipment, supplies, ideas, and energy[9]and

vi. equitable – providing care that does not vary in quality because of personal characteristics, such as gender, ethnicity, geographic location, and socioeconomic status.[9]

Based on this description of high quality care, it has been observed that even where health systems are well developed and resourced; there is clear evidence that quality remains a serious concern.[10] But limited data indicate that high-quality care can be provided even in environments with severely constrained resources.[6]

Funding for HIV response has reached unprecedented levels in recent years[11]including Nigeria. The public sector health facilities has been the main recipient of these funds and thus the major provider of HIV/AIDS services.[11] A relatively unexamined aspect is the role of the private sector facilities in HIV/AIDS services. Understanding the current and potential contributions from the private sector is critical[11] as the nature of the HIV/AIDS response evolves from emergency relief to long-term sustainability. A study of five Sub-saharan countries found an absolute increase in HIV resource consumption at both public and private hospitals, but larger increases in private hospitals.[11]According to the latest national health accounts report for Nigeria, private health facilities are the most patronized type of health facilities.[12]In many developing countries, when people seek treatment for an illness they visit a private health provider first.[13]Many clients prefer to visit private health facilities based on factors such as ease of geographic access, shorter waiting periods, longer or more flexible opening hours, greater availability of staff.[14,15] Greater confidentiality in dealing with diseases such as TB and STIs; perceptions that private service providers(PSPs) are more considerate, caring and sensitive to client concerns andare perceived to

betechnically superior,[14,15] have supported the increasing trend of patients seeking such providers.

Although some studies have been carried out to determine access to private health facilities in Nigeria, few have focused on quality of HIV/AIDS services provided by this sector. However, the available evidence reveals that serious technical weaknesses might exist in the services supplied by many for-profit providers.[16] Studies in Vietnam have shown little use of appropriate diagnostic tests, delays in establishing the diagnosis, commencing treatment and poor referral for health services by private service providers.[14] Nigerian Demographic Health Survey 2013 reported that users of contraceptives were slightly less likely to receive information about side effects or problems from a private medical facility (47%) than from a government hospital (79%). 40% of users were given information on what to do if side effects were experienced in private medical facilities, as compared with 76% in government hospitals.[18] Users of private health facilities may find them more responsive, but may fail to recognize their inadequacies.[13]It is usually assumed that the rich use private sector services more than the poor. Although this is generally the case, the poor also account for a significant proportion of private service users.[13] But when the rich use private sector services, they are likely to have access to better services and make better-informed choices than the poor.[13] Thus, concerns about the quality and affordability of ARV provision seems to be one of the factors limiting the role that the private sector currently plays in providing essential health services,[19] including HIV care and treatment.

1.2 Problem Statement

Antiretroviral therapy (ART) has transformed HIV infection into a manageable chronic condition. and the 4th target of the United Nations Member States political declaration on HIV/AIDS at New Yorkin June 2011, was to reach 15 million people globally with ART by 2015.[20] Based on this, the 2013 WHO ARV guidelines recommended initiating ART for patients with a CD_4 count less than or equal to 500 cells/mm^3 and for the following groups irrespective of CD_4 levels:sero-discordant couples, pregnant women living with HIV, people with TB and HIV co-infection, for people with HIV and hepatitis B co-infection and children living with HIV who are younger than five years.[21] This will increase the potential number of people eligible for ART to an estimated 25.9 million (9.2 million more people than were eligible under the previous 2010 WHO treatment guidelines).[21]Despite substantial growth in donor funding for HIV treatment and the rapid scale-up of ART, the majority of countries in sub-Saharan Africa have yet to achieve universal ART coverage.[22]

Nigeria is the most populous country in Africa. Both in terms of volume and severity, there are significant health-related challenges in the country.[23] Among the major contributors to the disease burden of the country are malaria, TB and HIV/AIDS.[23] With a population estimated at 170 million, Nigeria has the second largest population living with HIV/AIDS in the world.[24]President's Emergency Plan for AIDS Relief (PEPFAR) was rolled out in 2009 at federal and state levels and it aims at reducing the burden of HIV/AIDS in the country.[26] Its objective was to test 80 million Nigerians for HIV, provide ART to 90% of the people living with HIV in need, reach 90% coverage for PMTCT, reach 500,000 persons among MARPs and 4 million young people with combination prevention by 2015. Coverage has increased steadily by about three folds from 108,572 in 2006 to 359,181 eligible adults and children in 2010.[27] In addition,

the number of sites providing ART increased from 20 to 446 during the period.[28]But in 2012, the number of adults in Nigeria reported to be on ART was 459465 while the estimated number needing therapy based on WHO 2010 guidelines was 1300000.[29] Thus, only one-third of treatment-eligible individuals have access to ARVs. Also, ART coverage in 2013 has declined to 20%[30] from an estimated coverage 36% in 2012.[29]Thus, an increase in availability of ART or sites providing such services does not automatically translate to increased uptake.[31] Some of the reasons for this might be attributable to other factors such as the cost of seeking treatment, the time and distance needed to travel to access care etc.[31]

In developing countries including Nigeria, standards of quality of care are often set by health managers and care providers.[32]In a study conducted in southeast Nigeria, some HIV patients felt that they are not in any position to influence the type and quality of services received, even if their expectations were not met.[33]It is also extremely difficult to arrive at a consensus as to what constitutes good quality care[32]. And even in regions with existing policies and guidelines for good quality of care, the extent to which they are adhered to is not well known.[32]

Nigeria has a vast array of facilities in the formal health sector; government (public) health service, private health care provider and non-governmental health care providers. The public health sector is in the forefront of HIV care and treatment in the country as they are estimated to have a greater capacity than other sectors; it treats a higher volume of patients and is considered to be more advanced than the private sector. Nonetheless, it has been observed that scaling up access to ART provision had put additional stress on an already overburdened public health sector.[19]Budgetary constraints limit the ability of some public facilities to provide a complete range of HIV-related services, recruit professional staff, conduct adequate HIV/AIDS training programs and provide ARV drugs.[34] Facility staff in the public sector are overextended[34] and

formal linkages between private and the public sector ART programs is either poor or almost non-existent. And it has also been documented that faith based and commercial (private) providers are estimated to provide 80 percent of health services nationally(in Nigeria).[35]NDHS 2008 reports that there is a greater preference for private health facilities to public health facilities and this was not due to difference in technical competence but primarily due to the process of service provision.[37]Regarding HIV/AIDS prevention; the private sector was reported as the main source for male condoms (74%) and oral contraceptives (72%) according to NDHS 2013.[18]65 percent of commercial providers in Nigeria offer HIV testing and counselling[22] and a USAID-supported assessment estimated that the private health facilities in Nigeria provided up to 100,000 (29% of target) patients with ART in the year 2009.[23]Despite the significant contribution from this sector, majority of theprivate health sector facilities do not receive any form of support from the government.[22] Other constraints noticed in private health sector includes inaccessibility to national guidelines on ART treatment and most of these facilities have not identified operational procedures for HIV care and ARV use.[34] They also lack adequate systems for patient tracking, follow-up and monitoring.[34]In spite of these challenges, the role of private health sector is inimical to the role it plays in improving access to ART service delivery in Nigeria.

1.3 Justification

The 2012 NARHS Plus survey indicated that FCT is one of the states with high prevalence of HIV; it ranked 5th with a rate of 7.5%.[36] A USAID study in Nigeria estimated that approximately 20,000 private sector doctors are concentrated in urban areas, as they are in the public sector.[23] The public healthcare sector is already overburdened[19] and task shifting to private health facilities could help increase the coverage of ART services rendered. Data from studies

conducted in Nigeria on private health providers suggests that it has a potential for serving large numbers of patients,[23] including provision of HIV/AIDS treatment services. But without a survey of the patients' view of the ART programme, lapses in ART care can arise and continue if it is not detected early.[39] This could lead to poor adherence to ART and possible dropout from the treatment programme.[17]The public health implications of patient drop-out include treatment failure and emergence of resistant strains of the HIV that could lead to rapid increase in HIV prevalence with its grievous public health consequences.[37]

The practices of private service provider practices have also been under-researched and there are few available studies on private sector quality of care, in spite of its potential to ease the increasing burden on public healthcare resources and consequently strengthen the health sector in developing countries.[19] The private health sector has the capacity to reduce this unmet need for ART and HIV care. To better understand the current and potential role of the private health sector in delivering HIV/AIDS services, it is necessary to assess the quality of ART refill services offered by private health sector facilities in FCT.

Research on patient satisfaction is an important tool that can improve the quality of ART services and support indicators such as processes of HIV/AIDS care measures. This study seeks to provide information on the utilization characteristics and quality of ART care and treatment based on patients' perceptions. The results of this study will provide information on perceived gaps in quality that might exist. This could culminate in an increase in ART uptake and coverage in FCT.

1.4 Research Question

Which infrastructure, equipment, human resources and client characteristics influence the satisfaction of HIV/AIDS clients on ART inprivate health facilities in F.C.T.?

1.5 General and Specific Objectives

1.5.1 General objective

To determine which health system factors influence the satisfaction of HIV/AIDS clients on ART in private health facilities, in F.C.T.

1.5.2 Specific Objectives

1. To describe socio-demographic characteristics and clinic history of clients that use ART services in private health facilities in F.C.T.
2. To determine the clients' satisfaction with ART services provided in these health facilities in F.C.T.
3. To describe the human resources, ART services and equipment and infrastructure of private healthcare facilities providing ART services in F.C.T.
4. To determine the health system factors that influence client satisfaction with ART services in these health facilities.

1.5.3 Scope of the Study

i. This study determined the satisfaction of HIV positive persons with ART refill services in private health facilities located in FCT.

ii. It identified client characteristics associated with the satisfaction of these clients on the care and treatment received at the ART outpatient clinic in private health facilities in FCT.

iii. It identified the health system factors associated with the satisfaction of these clients on the care and treatment received at the ART outpatient clinic in private health facilities in FCT.

CHAPTER TWO - LITERATURE REVIEW

2.1 Quality of Care

2.1.1 Definitions and Concepts of Quality

Quality is complex and multidimensional.[38] It is difficult to arrive at a consensus as to what constitutes good quality care because medical care is not a unitary concept.[39] Many definitions of quality are available and each definition includes norms and value judgments and advocates the criteria to be used in evaluating care.[39]Lee and Jones in 1933 defined quality as, "Good medical care is the kind of medicine practiced and taught by the recognized leaders of the medical profession at a given time or period of social, cultural, and professional development in a community or population group.[40]Standards of quality of care should be based on the degree to which care is available, acceptable, comprehensive, continuous, and documented, as well as on the extent to which adequate therapy is based on an accurate diagnosis and not on symptomatology"[41] was documented by Esselstyn in 1958. Harteloh reviewed multiple conceptualizations of quality and concluded with a very abstract definition: "Quality [is] an optimal balance between possibilities realised and a framework of norms and values."[42]IOM defined quality as "the degree to which health services for individuals and populations increase the likelihood of desired health outcomes and are consistent with current professional knowledge".[3] In the context of healthcare delivery Donabedian (1980) posits, "the quality of technical care consists of the application of medical science and technology in a way that maximizes its benefits to health without correspondingly increasing its risks. The degree of quality is, therefore, the extent to which the care provided is expected to achieve the most favorable balance of risksand benefits".[43]

Darzi defined quality as that "which focuses on clinical effectiveness, safety and patient experience";[44]and Campbell as "whether individuals can access the health structures and process of care, which they need and whether the care received is effective".[45] Steffen states it is "the capacity of the elements of care to achieve legitimate medical and nonmedical goals"[46] while the Australian Commission on Safety and Quality in Health Care described it as "the extent to which a health care service or product produces a desired outcome or outcomes".[47]Melum and Sinioris also stated that, "total quality management is a management process of continuous improvement − a process of continuously striving to exceed customer expectations".[48]

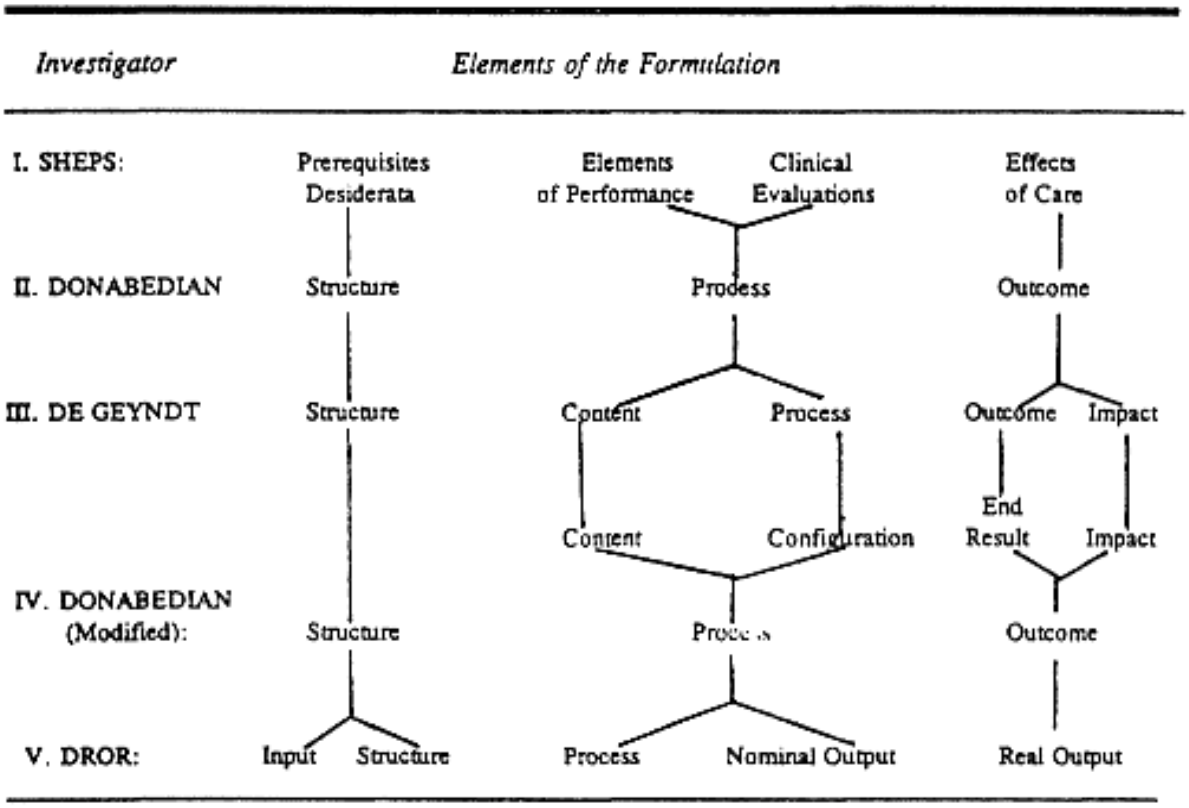
Organizations of all types and sizes have come to realize that their main focus on quality must be to satisfy their customers.[49] The questions to ask are "who are the customers?" and "what does it take to satisfy them?" A customer includes anyone the organization supplies with products or services and they can be satisfied by providing what is needed when it is needed. In ideal situations, it should up to the customer to provide the supplier with requirements for satisfaction.But as medical science and technology have advanced, and patients have become more complex, the health care system has not been able to provide consistently high quality care.[2]

2.1.2 Models and Dimensions of Quality

MindelSheps' work stimulated and influenced efforts at conceptualizing quality of care. She listed prerequisites for good quality care, defined the elements of satisfactory performance and examined the effects of care.[39] She posited thatpre-requisites were the minimum or optimum levels of facilities, equipment, professional training and organization required for quality care.[50]She stated that it is possible to select the prerequisites for adequate care[39] and that improvement of these factors leads to improved care.[42]She defined the elements of satisfactory

performance as“indices” which are “one or a set of measures used to measure indirectly the incidence of a characteristic that is not directly measurable”.[54] Good indices are objective, reliable and valid.[54]The development of appropriate standards of care involves studies to estimate desirable levels for the various indices and the expected variations.[53] These levels should be adaptable and capable of reflecting progress.[53]She also determined that the effects of care on patient health are appraisable by the use of indexes.[53] But these effects can be influenced by other factors such as age, sex, nutrition, stage of the disease and the emotional state of the patient.[53] Objective indices therefore require careful definition and evaluation.[53]

Dror (1968) stated that quality should be split into input, structure, nominal output, process and real output elements.[42,55] De Geydnt distinguished five approaches to assessing the quality of care: content, process, structure, outcome and impact.[55] His postulation was that as concern with the care moves from that which is provided by one practitioner to that provided by aggregates of practitioners, the process of care appears to become readily differentiated into two components: content and configuration.[55]The configuration component is also called process and it includes properties such as continuity, coordination, sequencing and teamhood.[55]The outcome categorybifurcates into end results and impacts which describe the states of individuals and states of populations respectively.[55]



Quality of Care Models[42]

Donabedian proposed a model for understanding the elements of quality in healthcare. He introduced the concept of a triad comprising structure, process and outcome.[56]Structure includes physical infrastructure (e.g., facilities, equipment, supplies) and the structure of organizational capability (e.g., provider qualifications).[57]Process includes all activities that take place between direct and indirect organizational health care providers and patients. These are categorized into technical and interpersonal processes.[57]Technical processes deal with clinical activities focused primarily on individual health and reduction of associated clinical risk.[57]Interpersonal processes focus on the social and psychological interactions between individual health providers and the patient.[57]Outcome refers to the impact of these processes on patients and the organisation.[56]There

are four broad clusters of outcomes that can be identified, measured and categorized: behavioral, experiential, clinical and financial.[57]Donabedian emphasizes the critical role of health care structure as a prerequisite forprocess and outcome[58] and the technical skill of providers.[59] While the Triad provides a basic framework for understanding quality, it overlooks certain areas such as cost and efficiency. In addition, Donabedian's work fails to incorporate the culture of patient safety, which is one of the core component of IOM's definition of quality care[57] and the role of patient satisfaction.

In response to these omissions, the Institute of Medicine established that a health system should seek to make quality care in six areas(dimensions). These dimensions require that health care be effective; delivering health care that is adherent to evidence and results in improved health outcomes for individuals and communities.[10] Health care should be efficient; delivering health care in a manner which maximizes resource use and avoids waste.[10] It should be accessible; delivering health care that is timely, geographically reasonable and should be provided in a setting where skills and resources are appropriate to medical need.[10] It should be acceptable(patient centered); delivering health care which takes into account the preferences and aspirations of individual service users and the cultures of their communities.[10] It should be equitable; delivering health care which does not vary in quality because of personal characteristics such as gender, race, ethnicity, geographical location, or socioeconomic status.[10] Finally, health care should be safe; delivering health care which minimizes risks and harm to service users.[10]

2.1.3 Perspectives on Quality of Care

There are many users of information on the quality of health care, including: the government, health care providers, the public, patients and their families.[41]And the definition, measurement and communication of quality in health and social care should involve multiple stakeholders.[61] However discrepant views between the different stakeholders exist with regards to the definition and prioritization of quality issues.[62] The measurement and communication of health and social care quality therefore requires assessment of key and consensual variables that reflect the breadth and complexity of health care.[61]

Engaging multiple stakeholders to identify these variables is vital to this process. As each audience use information on quality for different purposes, they require different types of information and different presentation formats.[41] The selection and design of indicators must be tailored to the different requirements to produce a positive impact and avoid unintended consequences.[41]The aims of quality measurement should determine what information should be obtained, how it will be obtained and method of reporting the findings following analysis.

2.1.4 Approaches for Measuring Quality in Healthcare

Quality assurance(QA) is the planned and systematic activities implemented in a system, so that quality requirements for a product or service will be fulfilled.[49] It is a pro-active management practice.[59] Approaches in ensuring qualityin healthcare systems include hospital medical staff committees, the tracer methodology, health accounting method and the accreditation of health care organizations.

The Hospital Medical Staff Committeesis carried out by committees for patient care in a hospital setting.[39] It examines the qualifications and credentials of staff physicians and recommends privileges.[39]

Tracer methodology in healthcare was introduced in early 1970s.[60] Tracers are a "specific health problem, when combined in sets, allow health care evaluators to pinpoint the strengths and weaknesses of a particular medical practice setting or an entire health service network, by examining the interaction between providers, patients and their environments".[61] The basic assumption of this method is that, the quality of care provided to an individual with a tracer ailment will be used an indicator of the general quality of care of the system delivering that care.[62]This methodassesses the attributes of case−finding,evaluates the outcome of health care in terms of cost and impact on the patient's health, indicates the appropriateness of screening services provided and whether the care provided meets minimal medical standards.[39,60,62]

The health accounting methodtakes the patient as the unit of analysis and focuses on patient−physician interaction. The health accounting method consists of four basic steps;[39]standards are set by physicians or by external panels of experts, the outcomes of optimum care are specified (predicted outcomes), the actual outcomes are then measured by the health accountant and the actual outcomes are compared with the predicted values.The difference between the results that could optimally be attained with available resources (the predicted outcomes) and the “actual” obtained outcomes is called “achievable benefits not achieved” (ABNA gap).[39] The goal is to reduce the ABNA gap to zero.[39]

For accreditation of health care organizations, a multidisciplinary team of health professionals usually compares the standards in an organization, with what should be obtainable for the region

it is located in.[63]The standards that are used for the comparism,are derived from an amalgamation of national statutes, government guidance, independent reports, the standards of other countries and or biomedical and health services research.[63] A delegated ministerial authority or nongovernmental agency most commonly manages this accreditation.[63]

Various researchers have suggested other domains on which to assess quality; including but not limited to safety, effectiveness, patient centred/experience, value for money, capacity, equity etc. Patient centeredness is one domain that is consistently analysed.[60] Patient satisfaction can be defined as the "positive evaluations of distinct dimensions of healthcare".[65] It is a function of patients' subjective responses to experienced care and is influenced by varying standards, different expectations, the patient's disposition, previous experience etc.[66,67] As healthcare is being increasingly defined as a service, patient satisfaction is becoming more central to evaluating the services being proffered. Data for evaluation is usually derived from surveys.[2]

When evaluating medical care, there are often differences between the opinions of patients and that of healthcare providers on the quality of care provided.[68] Thus, patient feedback is being used increasinglyas a means to understand patients' experiences with how satisfied they are with their careand for evaluating and improving quality performance.[2,43] Patient satisfaction can either be regarded as an outcome measure (satisfaction with health status following treatment) or a process measure (satisfaction with the way in which care was delivered).[67] Although it has been documented that greater patient satisfaction improves clinical outcomes,[69,70]high satisfaction ratings actually indicate that care is adequate not that it is of superior quality.[67] The concept of patient satisfaction remains complicated, multidimensional and not yet well defined.[71]Indicators relating to experiences with therapy can also be subject to problems of interpretation.[67] Despite these issues, patient satisfaction still remains a proxy for the clients' assessment of service

quality.[71] Clients' decisions to use available health services can be greatly affected by the quality of care received and[73] provision of quality services can produce high consumer satisfaction. This can invariably lead to retention in care. Customers feedback improves the knowledge of decision makers, guides strategic resource allocation and it creates a platform for providing better services.[15]

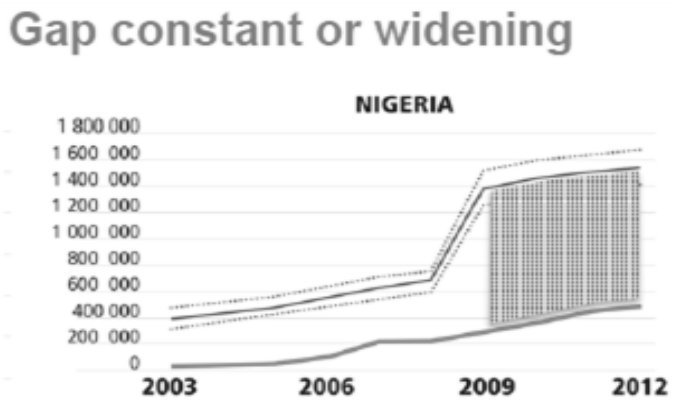
2.2 Patient Satisfaction and the Quality of HIV Treatment in Private Health Facilities

2.2.1 Evolution of HIV Treatment and Care in Nigeria

The first case of AIDS in Nigeria was reported in 1986. In line with guidelines from the World Health Organization (WHO), the Nigerian government adopted ANC sentinel surveillance as the system for assessing the epidemic.[36]Trends in sentinel survey data showed that the HIV prevalence increased from 1.2% in 1991 to 5.8% in 2001.[36] This has since declined to 3.4% according to the 2012 NARHS Plus survey. Despite this, the HIV epidemic in Nigeria are still ongoing and one of the major drivers is inadequate access to and poor quality of healthcare services.[36]

In 2001, the Federal Government of Nigeria initiated the National Antiretroviral Programme, where 10,000 adults and 5,000 children were to be treated in 25 centers across the country.[33]The slots provided under this programme were minimal compared to the estimated 1.5 million needing ARV treatment during the same time frame.[33]One of the targets of the President's Comprehensive Response Plan was to provide ART to 90% of the people living with HIV in need by 2015.[26]The WHO's 2013 HIV treatment guidelines has modified the threshold values for initiation of ART such that if it is applied globally, the total number of PLWHA who are eligible for treatment in low- and middle-income countries will increase from 16.7 million to 25.8 million.[74]Nigeria is one of the 30 high impact countries that account for 86% of all people living

with HIV globally, 88% of all new HIV infections, 93% of new infections among children and 90% of all AIDS-related deaths.[26] In 2013, the antiretroviral coverage for Nigeria was estimated to be 20%.[29] An update on HIV treatment by WHO, UNAIDS and UNICEF in 2013 determined that the gap between PLWHA in need of therapy and those actually receiving treatment is actually increasing in Nigeria.[26] Thus, despite the substantial growth in donor funding for HIV treatment and global scale-up of antiretroviral therapy, Nigeria is yet to achieve universal ART coverage.



ART Initiation Gap in Nigeria[26]

2.2.2 The Role of Private Health Facilities in HIV care in Nigeria

There are three main health providers in Nigeria: government or public health service provider, private health care provider and non-governmental health care providers which are coordinated by the ministry of health.[75] The term "private sector" is defined to include: for-profit organizations, social enterprises, non-profits including NGOs and faith-based organizations and privately motivated individuals and groups of individuals.[76] The private sector works outside the direct control of the government.[13] Private service providers may be formally trained

(pharmacists, doctors, nurses and midwives) or informally trained; they may work on their own or in institutions, and they may provide health care or other products such as drugs.[13]

The Nigerian government has made efforts to provide health care facilities to its population; this includes provision of primary health care (PHC) in many rural areas.[77] But the public sector health care system cannot provide basic, cost-effective services due to but not limited to; inequitable distribution of resources, decaying infrastructure, poor management of human resources, weak referral systems, unavailability or shortages of essential drugs and other health commodities.[75]

The private sector in Nigeria has been offering several priority public health services, including HIV/AIDS services.[78]Many private sector providers pioneered the provision of HIV-related care in developing countries. A study in south-east Nigeria determined that the private health facility was the first choice made by patient when seeking healthcare.[79]National AIDS Spending Assessment (NASA) in Nigeria determined that the private sector accounted for two thirds of the HIV goods and services provided in 2009 and 2010.[80] Despite this, a Response Analysis from National AIDS Control Agency(NACA) determined that response from the private sector to HIV/AIDS is relatively recent and remains largely untapped.[36]There is limited private sector participation in service delivery and clear mechanisms integrating this in the national HIV/AIDS response are lacking.[19,36] NASA also reported that the public sector receives twice as much HIV/AIDS funding as the private sector despite the fact that the latter provides more services.[80] Also, quality monitoring among private service providers remains mostly theoretical.[81]Identifying poor-quality providers is largely dependent on patients, since government agencies that are responsible for ensuring compliance infrequently conduct any monitoring activity.[81]In spite of all these challenges, private sector participation still remains one

of the strategic interventions required to ensuring that at least 80% of eligible adults have access to ART.[82]

2.2.3 The Role of Patient Satisfaction inAntiretroviral therapy

Nigeria is one of the several countries have managed to increase the number of people receiving ART by small margins in the past few years but is struggling to achieve high ART coverage.[74] Based on the current pace of the national ART scale-up, it is not likely to reach 80% coverage by 2015[74] using the 2010 WHO treatment eligibility criteria.[21]It has also been documented that one of the major drivers of the HIV epidemic in the country is inadequate access to healthcare and poor quality of services.[36]

The assessment of the quality of care given to HIV/AIDS patients has been receiving more attention in the past two decades.[83] Different models of indicators for assessing performance of HIV clinical care have been proposed. Some proposed models are based on TB screening, prophylactic therapy and pneumocystis prophylaxis.[84] Others are based on a model which assesses the clinical care based on CD4+ count and or viral load as a marker of the evolution of the patient.[85]The use of total lymphocyte count in monitoring antiretroviral therapy in resource-limited settings have also been suggested.[86]

Patient satisfaction is one of the most recently used methods for assessing quality of care. Several domains have been evaluated, including but not limited to: attitude of healthcare providers,[87,87] availability of staff,[7] waiting time,[88] privacy and confidentiality,[89] perceived technical competence of service provider,[90] clinical communication,[37] incurred cost during each visit,[37] accessibilty,[15] cadre of staff[91] etc.Factors associated with satisfaction vary across measures, patients' characteristics, clinical stages and health care systems. In Vietnam, 52.6%

were satisfied with the competence of health care workers while clients were least satisfied with convenience with booking appointments(44.2%).[92] A study in South Africa demonstrated that all clients with HIV were satisfied with staff-patient communication with regards to antiretroviral therapy while 52% of the respondents stated that some hospital staff do not treat patients with sufficient respect.[88] The findings of staff-patient communication was congruent with findings in India where 93% were also satisfied with communication.[87]

Responses from patients can also be influenced by characteristics unrelated to the quality of care, such as age, gender, region of residence, self-reported health status, type of care and expectations.[67,68] A study in France determined that higher patient satisfaction levels were noticed among older age groups.[92,94] But this is contrary to studies in South Africa and Central Nigeriathat concluded that age did not significantly influence patient satisfaction with HIV treatment.[88]The same study also reported that females were more satisfied with care in ART clinics in health facilities;[88] this was in concordance with findings from a Malaysian study.[95]According to the findings in Ethiopia, PLWHA who were single were more satisfied with care, than those who were married.[96] Lower patient satisfaction scores have alsobeen reported in patients with higher levels of education, this was documented in study conducted in Tanzania.[97]

Healthcare system factors are also co-modulators of patient satisfaction.Geographic and transportation-related barriers have found to impede access to care at all points in the HIV care continuum, as documented in a systematic review of the impact of geographic barriers on HIV outcomes in Sub-saharan Africa.[98]In Ethiopia, those located in urban areas were more satisfied with access to services when compared to those in rural areas.[96]It has been documented that that PLWHA prefer faith-based health facilities because they do not just provide ARVs; they have been reported to offer spiritual/social support to PLWHA.[99]In Enugu, HIV positive clients on

ART were dissatisfied with services because the ART clinic medical records system was integrated with that of non-HIV positive clients.[37]However, a study in Kenya found that patient satisfaction remained high despite integration.[100] In Ethiopia, having a non-physician as the primary HIV care provider had no effect on patient satisfaction when compared to clients who were being managed by physicians.[101] In Uganda and Zambia, the performance of non-physicians providing ART were evaluated to be as good as that of physicians by 97% of theinterviewed respondents.[102]

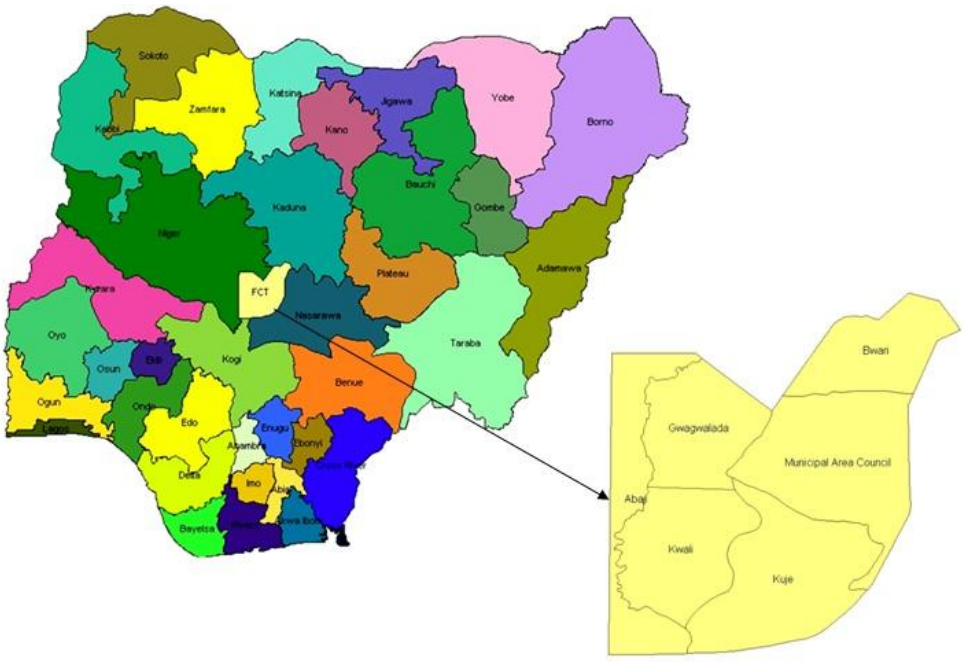
The centrality of the patient in the delivery of ART services cannot be downplayed. Even though the exact mechanisms explaining the linkages between satisfaction and retention in HIV care still remain unclear,[103] it is still imperative that patient satisfaction be continually prioritized as an important goal of treatment. This will aid in consolidating the gains already made by the national HIV/AIDS prevention and control programmes, accelerate the successful scaling up of ART provision services and it has the potential to increase the role of private sector in HIV care and treatment.[15]

CHAPTER THREE - METHODOLOGY

3.1 Description of Study Area

a. General information of FCT

The Federal Capital Territory is located in the centre of Nigeria. It was created in 1976, after a panel set up by the Nigerian government recommended that it was a suitable alternative location to Lagos as the country capital. The seat of Government was formally moved to Abuja in1991. It is bounded on the north by Kaduna State, on the west by Niger State, on the east and south-east by NasarawaState and on the south-west by KogiState. It falls within latitude 7° 25' North and 9° 20° North of the Equator and longitude 5° 45' and 7° 39'.Its area covers 2,824 square miles (8,000 square km) with a population of 1,406,239 (projected from 2006 census) and a population density of 192 people per square kilometre. It accounts for 1.3% of Nigeria's total population. Both Abuja city and the Federal Capital Territory have undergone a huge population growth—with some areas growing at a rate of up to 30% each year.



Map of Nigeria depicting FCT

b. Organization of ART refill services in private health facilities

FCT is made up of six area councils namely; Gwagalada, Kuje, Abaji, Abuja Municipal, Bwari and Kwali. There are 271 hospitals offering HIV/AIDS services in Abuja, 87 of these are private health facilitiesproviding HIV/AIDS testing, treatment and prevention services.Sixty-three are primary health facilities and 65 are ART comprehensive sites. Of these private health facilities, 81 provide counselling and testing services and 78 give PMTCT ARV prophylaxis.There are 64 private health facilities providing ART refill in Abuja: 32 health facilities in AMAC, 14 in Bwari, 2 in Kujeand 14 in Gwagwalada. They are also disaggregated by caseload i.e. clients retained on ART from inception of ART services till June 2014.

3.2 Study Design

A cross sectional study design was used to describe the characteristics of private health facilities and healthcare staff, utilization characteristics of their clients, their perception of quality of care and the factors influencing these perceptions.

3.3 Study Period

The study preparation period was from February 2015 to March 2015, the actual data collection and analysis was carried out from April 2015 to August 2015 (Appendix 6).

3.4 Study Population

The study population were:

a. HIV infected individuals that were accessing care at the sampled private health facility in FCT. The respondents were HIV infected persons of any sex from the age of 18 years and above who refill their ARVs from the outpatient departments of these health facilities.
b. The medical directors that were in charge of the sampled private health facilities providing ART services.

3.4.1 Inclusion criteria

Clients:

a. HIV positive adults 18 years and above that were initiated on ART and were refilling their drugs at the sampled private health facilities on the day of the survey.
b. The clients should had been on ART for at least 6 months; they would be better qualified to assess the quality of care in these institutions.
c. The clients that were being managed in the ART clinics of hospitals with a caseload of greater than or equal to 10 clients since inception.

Health facilities:

a. Medical directors in health facilities with a caseload of more than 10 clients were interviewed.

3.4.2 Exclusion criteria:

Clients:

a. All clients in health facilities that had a total client caseload of less than 10 persons were excluded.
b. HIV positive children, HIV positive pregnant women and HIV positive clients that were accessing in-patient and emergency care were excluded.
c. Other exclusions includedHIV positive clients that were not on ART, clients visiting the health facility for ART for less than 6 months, unconscious, very ill and mentally challenged HIV positiveadult clients.

Health facilities:

a. Medical directors in health facilities with a caseload of less than or equal to 10 clients were excluded.

3.5 Sample Size Determination

Clients:

The minimum sample size for the clients was determined using the formula for descriptive health studies;

$$n = \frac{Z_{\alpha}^{2} pq}{d^{2}}$$ [104]

where

p is the prevalence of ART clients satisfied with accessibility in a private hospital in North Central Nigeria; **70%** [105]

Zα is the standard normal deviate corresponding to significance level of 0.05 (for a 2-tail test of significance), **1.96**

q is the complement of the prevalence value, **30%**

d is the desired level of precision for single proportions, **5.1%**

$n= (1.96)^2 \times 0.7 \times 0.3/(0.051)^2$

The calculated minimum sample size was 310.

The expected non-response rate was 8% as documented in a study conducted in United States[106] on physician specialization and the quality of care for Human Immunodeficiency Virus infection.

$$n(\text{accounting for non-response rate}) = \frac{n}{(1 - NR)}$$

NR is the expected non-response rate,**0.08**

n= 310/(1-0.08)

Thus the estimated sample size was337(accounting for non-response rate).

3.6 Sampling Technique

A multi stage sampling technique was used

Health facilities:

1. There are 64 private health facilities offering ART services in FCT. A third of these health facilities was selected.

   1/3 * 64 = 21.3

   Thus, approximately 20 health facilities were selected for the survey.
2. The health facilities are disaggregated by caseload as shown in the table below.

Private health facilities providing ART refill services in FCT, disaggregated by caseload

Number of private health facilities	HIV clients retained on ART (from inception of ART refill services till June 2014)
22	≤10 clients
39	11-150 clients
3	≥150 clients

All the health facilities with more than 150 clients retained on ART were included in the survey. These health facilities have a higher patient output rate and can yield substantial number of respondents for the survey within the limited time. From the health facilities with 11 to 150 clients retained on ART, 17 health facilities were selected randomly. The medical director or representatives were interviewed in these hospitals. The total number of medical directors interviewed was 20.

Clients:

Clients were interviewed from a third of the previously selected health facilities.

1/3 * 20 = 6.3

Thus, 6 health facilities were visited for client interviews. Three of the health facilities with 11-150 clients retained were selected randomly alongside the 3 health facilities with more than 150 clients retained on ART.

A proportionate to size sampling was used to determine the number of patients that wereselected per site, based on the sample size.

The number of clients interviewed per health facility is given by

(x * y)/z

where

x is the number of clients retained on ART in each health facility

y is the total number of clients retained in these 6 health facilities and is a constant i.e. 3438

z is the sample size; it is also a constant i.e. 313

Number of clients on ART selected per site

Health facility	**Number of clients retained on ART**	**Number of clients interviewed**
Daughters of Charity (DOC) Kubwa	2514	228
Sisters of Nativity (SON) Jikwoyi	553	50
St Mary's Catholic Hospital, Gwagwalada	200	18
Bwari Medical Centre	106	10
Allison Hospital	35	4
Lamina Hospital	30	3
TOTAL	**3438**	**313**

Every consecutive consenting client exiting the consulting room of the outpatient department were interviewed. The total number of clients interviewed was 313.

3.7 Data Collection Technique

Data was collected using a quantitative method. Three instruments were used:

a. The Health Facility Questionnaire and Health Facility Checklist: this was an interviewer administered semi-structured questionnaire (Appendices 1 and 2).
b. The Client Exit Interview questionnaire: this was an interviewer-administered, semi structured questionnaire(Appendix 3).

3.8 Data Collection Management

3.8.1 Data collection and retrieval

The interviewers collected the information from the respondent using the questionnaire and these were submitted to the investigator daily. Questionnaires were checked for errors and omissions and these were corrected immediately.

3.8.2 Measurement of variables

Data collected for this study were the following variables (Appendices 1-4);

Clients

Socio-demographics, HIV/ART medical history, access to HIV care, nonmedical needs, HIV medical visit and medical outcomes were assessed using the Client exit interview questionnaire. Thequestionnaire partly adapted from the Patient Satisfaction Questionnaire(PSQ)-18 [107]questionnaire which consists of 18 items that tap patient satisfaction with technical quality, communication, interpersonal manner, financial aspects, time spent with doctor and accessibility of care.

Health facility

The Health facility questionnaire and checklist were administered to the Medical Director or a designated representative. Utilities, human resources, ART service supplies and equipment, technical support and funding level for ART services, ART health management information system, ART information, ART supportive system, hospital communication, availability of electricity and transportation, water and sewage disposal and the ART clinic environment were assessed. The questionnaire waspartly adapted from the Nigerian Primary Health Care Facilities Assessment questionnaire.

3.8.3 Scoring of variables

Clients

Using the 18-item instrument, patients' satisfaction was assessed on seven dimensions of care as follows: general satisfaction – 2 items, technical quality – 4 items, interpersonal manner - 2 items, communication – 2 items, financial aspects – 2 items, time spent with doctor – 2 items and access/availability/convenience of care – 4 items.[107] Items of a particular domain did not follow a sequential order but were scattered to avoid a biased pattern of responses. Some PSQ-18 items were worded so that agreement reflects satisfaction with medical care, whereas other items were worded so that agreement reflects dissatisfaction with medical care. All items were scored so that high scores reflect satisfaction with medical care. After item scoring, items within the same subscale were averaged together to create the 7 subscale scores. Items left blank by respondents (missing data) were ignored when calculating scale scores. In other words, scale scores represented the average for all items in the scale that were answered.Items in each domain were assessed on a 5-point likert scale of "strongly agree = 5", "agree = 4", "don't know = 3", "disagree = 2" or "strongly disagree = 1"; each study participant responded to these options by

ticking the most appropriate one. For each domain, the scores for each question were summed up and averaged for each participant.

For general satisfaction, interpersonal manner, communication, financial aspects, and time spent with doctor domains, the lowest possible score was 2 points and the highest possible score was 10 points. For the technical quality and access/availability/convenience of care domains, the lowest possible score was 4 points and the highest possible score was 20 points. The mean global satisfaction score for eachdomain were computed. Scores above the mean global satisfaction score for eachreflected satisfaction with ART services and scores below each subscale were reflected dissatisfaction.

3.9 Quality Assurance Procedures

To ensure the data collected and information obtained was of high quality, all data collection personnel were selected carefully. Training of all data collectors and pretesting was done to ensure that all personnel understood the use of the data collection instruments.

Three weeks before the data collection, these questionnaires were pre-tested in a public health facility offering ART services and adjusted as follows:

a. All ambiguous questions were reviewed.
b. Some questions seemed repetitive. These were reviewed and questionnaire was restructured accordingly.

5 research assistants who have participated in health related research previously were recruited and trained over a 3-day period to ensure standards. At the training, the research assistants were introduced to study design, data collection method and obtaining consent. The assistants could speak English, pidgin English, Yoruba and Hausa.Before interviews were conducted in these facilities, advocacy wasconducted to the medical directors in the selected private health facilities.

A letter of introduction and a copy of the ethical clearance were given to each health facility. The health facility questionnaires, checklist and the primary care provider questionnaire were administered within three-week period.Questionnaires for Clients were administered usingthese trained assistants over a 2-month period.

3.10 Statistical Analysis

Manual editing and review of the filled questionnaires for the health facility and primary HIV care provider interviews were done before electronic data entry. For the client exit interviews, data was collected using "ODK Collect" application on Android mobile phones. Data was entered using Microsoft Excel 2007 and Epi-info version 7. Data was checked to exclude incomplete, inconsistent and inaccurate data. Statistical analyses were done using Epi-Info 7 and SPSS software. The following analyses were conducted:

a. Univariate analyses: proportions, frequencies, range
b. Bivariate: Odd's ratios. Significant variables were included at ≤ 0.05 level of significance
c. Multivariate analysis: binary logistic regression was conducted

Data summary was done using tables and charts for key indicators.

3.11 Ethical Consideration

i. Ethical clearance was sought from FCT Health Research Ethics Committee (Appendix5).
ii. Informed written consent was obtained from all respondents before administering questionnaire (Appendices 1-4); with the aid of a consent form. For clients that couldn't speak in English, the form was translated to Hausa or Yoruba orally before they signed.
iii. For the medical directors, any name included was kept confidential and de-linked from data. Data collected was used only for the purpose of research. For the HIV positive clients, names were not collected.

iv. Participants were educated on their rights to decline answering any questions if they chose not to continue.

v. Confidentiality was observed strictly, participation was voluntary and respect for human participants assured.

3.12 Limitations (and efforts made to reduce the effect of the limitations)

a. This study lacks additional information on other ART client factors that might affect the quality of their care, such aspatient motivation,comorbidities etc.

b. There was a possibility of recall bias on some of the questions.

c. Patients may not want to express dissatisfaction as the survey was conducted in the hospital. The interviews were conducted out of the earshot of the healthcare providers; so the clients were able to freely express themselves.

d. There was no standard definition of "good" knowledge. A scoring system of above average (50%) for these variables was adopted.

e. A lot of ART clients were not forthcoming about their income. The reason for collecting the data was explained to them and an increase in responses was seen.

f. There was no sampling frame available in most of the hospitals since they did not line-list their patients because of privacy. Thus consecutive consenting ART clients were interviewed on exit from consultation.

g. Our respondents were HIV positive clients that decide to seek care in a private health facility. Their characteristics and views may be different from those that never sought care in these hospitals. Thus, these findings cannot be generalized to the total population of ART clients in FCT.

CHAPTER FOUR – RESULTS

This chapter represents the findings of the study. A total of 313 HIV positive clients on Antiretroviral Therapy were interviewed.In the private health facilities, 20 medical directors were interviewed.

ART Client Characteristics

This section shows the socio-demographics characteristics, ART clinic history and satisfaction levels of the study population. A total of 313 HIV positive clients on Antiretroviral Therapy were interviewed. The non-response rate was 8.3% and exclusion rate was 13.4%.

4.1 Clients' Socio-demographics

Table 1: Socio-demographic characteristics of ART clients (n=313)

Variable	Frequency	Percent (%)
Age group (years)		
18-24	13	4.2
25-34	140	44.7
35-44	129	41.2
45 or more	31	9.9
Sex		
Female	197	62.9
Male	116	37.1
Marital status		
Married	176	56.2
Single	137	43.8
Employment status		
Employed	265	84.7
Unemployed	48	15.3
Occupation		
Trader	118	37.7
Unemployed	48	15.3
Others (such as labourers, engineers)	45	14.4
Artisan	37	11.8
Civil servant	24	7.7
Driver	16	5.1
Teacher	14	4.5
Farmer	11	3.5

Education		
No education	7	2.2
Quaranic education	10	3.2
Primary	38	12.1
Secondary	170	54.3
Tertiary	88	28.1
Income		
<18000 naira	61	19.5
18000-30000 naira	34	10.9
30000-70000 naira	61	19.5
70000 naira or more	72	23.0
Refused to say	85	27.2
Religion		
Christian	249	79.6
Muslim	64	20.4
Distance from residence to health facility		
Less than one hour	158	50.5
One hour or more	155	49.5
Has access to NHIS	15	4.8

Less than half(44.7%) of the clients on ART were within the age group of 25 to 34 years.The mean age was 35±7 years,with a range of 20 to 61 years. There were more female clients (62.9%) among the ART clients.About 56.2% were marriedwhile 43.8% were single. Two-hundred and sixty-five (84.7%) were employed and 37.7% were traders. With respect to educational qualification, 2.2% had no form of education, 3.2% had Quranic education while 54.3% had up to tertiary level education. Two hundred and fourty nine (79.6%) of the clients

were Christians. The proportion of respondents that earned less than 18000 nairawas19.5% while 23% earned 70000 naira or more.The patients' incomeranged from 1000 to 120000 naira,with mean of 49750±35122 naira. Fifteen (4.8%) of the clients had access to the National Health Insurance Scheme (NHIS).ART clients that lived less than one hour from the private health facility were 158 (50.5%) and the mean travel time to the health facility was 62 ± 42 minutes with a range of 3 minutes to 4 hours.

4.2 Clients' ART Clinic Use History

Table 2: Clinic history of HIV positive clients on ART(n=313)

Variable	Frequency	Percent (%)
Duration in ART clinic		
6-11 months	29	9.3
1-4 years	117	37.4
5+ years	167	53.4
Duration on ART		
6-11 months	18	5.8
1-4 years	130	41.5
5+ years	165	52.7
Receiving cotrimoxazole prophylaxis	83	26.5
Sees the same primary HIV care provider at subsequent ART clinic visits	43	13.7
Missed at least one ART clinic appointment in the past year	21	6.7
Number of CD4 tests conducted in the past year		
None	20	6.4
One	127	40.6
Two or more	166	53.0
Site of CD4 testing		
Within the health facility	301	96.2
Outside the health facility	12	3.8
Received financial support from the health facility	18	5.8

Received nutritional support from the health facility	41	13.1
Received mental support from the health facility	278	88.8
Has been attending PLWHA support group within the health facility	44	14.1

Of the respondents surveyed, 53.4% had been in the ART clinic for 5 years or more and 52.7% have on ART for the same duration. The mean duration in the ART clinic was 73 ± 52 months while the mean duration on ART was 72 ± 53 months.The number of clients that were also on septrin was 83 (26.5%). Regarding their ART clinic visits, 13.7% of the respondents reported that they saw the same healthcare provider during subsequent visits while 21(6.7%) had missed at least one clinic appointment in the past year.Of the 21 that missed their appointment, 33% stated that they were unavailable for no particular reason, 29% travelled out of FCT, 24% stated other reasons such as death of a family member and 14% had transport related problems (no money for transport, road block etc).

One hundred and sixty-six (53%) has had at least 2 CD4 tests in the past yearwhile 96.2% conducted the tests within the health facility. All the clients got their ARVs from the health facility's pharmacy and were all on Highly Active Antiretroviral Therapy (HAART).

Types of support received from the health facility by the clients included financial support (5.8%), nutritional support (13.1%), mental support (88.8%) and being in a support group (14.1%).

Table 3:Clients' reasons for visiting the ART clinic on the day of the survey (n= 313)

Variable	Frequency	Percent (%)
Antiretroviral refill	241	77.0
Laboratory testing	24	7.7
Opportunistic infection management	15	4.8
Other reasons (such as bringing family member for HIV testing)	14	4.5
More than one reason	10	3.2
Adherence counselling	7	2.2
Antiretroviral side effect reporting	2	0.6
TOTAL	**313**	**100**

On the day of the survey, 247 (77%) ART clients were visiting the hospital to refill their antiretroviral medications.

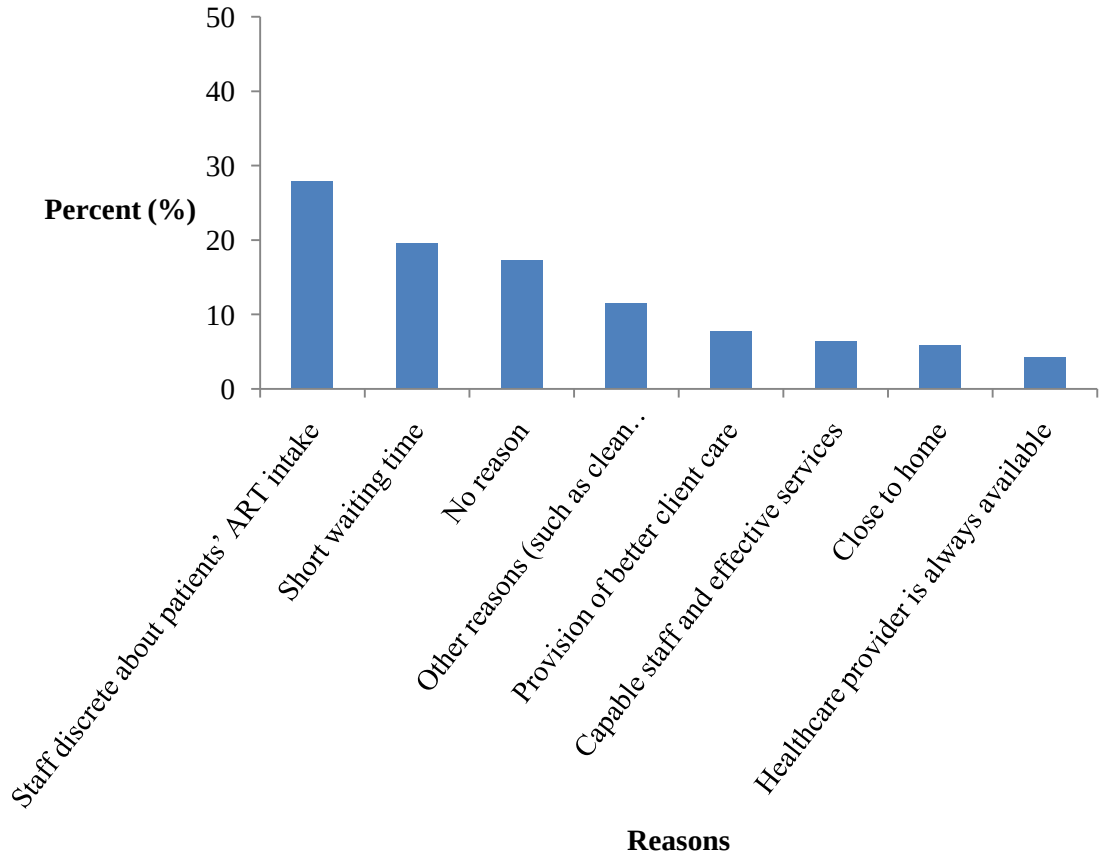


Figure 1: Clients' reasons for choosing a private health facility for HIV treatment (n=313)

About one-third of the respondents (27.8%) chose a private health facility for HIV treatmentbecause; the staff was discrete about their HIV status and antiretroviral intake.

Table 4: Clients' suggestions on areas for improvements in the ART clinic (n=313)

Variable	Frequency	Percent (%)
No changes necessary	297	94.9
Increase availability of services and drugs	4	1.3
Employ more staff	3	1.0
Provide snacks	2	0.6
Staff should be more caring	1	0.3
The clinic space should be expanded	1	0.3
The clinic should get more government support	1	0.3
The ART clinic should include prayers as part of services	1	0.3
The hospital should provide free transport for ART clients	1	0.3
The cost of services should be reduced	1	0.3
Waiting time should be reduced	1	0.3
TOTAL	**313**	**100**

Majority (94.9%) suggested that no changes should be made while 1.3% recommended that drugs, laboratory tests and other ART clinic services be made more readily available.

4.3 Client satisfaction

Table 5: ART clients' satisfaction with HIV care and treatment in each domain(n=313)

Variable	Frequency	Percent (%)
Accessibility and convenience		
Satisfied	96	30.7
Not satisfied	217	69.3
Communication		
Satisfied	244	78.0
Not satisfied	69	22.0
Finance		
Satisfied	120	38.3
Not satisfied	193	61.7
Interpersonal relationship		
Satisfied	270	86.3
Not satisfied	43	13.7
Technical quality		
Satisfied	51	16.3
Not satisfied	262	83.7
Time spent with doctor		
Satisfied	307	98.1
Not satisfied	6	1.9
General satisfaction		
Satisfied	259	82.7
Not satisfied	54	17.3

Concerning the satisfaction domains, 307(98.1%), 270(86.3%), 244(78%) 120(38.3%), 96(30.7%), 51(16.3%) were satisfied with consultation time, interpersonal relationship with Primary HIV Care Provider, communication, financial aspects, accessibility and technical quality of the private health facilities respectively. Two hundred and fifty-nine (82.7%) were satisfied overall with services, with a mean score of 3.9.

Health Facility Characteristics

This section shows the demographic characteristics, distribution of human resources, ART clinic services and equipment, physical infrastructure and external support available to private health facilities offering HIV care and Treatment in FCT.

4.4 Demographic Information

Table 6: Demographic characteristics of the private health facilities offering ART services(n=20)

Variable	Frequency	Percent (%)
Area council		
Abuja municipal	9	45.0
Bwari	8	40.0
Kuje	2	10.0
Gwagwalada	1	5.0
Ward type		
Rural	7	35.0
Urban	13	65.0
Ownership		
Private for profit	16	80.0
Faith based	3	12.5
Non-governmental organization	1	4.2
Level of care		
Primary	15	75.0
Secondary	5	25.0
HIV specialised site	7	35.0
HIV Comprehensive site	6	30.0

Less than half (45%) of the health facilities were located in Abuja Municipal Area Council while 35% were situated in rural wards. Sixteen (80%)of the health facilities were private for profit institutions.The level of care in 15(75%) of the health facilities was primary. The mean duration of commencing ART services was 32 ± 30 months with a range of 2 months to 10 years. Seven

(35%)of the private health facilities were HIV-specialized centers while 6 (30%) were HIV comprehensive sites i.e. offered all HIV services including PMTCT, PEP etc.

4.5 Human Resources

Table 7: Number of staff available: total number versus number dedicated to ART services in private health facilities offering ART services (n=20)

Cadre	Mean number of staff	Median range of all staff in each cadre	Median range of staff in each cadre dedicated to ART services only
Doctor	3 ± 2	0-5	1-2
Nurse	10 ± 13	1-35	1-4
Laboratorian	2 ± 2	1-3	0-2
Adherence counsellor	1 ± 2	Not applicable	0-6

The mean number of medical doctor was 3 ± 2 with a range of 1 to 5. The number of doctors dedicated only to ART services was 1-2. The ratio of specialists to generalist medical doctor heading the ART clinics was 1:1. The mean number of adherence counsellors was 1 ± 2 with a range of 0 to 6.

Nineteen (95%) and 12 (60%) had at least one medical doctor and one adherence counsellor in the health facility respectively while1 (5%)and 8 (40%) of the health facilities had none in each cadre respectively.

Table 8: Staff distribution in private health facilities offering ART services in FCT (n=20)

Variable	Frequency	Percent (%)
Sufficient staff	17	85.0
Specific health worker in charge of ART clinic	19	95.0
Has links with community-based ART health providers	7	35.0

In 17 (85%), the medical directors stated that they had sufficient staff in the ART clinic. A specific health worker in charge of ART services in 19 (95%) health facilities; 58% had a physician while 42% had a non-physician overseeing the clinic. Seven (35%) of the private health facilities wereworking with community-based ART health providers.

The mean number of clients seen per week was 57 ± 120 in number with a range of 1 to 400. The mean duration of hours spent in the ART clinic was 8 ± 14 hours with a range of 36 minutes to 48 hours. In 14 (70%) of the health facilities, the primary healthcare physicians spent more than 10 hours in the ART clinic per week.

4.6 ART clinic services and equipment

Table 9: ART clinic characteristicsin private health facilities (n=20)

Variable	Frequency	Percent (%)
Duration of ART service commencement at the health facility		
Less than 5 years	18	90.0
5 years or more	2	10.0
Has a specific clinic day	3	15.0
Has separate medical records for ART clients	18	90.0
Provides adherence counselling	20	100.0
Provides cotrimoxazoleprophylaxis	17	85.0
Provides ART toxicity detection	17	85.0
Provides ART resistance detection	9	45.0
Traces ART defaulters	10	50.0
Refers clients for other services that are unavailable	15	75.0
Collects clients' opinions about ART services	15	75.0
Analysis of ART clinic data	8	40.0
Provides CD4 monitoring	14	70.0
Antiretroviral drugs collection method		
Collected from the donor store in FCT	9	45.0
Sent to the health facility	11	55.0

Eighteen (90%) of the private health facilities had been prescribing ART for less than 5 years. The mean duration of ART prescription commencement was 32 ± 30 months with a range of 6 to 120 months. Three (15%) had a specific ART clinic day while 18(90%) had a separate medical records system for ART clients. In 18 (90%) of the health facilities, the record system was paper-based and mainly electronic for 10%. In 15 (75%) of the health facilities, clients'opinions on ART services rendered were collected. Out of those that collected such information, 4 (27%), 6 (40%), 2 (13%), 2 (13%) and 1 (7%)did so via telephone, face-to-face discussion, surveys, e-mails and multiple methods respectively. Eight of the health facilities analyzed the ART clinic data; 62.5% did so monthly while 37.5% quarterly.

All of the private health facilities provided ART adherence counselling. Seventeen (85%) provided both cotrimoxazole prophylaxis and ART toxicity detection while 9 (45%) screened for ART resistance. In 10 (50%) of the hospital, ART defaulters were traced and 15(75%) referred clients to other clinics for unavailable ART services.

In 14(70%) of the ART clinics, CD4 monitoring was available. All the health facilities stocked Highly Active Antiretrovirals (HAART) and these drugs were delivered to 11 (55%) of the private health facilities by the donor agencies.

4.7 Infrastructure and Support

4.7.1 Physical infrastructure

Table 10: Physical infrastructure in private health facilities (n=20)

Variable	Frequency	Percent (%)
Has ART services posters displayed	11	55.0
Has a copy of the national ART guidelines	19	95.0
ART clinic consultation room privacy		
Visual and auditory	8	40
Visual only	6	30
No visual or auditory	6	30

In 11 (55%) of the private health facilities, ART services posters were displayed in the clinic while 19 (90%) of the private health facilities had a copy of the national ART guidelines. Visual and auditory privacy was available in 8 (40%) of the ART consultation rooms while 3% of the private had neither form of privacy.

4.7.2 External Support

Table 11: Support available to the private health facilities (n=20)

Variable	Frequency	Percent (%)
Receipt of technical support for ART services in the past 6 months		
Ever received	11	55.0
Never received	9	45.0
Receipt of financial support for ART specific services in the past 6 months		
Ever received	10	50.0
Never received	10	50.0
Receipt of financial support for support group activities in the past 6 months		
Ever received	2	10.0
Never received	18	90.0
Had supervisory visit in the ART clinic in the last 3 months	17	85.0

Eleven (55%) of the private health facilities had ever received technical supportfor ART services in the past 6 months while 10 (50%) and 2 (10%) had ever received financial support for ART clinic and support group activities respectively. All of the financial support was provided by donor agencies. Regarding technical support, 1 (11%) received such from a government agency while 8 (89%) from donor agencies. There were supervisory visits to17 (85%) of the private health facilities in the last 3 months. Three (18%) and 14 (89%) of the visits were from the government and donor agencies respectively. Of the 20 private health facilities, supervisors

trained the health providers in 15 (75%), observed ART sessions in 14 (70%) and collected data forms in 7 (35%).

Factors associated with ART client satisfaction

Bivariate analysis

Table 12: Relationship between ART clients' characteristics and patient satisfaction with ART services in FCT (n=313)

FACTORS	Satisfied (n=259)	Dissatisfied (n=54)	O.R.	95% C.I.	p-value
Location of health facility					
Outside Abuja city	219	32	3.8	2.0-7.1	0.000
Within Abuja city	40	22			
On cotrimoxazole prophylaxis					
Yes	62	21	2.0[d]	1.1-3.8	0.020
No	197	33			
ART intake duration					
5 years or more	146	19	2.4	1.3-4.4	0.005
Less than 5 years	113	35			
Received financial support from health facility					
Yes	10	8	4.3[d]	1.6-11.6	0.005
No	249	46			
In the health facility's support group					
Yes	31	13	2.3[d]	1.1-4.8	0.021
No	228	41			

[d]indicates dissatisfaction with ART services

Clients that were in health facilities located outside Abuja municipal (O.R.= 3.8, p=0.000) and had been on ART for 5 years or more (O.R.= 2.4, p=0.005) were satisfied with the services in private health facilities. Clients that were receiving cotrimoxazole prophylaxis(O.R.= 2.0,

p=0.020), who had received financial support(O.R.= 4.3, p=0.005) from the health facility and were in the support group(O.R.= 2.3, p=0.021) were dissatisfied with ART services.

Table 13: Relationship between private health facility characteristics andpatient satisfaction with ART services in FCT (n=313)

FACTORS	Satisfied (n=259)	Dissatisfied (n=54)	O.R.	95% C.I.	p-value
Number of adherence counsellors					
At least one	221	35	3.2	1.6-6.1	0.000
None	38	19			
Number of hours spent in the clinic per week					
Ten hours or more	214	34	2.8	1.5-5.4	0.003
Less than ten hours	45	20			
Has link with community based ART health workers					
Yes	211	31	3.3	1.8-6.1	0.000
No	48	23			
Provides cotrimoxazole prophylaxis					
Unavailable	45	2	5.5	1.3-23.3	0.010
Available	214	52			
Refers patients to other health facilities for unavailable ART services					
Yes	205	51	4.4[d]	1.3-14.9	0.006
No	54	3			
Duration of ART service commencement					
5 years or more	211	31	3.3	1.8-6.1	0.000
Less than 5 years	48	23			

Supervisors train staff during visit					
Yes	45	2	5.5	1.3-23.3	0.010
No	214	52			
Supervisors collect data during visit					
Yes	214	34	2.8	1.5-5.4	0.003
No	45	20			
Health facility uses suggestion box or surveys to collect clients' opinions on ART services					
Yes	45	2	5.5	1.3-23.3	0.010
No	214	52			

[d]indicates dissatisfaction with ART services

Clients that were in health facilities that had at least one adherence counsellor (O.R.= 3.2, p=0.000), where ten hours or more was spent on ART services per week (O.R.= 2,8, p=0.003), in health facilities that provides cotrimoxazole prophylaxis (O.R.= 5.5, p=0.010) and those that worked with community based ART health workers (O.R.= 3.3, p=0.000) were satisfied with ART services. In health facilities that had commenced ART services 5 years or more ago (O.R.= 3.3, p=0.000), that used the suggestion boxor surveys (O.R.= 5.5, p=0.010) to collect clients' opinions on ART services and those that received training (O.R.= 5.5, p=0.010) or had data collected (O.R.= .2.8, p=0.003) during supervisory visits, clients were also satisfied with services. Clients in health facilities that referred patients to other clinics (O.R.= 4.4, p=0.006) when some ART services are unavailable, were dissatisfied with services.

Multivariate analysis

Table 14: Unconditional logistic regression

Variables	A.O.R.	C.I.	p-value
Clients characteristics			
Does not receive financial support	3.8	1.3-11.1	0.013
Commenced ARVs 5 years ago or more	2.1	1.1-4.3	0.033
Does not takecotrimoxazole prophylaxis	2.0	0.96-4.3	0.064
Age	0.97	0.94-1.0	0.653
Distance from residence < 1 hour	1.3	0.66-2.4	0.475
Private health facility characteristics			
Does not refer clients	7.3	2.1-25.8	0.002

[d] indicates dissatisfaction with ART services

After adjusting for age and distance, not receiving financial support (A.O.R.= 3.8, C.I.=1.3-11.1), commencing antiretroviral therapy 5 years ago or more (A.O.R.= 2.1, C.I.=1.1-4.3) and being in a health facility that did not refer ART clients (A.O.R.= 7.3, C.I.=2.1-25.8) remained significantly associated with patient satisfaction with ART services.

CHAPTER FIVE - DISCUSSION

About two-thirds of the respondents were within the 25 to 34 years' age group. This is similar to findings in Enugu where the highest proportion of patients visiting the HIV clinic were 25-39 years[37], in Ethiopia where those aged 25 to 34 years accounted for 42%[96] and in Edo State.[108] According to the 2012 NARHS survey, those aged 35 to 39 years had the highest HIV prevalence.[36] There were more female patients among the study population. This was also reported in studied conducted in Sokoto[109], Benue[15] and Ethiopia.[110] But in the United States,[103]majority of the respondents were male. One-fourth of the respondents were employed; this proportion has also been documented in India[87] and Tanzania.[7] This is different from the findings in South Africa where the employment rate was very low (12%).[111] The low unemployment rate in our study might be attributable to the fact that the study was conducted in FCT, a cosmopolitan city where more economic opportunities abound when compared with some states in the country.

The literacy level among the respondents was quite high (95%). This is similar to findings in Sokoto[109] and Tanzania.[7]But in Benue, it was reported that 46% were educated.[15] Christianity was the main (79%) religious affiliation of our clients; this proportion was higher than that reported in Ethiopia (59.5%).[112]In an Indian study, 1.17% of the respondents were Christians.[87] The finding that majority of the respondents were Christians, might be due to the fact that the private health facilities with highest patient yield in this study were supported by Catholic organizations.

Half of our respondents lived less than one hour from the health facility. In Nnewi,[37]only 8% of the respondents travelled for less than 30 minutes to the hospital for their HIV care.Our study found that the average travel time of about an hour which is similar with findings reported in an

Uganda study (60 minutes).[113] Even though it has been documented that distance can sometimes be a barrier to accessing care,[113,98] ART clients prefer to travel far distances to seek care. In Nepal[73] and Lagos,[114] patients selected their HIV treatment sites based on the absence of stigma and on account of privacy rather than proximity. This was corroborated by our finding; the major reason for selecting a private health facility was because ART use was kept confidential. Privacy aids flow of information and puts the client at ease.[7] Clients find it difficult to talk about about their illnesses when privacy, especially the auditory kind is lacking.[89] Our study revealed that less than half (40%) of the consultation rooms had both visual and auditory privacy. This proportion is higher than the findings reported from a tertiary hospital (18.6%)[7] in Tanzania but lower when compared with another ART clinic (90.6%)[7] also surveyed in Tanzania. The presence or absence of privacy in ART clinics has been found to significantly impact patient satisfaction levels.[88]

Private sector healthcare provision is expensive and the wealthier, formally employed, better-educated clients who usually seek for quality care and can afford it, prefer to live in urban areas.[13]Majority of the private health facilities in our study were in Abuja city and located within urban wards. This is similar to the findings of a survey conducted in Lagos.[78]However 55% of the health facilities were in rural areas in Zambia.[115] The ART clients in our study were less satisfied in private health facilities located inside Abuja municipal, which is an urban city. Our finding might be attributable that health services are priced higher in urban areas.[78]In contrast, being in health facilities in rural locations wereassociated with lower odds of satisfaction for patients receiving HIV services in Zambian.[115]

Nine-tenths of the private health facilities in our study had a separate records system for ART clients. Even though some researchers have documented that integration of ART service into

routine care could potentially culminate in better quality of care[37,116] as has been documented in South Africa[117] and Kenya,[100] this is yet to be fully accepted and implemented in Nigeria. The national ART guidelines were available in majority (90%) of the private health facilities. But findings from a rapid assessment of HIV services in Nigeria, reported that the national guidelines were rarely available in private hospitals.[33] We also found that almost all the respondents (96%) have had at least one CD4 test in the past year, which is concordant with the finding that 70% of the private health facilities in our study provided CD4 monitoring. This is higher than the findings from Uganda, where 36% of clients on ART had received at least one CD4 test result.[118]

Few (13.1%) ART clients received nutritional support from the health facility in our study. This proportion is higher than the findings in a Ugandan study, where none of the participants received supplemental food provisions.[119] Food security has a significant impact on HIV treatment programs and it has been suggested that food supplementation and sustainable food production strategies be integrated as essential components of such programs.[119]

In this study, clients were most satisfied with consultation time and least satisfied with the technical quality of the private health facilities. Satisfaction with consultation time might be related to the finding that the second commonest reason for choosing a private health facility in this study was due to short waiting time at these clinics. Similar to our findings, 95.9% of ART clients in Tanzania[89] expressed the opinion that they were satisfied with the time spent with the doctor. Nonetheless, clients reported low satisfaction with consultation time in Benue[15] and Thailand.[120] The poor satisfaction with technical qualitycould be attributable to the finding that,majority (75%) of the private health facilities in this study provides primary level of care. High satisfaction scores were reported for competence of health care workers (52.6%) in Vietnam[92] andtechnical quality in Benue.[15] However, in a study conducted in West Africa,

clients on ART were dissatisfied with technical quality.[121] In a South African study,[122] ART clients who were referred from secondary to primary health centers (down-referral) felt disadvantaged, because they believed that ART services would be poorer at the "lower" health facilities.

ART clients in our study were satisfied in health facilities that had at least one adherence counsellor, spent ten hours or more in the ART clinic per week and had commenced ART services 5 years or more ago. The association between adherence counselling and patient satisfaction is similar to the findings in Enugu where ART clients in a secondary health facility were satisfied with the adherence counselling, when compared to other service points.[37]In contrast, ART clients in Sokoto reported dissatisfaction with treatment support.[109] There was an association between being in a clinic with longer duration of ART prescription services, where staff spent longer hours consulting in the ART clinicand patient satisfaction. This might be attributable to the belief that such hospitals may be more experienced in HIV treatment, since they may be interacting with significant numbers of clients regularly. A similar finding was documented in the United states.[123]Nevertheless, studies conducted in Nigeria[124] and Ethiopia[112]documented no associationbetween duration of ART service provision and patient satisfaction. It has however been suggested that pressure to see more patients can affect facility/provider-patient relationship and invariably reduce client satisfaction levels.[125] Also, those who have been in practice for more years might actually possess less factual knowledge and are less likely to adhere to appropriate standards of care.[126] This might lead to poorer patient outcomes[126] such as satisfaction.

Community ART healthcare providers are crucial in providing care to HIV positive clients, especially for chronically ill patients who still require on-going treatment and follow-up after

discharge. Our study found that there was an association between patient satisfaction and being in a health facility that linked up patients with community based ART health workers. This was similar to findings in Ethiopia,[127] Malawi[128] and United States.[129] Determining clients' opinions on ART services in the health facility was also associated with patient satisfaction. This is corroborated by a study in United States.[130] Patient who are engaged in health-making decisions adhere more with clinical treatment[131] and are more likely to be satisfied with care.

This study found that ART clients in health facilities with supervisory visits in the last three months were satisfied. Majority of the health facilities in our study were visited by supervisors, either from government agencies, implementing partners or both. This is consistent with findings in Malawi[132]where supervision was linked to a boost in the confidence of ART clients in their providers. Even though guidelines on supportive supervision for HIV/AIDS services in Nigeria are non-existent,[132] supervision is probably the only way to ensure that standards set on HIV treatment and care are maintained in resource-poor countries.[133]

Social support is a tool that can mitigate the impact of stigma and maximize treatment success. among ART patients.[134]There are two sources of social support: the first relates to family and friends, and the second to community-based support, government agencies, and the health care industry. Social support plays an important role in the eventual treatment outcomes of HIV positive clients on ART.[134] In this study, being in a support group was found to be associated with patient dissatisfaction. This is consistent with findings from a study in Sokoto.[109]However, a study in Nepal found that ART patients in support groups were satisfied with services.[135] The finding of dissatisfaction might be related to other factors present in the health facilities' support groups which are not included in this survey.

The average duration(6 years) on antiretrovirals among ART clients in this study was lower than that documented in Vietnam (3 years)[92] and in Nigeria (15 months).[15] We found that clients that have been on antiretroviral for at least 5 years were satisfied with services. In USA, women who used HAART reported higher satisfaction with care than women who were not reporting HAART use.[136]Physical and psychological adjustment to living with HIV and adherence to treatment usually improves over time[137] and when this is accompanied with an improving quality of life, satisfaction with HIV treatment is likely to increase. However, studies in Nigeria[124] and Vietnam[92] found that there was no association between duration of ART intake and patient satisfaction.

Clients in private health facilities that referred patients to other clinics were dissatisfied with ART services. This is consistent with findings in Pretoria.[122]In contrast, ART clients reported satisfaction with down-referral in Johannesburg.[138]This study also provides evidence that ART clients that were also receiving cotrimoxazole prophylaxis were dissatisfied with care. This might be attributable to a higher pill burden, for clients that are also taking septrin alongside their antiretrovirals.[139,140,141]This is consistent with findings in Europe,[142] where patients with fewer pills tended to be more satisfied.Treatment satisfaction has been found to increase significantly with pill burden reduction.

Cost of care which includes non-medical cost of visiting the HIV clinic, is one of the major obstacles in accessing HIV treatment,[143] especially in private hospitals. In our study, receipt of financial support was associated with patient dissatisfaction with ART services included. Patients that would have received such support are also more likely to be financially constrained. This is consistent with finding of studies in Ethiopia[101,144] and Thailand.[145] But in Bangladesh, no association was found between cost of care and patient dissatisfaction.[146]

CHAPTER SIX-CONCLUSIONS AND RECCOMENDATIONS

6.0 Conclusions

Majority of the clients using private health facilities for HIV care were mainly less than 45 years and employed. Most earned more than the minimum wage. ART clients who earned low incomes utilized the private health facilities as much as higher earning persons. A significant number of the clients had conducted at least one CD4 test in the past year. Most of them had been on ART for at least one year and all used HAART. Most of the clients chose private hospitals fir HIV care because their privacies were assured and the overall waiting time was short.

Most of the ART clients were satisfied with services in the private health facilities. Consultation time with the primary health provider was the most appreciated aspect and the least favoured was technical quality.

A high proportion of the private health facilities that were situated in urban wards and the level of care were mostly primary. Almost all the facilities had at least one medical doctor in the ART clinic. Even though one-thirds had no adherence counselor, all provided adherence counseling. A significant number of the private hospitals referred clients. Less than half of the ART clinics had both visual and auditory privacy and majority had been visited by a supervisor in the last three months. Almost all had a copy of the national guidelines.

Being on antiretroviral therapy for longer duration, being more financially stable and receiving HIV treatment in a private health facility with comprehensive ART services resulted in patient satisfaction.

6.1 Recommendations

Private health facilities

1. Clients should be involved in decision-making with respect to their treatment and routine follow-up, especially those who have recently commenced treatment.
2. Private health facilities should explore several funding options for ART services (such as cost-sharing).
3. Emphasis should be placed on ensuring all necessary ART services and equipment areavailable within the health facility.
4. Health workers should be trained and retrained on the need to follow the national treatment guidelines with regards to monitoring patient's response to antiretroviral treatment, such as the importance of CD4 monitoring.
5. Data collected on patient outcomes in the ART clinic should be analysed regularly. This should be used to planning and improving ART services in the clinics.
6. The health facilities should provide adequate staffing and use task shifting to improve efficiency of services.Emphasis should be placed on employing adherence counsellors.
7. IEC materials that display information on HIV/AIDS care in local dialects should be made available.

FCDA (FCT Departments and Agencies) and HIV treatment donor agencies

1. Links private health facilities and community based organizations should be put in place and strengthened.
2. Technical support should be provided to health facilities and continuous supportive supervision should be consistently provided especially in the areas of ART service delivery training and the importance of collecting and analysing ART patients' clinic outcomes data.

Federal Ministry of Health and the Government

1. The government should increase efforts to reduce stigmatization of PLWHA by increasing the reach of BCC messages on HIV to the communities in FCT.
2. Technical support for ART services should be increased to private health facilities.

REFERENCES

1. Health Resources and Services Administration. Primary Care And HIV/AIDS. *HRSA Care Action*. 2012(March); 1–8.

2. Wisconsin Hospital Association. What is Quality in Health Care. *Myschospital*. (cited 2014 November 26); http://www.myschospital.org/WhatQualityHealthCare.aspx

3. The Institute of Medicine. The Definition of Healthcare Quality. *Performance/Quality Improv*. (cited 2014 November 28); http://www.peerpt.com/website/index.php?option=com_content&view=article&id=10&Itemid=10

4. Leatherman, S, Ferris, TG, Berwick, D, Omaswa, F, Crisp, N. The role of quality improvement in strengthening health systems in developing countries. *Int J Qual Heal Care*. 2010; 1–7.

5. World Health Organization. *Strategic Plan for Strengthening Health Systems in the WHO Western Pacific Region*. Geneva, Switzerland. 2008: p. 1–56.

6. Peabody, JW, Taguiwalo, MM, Robalino, DA, Frenk, J. *Improving the Quality of Care in Developing Countries*. Disease Control Priorities in Developing Countries. Second edition. Washington (DC). World Bank. 2006: p. 1–22.

7. Kagashe, G, Rwebangila, F. Patient satisfaction with health care services provided at HIV clinics at Amana and Muhimbili hospitals in Dar es Salaam. *Afr Health Sci*. 2011:11(1); S60–6.

8. World Health Organization. *Client Satisfaction Evaluations*. World Health Organization. 2000: p. 1–110.

9. Cleary, PD, O'Kane, ME. Evaluating the Quality of Health Care. *e-Source*. (cited 2014 November 26); http://www.esourceresearch.org

10. World Health Organization. *Quality of care: A process for making strategic choices in health systems*. France. WHO press. 2006: p. 1–38.

11. Sulzbach, S, De, S, Wang, W. The private sector role in HIV/AIDS in the context of an expanded global response : expenditure trends in five sub-Saharan African countries. *Health Policy Plan*. 2011:26; 72–84.

12. Soyibo, A, Olaniyan, O, Lawanson, OA. *National Health Accounts Of Nigeria, 2003-2005: Incorporating Sub-National Health Accounts of State*. 2009: p. 1–194.

13. Smith, E, Brugha, R, Zwi, A. *Working with Private Sector Providers for Better Health Care: An Introductory Guide*. 2001: p. 1–72.

14. Lönnroth, K. Public health in private hands: studies on private and public tuberculosis care in Ho Chi Minh City, Vietnam. 2000

15. Osung, KO, Shaahu, N, Owoaje, EE, Adedokun, BO. Patients ' Satisfaction with Quality of Anti-Retroviral Services in Central Nigeria : Implications for Strengthening Private Health Services. *J Prev Med*. 2013:1(3); 11–8.

16. Swan, M, Zwi, A. *Private practitioners and public health: close the gap or increase the distance*. London School of Hygiene & Tropical Medicine. 1997: p. 1–56.

17. Aljunid, S. The role of private medical practitioners and their interactions with public services in Asian countries. *Health Policy Plan*. 1995:10(4); 333–49.

18. Nigeria National Population Commission, ICF International. *Nigeria Demographic and Health Survey 2013*. Abuja, Nigeria and Rockville, Maryland. 2013: p. 1–538.

19. Sargent, J, Johnson, J, Majorowski, M, Friedman, N, Blazer, C. *Private Sector Involvement in HIV Service Provision*. Arlington, VA. USAID|AIDSTAR-One Project, Task Order. 2009: p. 1–17.

20. United Nations Programme on HIV/AIDS (UNAIDS). *Global AIDS Response Progress Reporting 2014*. 2014: p. 1–79. http://www.unaids.org/sites/default/files/media_asset/GARPR_2014_guidelines_en_0.pdf

21. World Health Organization. *Consolidated Guidelines on the use of Antiretroviral drugs for treating and preventing HIV infection: Recommendations for a public health approach June 2013*. 2013: p. 1–269.

22. Kathryn, B, Resch, S, Ugaz, J, Jackson, J, Chatterji, M, Talib, A. *Estimating the Untapped Capacity of the Private Sector to Deliver Antiretroviral Therapy in Lagos State, Nigeria*. 2014: p. 1–36.

23. Federal Ministry of Health Nigeria, USAID. *The private health sector in Nigeria- an assessment of its workforce and service provision*. 2009: p. 1–64.

24. World Bank. Nigeria Maps AIDS Epidemic: the Future of HIV Fight. HIV/AIDS (cited 2015 October 8); http://www.worldbank.org/en/news/feature/2012/07/20/nigeria-maps-aids-epidemic-future-of-hiv-fight

25. National Agency for Control of AIDS. *President's Comprehensive Response Plan for HIV/AIDS in Nigeria*. 2013: p. 54. http://www.zero-hiv.org/wp-content/uploads/2013/09/PCRP-2013-2015-real-2-Aug-2013.pdf

26. UNAIDS Programme Coordinating Board. *Snapshots 30+ High Impact Countries*. 2014: p. 1–88. http://www.unaids.org/sites/default/files/documents/20140627_UNAIDS_Snapshots_EN.pdf

27. National AIDS Control Agency, Federal Ministry of Health Nigeria. *Update on the HIV/AIDS Epidemic and Response in Nigeria*. 2011: p.

28. United Nations Programme on HIV/AIDS (UNAIDS). *UNAIDS Report on the Global AIDS Epidemic 2013*. 2013: p. 1–198.

29. The Henry J. Kaiser Family Foundation. Antiretroviral Therapy Coverage Rate. Glob. Heal. facts_HIV/AIDS (cited 2015 February 16); http://kff.org/global-indicator/arv-coverage-rate/#

30. Fox, MP, Mazimba, A, Seidenberg, P, Crooks, D, Sikateyo, B, Rosen, S. Barriers to initiation of antiretroviral treatment in rural and urban areas of Zambia : a cross-sectional study of cost , stigma and perceptions about ART. *J Int AIDS Soc*. 2010:13(8); 1–11.

31. Emelumadu, OF, Onyeonoro, UU, Ukegbu, AU, Ezeama, NN. Perception of quality of maternal healthcare services among women utilising antenatal services in selected primary health facilities in Anambra State , Southeast Nigeria. *Niger Med J*. 2014:55(2); 148–55.

32. Uguru, NP, Onwujekwe, OE, Tasie, NG, Uzochukwu, BS, Ezeoke, UE. Do consumers ' preferences for improved provision of malaria treatment services differ by their socio-economic status and geographic location: A study in southeast Nigeria. *BMC Public Health*. 2010:7(10).

33. Abt Associates Inc, John Snow Inc, Futures Group. *Nigeria : Rapid Assessment of HIV/AIDS Care in the Public and Private Sectors*. Bethesda, MD. 2004: p. 1–45.

34. Kombe, G, Fleisher, L, Kariisa, E, Arur, A, Sanjana, P, Paina, L, Dare, L, Abubakar, A, et al. *Nigeria Health System Assessment 2008*. 2009: p. 1–135.

35. Hutchinson, P, Do, M, Agha, S. Measuring client satisfaction and the quality of family planning services: A comparative analysis of public and private health facilities in Tanzania, Kenya and Ghana. *BMC Health Serv Res*. 2011:11.

36. National Agency for Control of AIDS. *Nigeria Global AIDS Response Progress Report 2014*. 2014: p. 1–46. http://www.unaids.org/sites/default/files/country/documents/NGA_narrative_report_2014.pdf

37. Nwabueze, S. A, Adogu, P. O. U. Comparative analysis of patients' satisfaction levels in HIV/AIDS care in secondary and tertiary health care facilities in Nigeria. *Niger Med J*. 2013; 1–20.http://nigerianjournalofmedicine.com/files/journals/1/articles/21/submission/review/21-71-1-RV.doc

38. Raleigh, VS, Foot, C. *Getting the measure of quality: Opportunities and challenges*. UK. The King's Fund. 2010: p. 1–27.

39. Geyndt, W De. *Managing the Quality of Health Care in Developing Countries*. Washington, D.C. The World Bank. 1995: p. 1–85.

40. Lee, RI, Jones, LW, Jones, B. *The Fundamentals of Good Medical Care*. Chicago, Illinois. University of Chicago Press. 1933: p. 1–302.

41. Esselstyn, CB. *Principles of Physician Remuneration*. Papers and Proceedings of the National Conference on Labor Health Services. Washington, D.C. American Labor Association. 1958: p.

42. Harteloh, P. The meaning of quality in health care: a conceptual analysis. *Heal Care Anal*. 2003:11(3); 259–67.

43. Donabedian, A. The Quality of Care: how can it be assessed? *JAMA*. 1988:260(121); 1743–8.

44. Wilcock, P. Improving quality in general practice: what does it really require? *Qual Prim Care*. 2010(18); 297–9.

45. Campbell, S, Roland, M, Buetow, S. Defining quality of care. *Soc Sci Med*. 2000(51); 1611–25.

46. Steffen, G. Quality medical care: a definition. *JAMA*. 1988(260); 56–61.

47. Runciman, B, Merry, A, Walton, M. *Safety and Ethics in Healthcare: a guide to getting it right*. Aldershot, England. 2007: p. http://www.aihw.gov.au/sqhc-definitions/

48. Melum, MM, Sinioris, MK. *Total Quality Management: the Health Care Pioneers*. Chicago, Illinois. AHA Publishing. 1992: p. 2.

49. Walker, FH, Benbow, DW, Elshennawy, AK, Walker, FH. *Quality concepts and Tools*. The Certified Quality Technician Handbook. Second edition. 2003: p. 1–2.

50. Sheps, MC. *Approaches to the Quality of Hospital Care*. 1955: p. 877–86.

51. Hagood, MJ, Price, DO. *Statistics for sociologists*. . Revised edition. New York. Henry Holt and Co. 1932: p. 138–43.

52. Donabedian, A. *Concepts of Health Care*. Washington, D.C. 1974: p. 1–16.

53. Runciman, WB, Baker, GR, Michel, P, Dovey, S, Lilford, RJ, Jensen, N, Flin, R, Weeks, WB, et al. Tracing the foundations of a conceptual framework for a patient safety ontology. *Qual Saf Health Care*. 2010:19(6); 1–7.

54. Grossbart, SR, Agrawal, J. *Conceptualization and Definitions of Quality*. Health Care Quality: The Clinician's primer. 2001: p. 9–24.

55. Kunkel, S, Rosenqvist, U, Westerling, R. The structure of quality systems is important to the process and outcome, an empirical study of 386 hospital departments in Sweden. *BMC Heal Serv Res*. 2007:7(104); 1–8.

56. Postema, T. Quality Assessment: Process or Outcome?; the use of performance indicators for quality assessment in Dutch health care. Qual. Dig. (cited 2015 August 8); www.qualitydigest.com/inside/fda-compliance-article/quality-assessment-process-or-outcome#

57. Royal College of Nursing. *Measuring for quality in health and social care: an RCN position statement*. 2009: p. 1–10. https://www.rcn.org.uk/__data/assets/pdf_file/0004/248872/003535.pdf

58. Leatherman, S, Sutherland, K. The Quest for Quality in the NHS: a mid-term evaluation of the ten-year quality agenda. *Nuff Trust*. 2003; 1–293.

59. Khalifa, A. Healthcare Quality Assurance. South Egypt Cancer Inst. (cited 2015 June 19); www.aun.edu.eg/SECI/Quality Assurance amal.pdf

60. Chew, N, Teo, M. *Adapting a Tracer Methodology to Conduct Education Internal Reviews*. National Healthcare Group Residency. Singapore. 2015: p. 1–26.

61. Kessner, DM, Dui, D, Kalt, CE. *A Strategy for Evaluating Health Services*. Washington, D.C. Panel of Health Services Research Institute of Medicine National Academy of Science. 1973: p. 1–219.

62. Dalton, RP. *Utilization of the Tracer Methodology to Assess the Care Provided by an Outpatient Clinic at Walson Army Community Hospital, Fort Dix, New Jersey*. 1985: p. 1–64.

63. World Health Organization. *Standards for quality HIV care: a tool for quality assessment,improvement and accreditation*. Geneva. 2004: p. 1–36.

64. Gardner, K, Mazza, D. Quality in general practice: Definitions and frameworks. *Aust Fam Physician*. 2012:41(3); 151–4.

65. Linder-Pelz, S. Toward a theory of patient satisfaction. *Soc Sci Med*. 1982:16(5); 577–82.

66. Ware, JEJ, Snyder, MK. Dimensions of patient attitudes regarding doctors and medical care services. *Med Care*. 1975:13(8); 669–82.

67. Devkaran, S. *Patient experience is not patient satisfaction: understanding the fundamental differences*. 2014: p. 1–48. http://www.isqua.org/docs/default-source/education-/isqua-webinar_november-2014_subashnie-devkaran.pdf?sfvrsn=0

68. Lebow, J. Consumer assessments of the quality of medical care. *Med Care*. 1974:12(4); 328–37.

69. Alazri, M, Neal, R. The association between satisfaction with services provided in primary care and outcomes in Type 2 diabetes mellitus. *Diabet Med*. 2003:20(6); 486–90.

70. Hirsh, A, Atchison, J, Berger, J, Waxenberg, LB LafayetteLucey, A Bulcourf, B, Al, E. Patient satisfaction with treatment for chronic pain: predictors and relationship to compliance. *Clin J Pain*. 2005:21(4); 302–10.

71. Gill, L, White, L. A critical review of patient satisfaction. *Leadersh Heal Serv*. 2009:22(February); 8–19.

72. Bleich, S, Ozaltin, E, Murray, C. *How does satisfaction with the health care system relate to patient experience?*. Bulletin of the World Health Organization, vol 87. 2009: p. 271–8.

73. Wasti, SP, Simkhada, P, Randall, J, Freeman, J V, van Teijlingen, E. Factors Influencing Adherence to Antiretroviral Treatment in Nepal. *PLoS One*. 2012:7(5); 11.

74. World Health Organization, United Nations Programme on HIV/AIDS (UNAIDS), United Nations Children's Fund. *Global Update on HIV Treatment 2013 : Results , Impact and Opportunities*. 2013: p. 30. http://www.who.int/hiv/data/global_treatment_report_presentation_2013.pdf

75. Awoyemi, TT, Obayelu, OA, Opaluwa, HI. Effect of Distance on Utilization of Health Care Services in Rural Kogi State , Nigeria. *J Hum Ecol*. 2011:35(1); 1–9.

76. International Finance Corporation. *The Business of Health in Africa: Partnering with the Private Sector to Improve People's Lives*. Washington, DC. 2007: p. 154. http://www.unido.org/fileadmin/user_media/Services/PSD/BEP/IFC_HealthinAfrica_Final.pdf

77. Ibor, UW, Atomode, TI. Health Service Characteristics and Utilization in Calabar Metropolis, Cross River State, Nigeria. *Acad J Interdiscip Stud*. 2014:3(1); 265–70.

78. SHOPS Project. *Nigeria Private Health Sector Assessment: a Brief*. 2012: p. 1–12.

79. Uzochukwu, BSC Onwujekwe, O. Socio-economic differences and health seeking behaviour for the diagnosis and treatment of malaria: A case study of four Local Government Areas operating the Bamako Initiative Program in south-east Nigeria. *Int J Equity Health*. 2004:3(6).

80. National Agency for Control of AIDS. *National AIDS Spending Assessment (NASA) for the period: 2009-2010*. 2010: p. 88.

81. Barnes, J, Chandani, T, Feeley, R. *Nigeria Private Sector Health Assessment*. 2008: p. 40.

82. National Agency for Control of AIDS. *National HIV/AIDS Strategic Plan*. 2010: p. 116.

83. Catumbela, E, Certal, V, Freitas, A, Costa, C, Sarmento, A, Pereira, C. Definition of a core set of quality indicators for the assessment of HIV/AIDS clinical care : a systematic review. *BMC Health Serv Res*. 2013:13(236); 11.

84. Agins, B, Young, M, Keyes, C, Ellis, W. Selection and Transformation of Clinical Practice Guidelines into Review Algorithms for Evaluating the Quality of HIV Care in New York State. *Clin Perform Qual Heal Care*. 1994:4(2); 209–13.

85. Mellors, J, Munoz, A, Giorgi, J, Margolick, J, Tassoni, C, Gupta, P, Kingsley, L, Todd, J, et al. Plasma viral load and CD4+ lymphocytes as prognostic markers of HIV-1 infection. *Ann Intern Med*. 1997:126(12); 946–54.

86. Badri, M, Wood, R. Usefulness of total lymphocyte count in monitoring highly active antiretroviral therapy in resource-limited settings. *AIDS*. 2003:4(17); 541–5.

87. Kishor, BV, Pal, DK, Lodha, RS, Bankwar, V. Clients' Satisfaction with Antiretroviral Therapy Services at Hamidia Hospital Bhopal. *Natl J Community Med*. 2011:2(2); 2009–11.

88. Chimbindi, N, Bärnighausen, T, Newell, M-L. Patient satisfaction with HIV and TB treatment in a public programme in rural KwaZulu-Natal: evidence from patient-exit interviews. *BMC Health Serv Res*. 2014:14(1); 1–32.

89. Muhondwa, EPY, Leshabari, MT, Mwangu, M, Mbembati, N, Ezekiel, MJ. Patient Satisfaction at the Muhimbili National Hospital in Dar Es Salaam, Tanzania. *East Afr J Public Health*. 2008:5(2); 67–73.

90. Landon, BE, Wilson, IB, Mcinnes, K, Landrum, MB, Hirschhorn, LR, Marsden, P V, Cleary, PD. Physician Specialization and the Quality of Care for Human Immunodeficiency Virus Infection. *Arch Intern Med*. 2005:165; 1133–9.

91. Sherra, KH, Miceka, MA, Gimbela, SO, Gloyda, SS, Hughes, JP, John-Stewartc, GC, Manjatef, RM, Pfeiffera, J, et al. Quality of HIV care provided by non-physician clinicians and physicians in Mozambique: a retrospective cohort study. *AIDS*. 2012:24(Suppl 1); 1–15.

92. Tran, BX, Phuong, N, Nguyen, T. Patient Satisfaction with HIV/AIDS Care and Treatment in the Decentralization of Services Delivery in Vietnam. *PLoS One*. 2012:7(10); 1–7.

93. Healthcare Commission. *Variations in the Experiences of Patients using the NHS Services in England: Analysis of the Healthcare Commission's 2004/2005 surveys of patients*. London. 2006: p. www.cqc.org.uk/publications.cfm?widCall1=customDocManager.search_do_2&tcl_id=2&top_parent=4513&tax_child=4759&tax_grand_child=4845&search_string=

94. Preau, M, Protopopescu, C, Raffi, F, Rey, D, Chene, G, et al. Satisfaction with care in HIV-infected patients treated with long-term follow-up antiretroviral therapy: the role of social vulnerability. *AIDS Care*. 2011:24(4); 434–43.

95. Ganasegeran, K, Perianayagam, W, Manaf, RA, Ahmed, S, Jadoo, A, Al-dubai, SAR. Patient Satisfaction in Malaysia's Busiest Outpatient Medical Care. *Sci J*. 2015:2015; 1–6.

96. Tessema, SB, Adane, MM. Assessment of antiretroviral treatment (ART) care service provision in Tigray Region health centers, North Ethiopia. *BMC Health Serv Res*. 2015:15(368); 2–7.

97. Mfinanga, S, Kahwa, A, Kimaro, G, Kilale, A, Kivuyo, S, M, S, Al, E. Dissatisfaction with laboratory service in conducting HIV related testing among public and private medical personnel in Tanzania. *BMC Heal Res Bull*. 2007(9); 110–4.

98. Lankowski, AJ, Siedner, MJ, Bangsberg, DR, Tsai, AC. Impact of Geographic and Transportation Related Barriers on HIV outcomes in Sub-Saharan Africa: A systematic Review. *AIDS Behav*. 2014:18(7); 1199–223.

99. Woldehanna, S, Ringheim, K, Murphy, C. *Faith in Action: Examining the Role of Faith-Based Organizations in addressing HIV/AIDS*. 2004: p. 1–12.

100. Odeny, TA, Penner, J, Lewis-kulzer, J, Leslie, HH, Shade, SB, Adero, W, Kioko, J, Cohen, CR, et al. Integration of HIV Care with Primary Health Care Services : Effect on Patient Satisfaction and Stigma in Rural Kenya. *AIDS Res Treat*. 2013:2013; 1–10.

101. Asfaw, E, Dominis, S, Palen, JGH, Wong, W, Bekele, A, Kebede, A, Johns, B. Patient satisfaction with task shifting of antiretroviral services in Ethiopia: implications for universal health coverage. *Health Policy Plan*. 2014:29(Suppl 2); ii50–8.

102. Hiner, C, Mwale, G, Parsons, M, Adair, M, Reis, P, Hughes, R. *Evaluation of a task-shifting program implemented to increase access to ART in Uganda and Zambia*. XVII International AIDS Conference. 2008: p.

103. Dang, BN, Westbrook, R a, Black, WC, Rodriguez-Barradas, MC, Giordano, TP. Examining the link between patient satisfaction and adherence to HIV care: a structural equation model. *PLoS One*. 2013:8(1); 1–13.

104. Kothari, CR. *Research Methodology: Methods and Techniques*. . Second edition. New Age International Publishers. 1990: p. 1–398.

105. Souville, M, Msellati, P, Carrieri, M. Physicians ' knowledge and attitudes toward HIV care in the context of the UNAIDS / Ministry of Health Drug Access Initiative in Côte d ' Ivoire. *AIDS*. 2003:33(0); 79–86.

106. Landon, BE, Wilson, IB, Cohn, SE, Fichtenbaum, CJ, Wong, MD, Wenger, NS, Bozzette, SA, Shapiro, MF, et al. Physician Specialization and Antiretroviral Therapy for HIV. *J Gen Intern Med*. 1996:18; 233–41.

107. Marshall, GN, Hays, RD. *The Patient Satisfaction Questionnaire Short-Form (PSQ-18)*. Santa Monica. RAND (Research and Development) Corporation. 1994: p. 1–39.

108. Oparah, AC, Soni, JS, Arinze, HI, Chiazor, IE. Patient-reported quality of life during antiretroviral therapy in a Nigerian hospital. *Value Heal Reg Issues*. 2013:2(2); 254–8.

109. Oche, MO, Raji, MO, Kaoje, AU, Gana, G, Ango, JT, Okafoagu, N, Adamu, H, Oladigbolu, RA, et al. Clients ' satisfaction with antiretroviral therapy services in a tertiary hospital in Sokoto, Nigeria. *J AIDS HIV Res*. 2013:5(9); 328–33.

110. Getenet, H, Haileamlak, A, Tegegn, A. Clients' Satisfaction with Antiretroviral Therapy Services at Jimma Specialized Hospital. *Ethiop J Heal Sci*. 2006:18(2); 8.

111. Wouters, E, Heunis, C, van Rensburg, D, Meulemans, H. Patient satisfaction with antiretroviral services at primary health-care facilities in the Free State, South Africa--a two-year study using four waves of cross-sectional data. *BMC Health Serv Res*. 2008:8; 210.

112. Yakob, B, Ncama, BP. Perceived quality of HIV treatment and care services in Wolaita Zone of southern Ethiopia : a cross-sectional study. *BMJ*. 2015:5; 1–8.

113. Siednera, MJ, Lankowskia, A, Tsaia, AC, Muzoorac, C, Martind, JN, Huntd, PW, Haberera, JE, Bangsberga, DR. GPS-measured distance to clinic, but not self-reported transportation factors, are associated with missed HIV clinic visits in rural Uganda. *AIDS*. 2013:27(9); 1503–8.

114. Adeneye, AK, Adewole, TA, Musa, AZ, Onwujekwe, D, Odunukwe, NN, Araoyinbo, ID, Gbajabiamila, TA, Idigbe, PME and EO. Limitations to Access and Use of Antiretroviral Therapy (ART) Among HIV Positive Persons in Lagos, Nigeria. *World Health Popul*. 2006:8(2).

115. Dansereau, E, Masiye, F, Gakidou, E, Masters, SH, Burstein, R, Kumar, S. Patient satisfaction and perceived quality of care: evidence from a cross-sectional national exit survey of HIV and non-HIV service users in Zambia. *BMJ Open*. 2015:5(12); 1–11.

116. Oleribe, OO, Oladipo, O, Osita-Oleribe, P, Nwachukwu, E, Nkwopara, F, Ekom, E, Nwabuzor, S, Iyalla, G, et al. Commonization of HIV/AIDS services in Nigeria: the need, the processes and the prospects. *Pan Afr Med J*. 2014:19; 1–8.

117. Mathibe, MD, Hendricks, SJH, Bergh, A-M. Clinician perceptions and patient experiences of antiretroviral treatment integration in primary health care clinics, Tshwane, South Africa. *Curationis*. 2015:38(1); 1–11.

118. Burua, A, Nuwaha, F, Waiswa, P. Adherence to standards of quality HIV/AIDS care and antiretroviral therapy in the West Nile Region of Uganda. *BMC Health Serv Res*. 2014:14(521); 1–7.

119. Weiser, SD, Tuller, DM, Frongillo, E a, Senkungu, J, Mukiibi, N, Bangsberg, DR. Food insecurity as a barrier to sustained antiretroviral therapy adherence in Uganda. *PLoS One*. 2010:5(4); e10340.

120. Kitajima, T, Moolphate, S, Aung, MN, Okamura, H, Katanyoo, C, Takamtha, P, Noyama, O. *Outcome, satisfaction and cost of task-shifting of antiretroviral therapy to health centers in Thailand: from patients' perspective*. Dealing with HIV. 2013: p. 1–3. http://www.nber.org/papers/w19280

121. Morin, D, Godina, G, Alary, M, Sawadogo, MR, Bernier, M, Khonde, N, Kintin, F, Koné, A, et al. Satisfaction with health services for STIs, HIV, AIDS among a high-risk population in West Africa. *AIDS Care*. 2008:20(3); 37–41.

122. Mukora, R, Charalambous, S, Dahab, M, Hamilton, R, Karstaedt, A. A study of patient attitudes towards decentralisation of HIV care in an urban clinic in South Africa. *BMC Health Serv Res*. 2011:11(205); 1–8.

123. Sullivan, LM, Stein, MD, Savetsky, JB, Samet, JH. The doctor-patient relationship and HIV-infected patients' satisfaction with primary care physicians. *J Gen Intern Med*. 2000:15(7); 462–9.

124. Onukwugha, E, Jayasekera, J, Ugoji, C, Dakum, P. *An Assessment of the role of patient satisfaction in early retention in HIV care among patients receiving antiretroviral therapy in outpatient treatment settings in Nigeria (Unpublished)*. Baltimore. 2010: p. 1–2.

125. Rodriguez, H, Wilson, IB, Landon, BE, Marsden, P V, Cleary, PD. Voluntary Physician Switching by Human A National Study of Patient , Physician , and Organizational Factors. *Med Care*. 2007:45(3); 189–98.

126. Choudhry, NK, Fletcher, RH, Soumerai, SB. The Relationship between Clinical Experience and Quality of Health Care. *Ann Intern Med*. 2005:142; 260–73.

127. Tibebu, B, G/Mariam, A, Belachew, T. Knowledge, attitude and practice of home-based care for HIV/AIDS patients by their family/caregivers at Jimma Town. *Ethiop Med J*. 2007:45(3); 283–92.

128. Pindani, M, Maluwa, A, Nkondo, M, Nyasulu, BM, Chilemba, W. Perception of people living with HIV and AIDS regarding home based care in Malawi. *J AIDS Clin Res*. 2013:4(3); 1–5.

129. Foley, ME, Fahs, MC, Eisenhandler, J, Hyer, K. Satisfaction with home healthcare services for clients with HIV: preliminary findings. *J Assoc Nurses AIDS Care*. 1995:6(5); 20–5.

130. Mallinson, RK, Rajabiun, S, Coleman, S. The Provider Role in Client Engagement in HIV Care The Provider Role in Client Engagement in HIV Care. *AIDS Patient Care STDS*. 2007:21; 77–84.

131. Bakken, S, Holzemer, WL, Brown, M-A, Powell-Cope, GM, Turner, JG, Inouye, J, Nokes, KM, Corless, IB. Relationships between perception of engagement with health care provider and demographic characteristics, health status and adherence to therapeutic regimen in persons with HIV/AIDS. *AIDS Patient Care STDS*. 2000:14(4); 189–97.

132. MEASURE Evaluation. *Report on the Status of the Nigerian National HIV Monitoring and Evaluation System*. 2010: p. 1–88.

133. Libamba, E, Makombe, S, Mhango, E, Teck, DA, Limbambala, E, Schouten, EJ, Harries, AD. Supervision, monitoring and evaluation of nationwide scale-up of antiretroviral therapy in Malawi. *Bull World Health Organ*. 2006:84; 320–6.

134. Weaver, ERN, Pane, M, Wandra, T, Windiyaningsih, C, Herlina, Samaan, G. Factors that influence adherence to antiretroviral treatment in an urban population, Jakarta, Indonesia. *PLoS One*. 2014:9(9); e107543.

135. Yadav, S. Perceived social support, hope and quality of life of persons living with HIV/AIDS : a case study from Nepal. *Qual Life Res*. 2010; 1–10.

136. Burke-Miller, JK, Cook, J a, Cohen, MH, Hessol, N a, Wilson, TE, Richardson, JL, Williams, P, Gange, SJ. Longitudinal relationships between use of highly active antiretroviral therapy and satisfaction with care among women living with HIV/AIDS. *Am J Public Health*. 2006:96(6); 1044–51.

137. Igumbor, J, Pascoe, S, Rajap, S, Townsend, W, Sargent, J, Darkoh, E. A South African public-private partnership HIV treatment model: viability and success factors. *PLoS One*. 2014:9(10); e110635.

138. Brennan, AT, Long, L, Maskew, M, Sanne, I, Jaffray, I, MacPhail, P, Fox, MP. Outcomes of stable HIV-positive patients down-referred from a doctor-managed antiretroviral therapy clinic to a nurse-managed primary health clinic for monitoring and treatment. *AIDS*. 2011:25(16); 2027–36.

139. Truong, WR, Schafer, JJ, Short, WR. Once-daily, single-tablet regimens for the treatment of HIV-1 infection. *Pharm Ther*. 2015:40(1); 44–55.

140. Maitland, D, Jackson, A, Osorio, J, Mandalia, S, Gazzard, B, Moyle, G, and the Epivir-Ziagen (EZ) Switch Study Team. Switching from twice-daily abacavir and lamivudine to the once-daily fixed-dose combination tablet of abacavir and lamivudine improves patient adherence and satisfaction with therapy. *Can J Econ*. 2010:6(1991); 6–8.

141. Nachega, JB, Parienti, JJ, Uthman, OA, Gross, R, Dowdy, DW, Sax, PE, Gallant, JE, Mugavero, MJ, et al. Lower pill burden and once-daily antiretroviral treatment regimens for HIV infection: a meta-analysis of randomized controlled trials. *Clin Infect Dis*. 2014:58(9); 1297–307.

142. Langebeek, N, Sprenger, H, Gisolf, E, Reiss, P, Sprangers, M, Legrand, J, Richter, C, Nieuwkerk, P. A simplified combination antiretroviral therapy regimen enhances adherence, treatment satisfaction and quality of life: results of a randomized clinical trial. *HIV Med*. 2014:15(5); 286–90.

143. Ohene, S, Forson, E. Original Articles Care of Patients on Anti-Retroviral Therapy in Kumasi Metropolis. *GHANA Med J*. 2009:43(4); 144–9.

144. Alemayehu, YK, Bushen, OY, Muluneh, AT. Evaluation of HIV / AIDS clinical care quality : the case of a referral hospital in North West Ethiopia. *Int J Qual Heal Care*. 2009:21(5); 356–62.

145. Himakalasa, W, Grisurapong, S, Phuangsaichai, S. Access to antiretroviral therapy among HIV/AIDS patients in Chiang Mai province, Thailand. *HIV AIDS (Auckl)*. 2013:5; 205–13.

146. Andaleeb, SS, Siddiqui, N, Khandakar, S. Patient satisfaction with health services in Bangladesh. *Health Policy Plan*. 2007:22(4); 263–73.

Appendix 1: Health Facility Questionnaire and Checklist

ITALICIZED TEXT SHOULD NOT BE READ ALOUD.
For numeric responses, if the interviewee responds "Don't know," please write 99 in the blank.
Tick the correct options

IDENTIFICATION OF HEALTH FACILITY
Name of Health facility:

Area Council Name:

Ward Name:

Ward type:
a. Urban
b. Rural
Ownership
a. Private for profit
b. Private not for profit
c. NGO
d. Faith Based
e. Other (specify_____)
External Financial Support for HIV/AIDS activities
1. Yes
2. No
State the HIV/AIDS activities supported by external funding
a. ART services
b. PMTCT services
c. HCT services
d. PLWHA Support Groups
e. Other(specify_____)
Specialized HIV site
1. Yes
2. No
Teaching site e.g. residency, house officers' training
1. Yes
2. No

CONSENT FORM

Good day. My/our name (s) is/are_____. I/we are here to conduct a survey on The Role of Private Health Facilities in Abuja, FCT on Quality of HIV Care and Treatment for Patients on Antiretroviral Therapy. This survey is being carried out by Dr OladejoAbiodun with sponsorship by the African Epidemiology Network (AFENET) for an award of a Masters Degree from Ahmadu Bello University, Zaria, Kaduna. This study will help to assess the role of private health facilities with regards to ART services in Abuja, F.C.T.

Your facility was selected to participate in this study. I/We will be asking you questions about various health services and will ask to see patient registers. No patient names from the registers will be reviewed, recorded, or shared. The information may be used by AFENET, FMOH and other organizations supporting health services for planning service improvement or further studies of health services. The data collected may also be provided to researchers for analysis. However, neither your name nor the name of this health facility will be provided, and any reports that use this facility's data will only present information in aggregate so that the facility cannot be identified. Your name and all information that you give me will be kept strictly confidential.
I/We are asking for your help to ensure that the information I/we collect is accurate. If there are questions for which someone else is the most appropriate person to provide the information, I/we would appreciate your introducing us to that person.

You may refuse to answer any question or choose to stop the interview at any time. Do you have any questions about the survey? Do I have your agreement to proceed?
If Yes, please sign the consent below;

Name of Medical Director or Representative:

Signature: Date:

Signature of Interviewer: Date:

A. Utilities

A1 Respondents' Initials and Position (years in position):

A2 Which ART specific Services does this facility offer?

1. Adherence counseling
    a) Available
    b) Free
2. Cotrimoxazole prophylaxis
    a) Available
    b) Free
3. ART toxicity detection and monitoring
    a) Available
    b) Free
4. ART resistance detection and monitoring
    a) Available
    b) Free
5. ART Defaulter Tracing
    a) Available
    b) Free

A3 Are there designated days for HIV care and treatment in the outpatient clinic?

a) Yes
b) No

A4 Do you refer clients to other health facilities for ART services that are unavailable in your facility?

a) Yes
b) No

B. Human Resources

B1 How many individuals work in the General Outpatient?

Designation	Total Number	Number dedicated to ART services only
Medical Doctors		
Nurses		
Laboratorian		
Adherence counsellor		

B2 When did ART prescription services commence in this facility?

IF THE RESPONDENT IS NOT CERTAIN, PROBE FOR AN ESTIMATE, WRITE "99" IF DAY AND MONTH ARE UNKNOWN, YEAR MUST BE FILLED

[_][_] / [_][_] / [_][_][_][_]

dd mm yyyy

B3 Is there a person specifically in charge of ART? If "No"=> B5

a) Yes
b) No

B4 What is the qualification of the person in charge of ART services?

a) Medical Doctor
b) Specialist Medical Doctor
c) Nurse
d) Laboratory Scientist
e) Pharmacist
f) Adherence counselor

B5 Are staffing levels sufficient for the services being offered now?

a) Yes
b) No

B6 Does this health facility have links with community based health workers or volunteers? If "No"=> B8

a) Yes
b) No

B7 Has a supervisor visited in the past 3 months? If "No"=> C1

1 Yes

2 No

99 Don't Know

B8 Which agency was the supervisor from?

TICK ALL THAT APPLY

a) Government

b) Implementing partners(donor agencies)

c) Others(specify)_____-

B9 What did the supervisors do during their visits to the health facility?

DO NOT READ; TICK ALL THAT APPLY

a) On-the-job training for ART services

b) Observation of ART clinical sessions

c) Collected monthly reporting forms

d) Delivered ART supplies

e) Other(specify_____)

C. ART Service Supplies and Equipment

C1 Does this facility own a CD4 machine?

a) Yes

b) No

C2 What are the 3 commonest Antiretroviral agents stocked in this hospital for adult ART care?(excluding prophylaxis for pregnancy)

1

2

3

C3 How does the health facility get its ARVs?

a) Collected from an ARV store within Abuja

b) Collected from an ARV store outside Abuja

c) ARVs are sent to the health facility

D. Technical support and Funding

D1 Is this facility receiving any technical support for providing any HIV related services, other than through your managing authority?

a) No, never
b) No, received previously (not now)
c) Yes, currently

D2 Does this facility receive funds from any sources other than the managing authority? If "No" =>D4

a) No, never
b) No, received previously (not now)
c) Yes, currently

D3 Who provided/is providing the financial support?

a) Government (specify_____)
b) Donor agency (specify_____)
c) Other (specify_____)

E. ART Health Management Information System

E1 Is there a medical records system for ART clients?

a) Yes
b) No

E2 Is it separate from the medical records for other clients?

a) Yes
b) No

E3 What type of records system is it?

a) Paper-based
b) Electronic

E4 Does the staff routinely discuss and analyze these statistics?

a) Yes
b) No

E5 How often is this analysis done?

a) Weekly
b) Monthly
c) Quarterly

d) Annually

e) Other (specify_____)

E6 What are the intended uses of this analysis

a) For reporting to government

b) For reporting to donors

c) To plan for next HIV clinic

d) To improve services

e) Other (specify_____)

F. ART information

F1 Does your facility prominently display posters on HIV care and treatment services?

a) Yes Visual

b) No [_]

F2 Are these posters on ART services:

MARK ALL THAT APPLY

a) Written in English languages

b) Written in local languages

c) Display day(s) and times ART services are available

d) Display the cost of ART services

e) Display some information tailored to Most-At-Risk-Populations(MARPS)

f) Other information (specify_____)

Thank you for your participation

Appendix 2: Health Facility Checklist

A. Supportive system

A1 Does this facility have any system for determining clients' opinions about the health facility or its services?

a) Yes
b) No

A2 Please tell me all the methods that this facility uses to elicit client opinion

a) Suggestion box
b) Client survey form
c) Client interview form
d) Informal discussion with clients or the community
e) Email
f) Facility's website
g) Letters from clients/community
h) Telephone
i) Other (specify_____)

B. ART Clinic

B1 Clinic equipment/resources

	Available	**Not available**	**Don't know**
ART National Guidelines	[_]	[_]	[_]

B2

Inspect for Auditory and Visual Privacy

MARK AS "BOTH" IF THERE IS A DOOR THAT CAN CLOSE; MARK AS "VISUAL" IF THERE IS A DRAPE OR CURTAIN

Can you please show me where patients are seen during consultation?

a) Visual and Auditory
b) Visual but no Auditory
c) Neither Visual nor Auditory

Thank you very much for your participation

Appendix 3: Client Exit Questionnaire

ITALICIZED TEXT SHOULD NOT BE READ ALOUD. For numeric responses, if the interviewee responds "Don't know," please write 99 in the blank. Tick correct options

IDENTIFICATION OF HEALTH FACILITY

Name of Health facility:

Area Council Name:

Ward Name:

Ward type:

a. Urban
b. Rural

Ownership

a. Private for profit
b. Private not for profit
c. NGO
d. Faith Based
e. Other (specify_____)

CONSENT FORM

Good day. My/our name (s) is/are_____. I/we are here to conduct a survey on The Role of Private Health Facilities in Abuja, FCT on Quality of HIV Care and Treatment for Patients on Antiretroviral Therapy. This survey is being carried out by Dr Oladejo Abiodun with sponsorship by the African Epidemiology Network (AFENET) for an award of a Masters Degree from Ahmadu Bello University, Zaria, Kaduna.

This study will help to assess the role of private health facilities with regards to ART services in Abuja, F.C.T. You were selected in this facility to participate in this study. I/We will be asking you questions about your level of satisfaction with HIV/AIDS services in this health. The information may be used by AFENET, FMOH and other organizations supporting health services for planning service improvement or further studies of health services. The data collected may also be provided to researchers for analysis. However, neither your name nor the name of this health facility will be provided, and any reports that use this facility's data will only present information in aggregate so that the facility cannot be identified. I/We are asking for your help to ensure that the information I/we collect is accurate.

You may refuse to answer any question or choose to stop the interview at any time. Do you have any questions about the survey? Do I have your agreement to proceed?

If **Yes**, please sign the consent below;

Initials of Client:

Signature: Date:

Signature of Interviewer: Date:

A. Socio-demographics

A1 Sex
- a) Male
- b) Female

A2 How old were you at your last birthday
(specify_____ years)

A3 What is your highest level of education? (at present)
- a) None
- b) Some primary (Primary 1-6)
- c) Some Junior Secondary (JSS 1-3)
- d) Some Senior Secondary (SSS 4-6)
- e) Some Tertiary
- f) Other (specify_____)

A4 What is the main source of your livelihood?
PROBE FOR ONE MAIN SOURCE: AVOID THE TERM “BUSINESSMAN”. PROBE TO DETERMINE THE MAIN JOB
(specify_____)

A5 What is your income per month
(specify_____ naira)

A6 Religion
- a) Christian
- b) Muslim
- c) Other (specify _____)

A7 Marital status
- a) Married
- b) Single

B. HIV/ART Medical History

B1 Your first visit here was in
PROBE FOR AN ESTIMATE, WRITE "99" IF DAY AND MONTH ARE UNKNOWN, YEAR MUST BE FILLED
[_][_] / [_][_] / [_][_][_][_]
dd mm yyyy

B2 You have been on ART since
PROBE FOR AN ESTIMATE, WRITE "99" IF DAY AND MONTH ARE UNKNOWN, YEAR MUST BE FILLED
[_][_] / [_][_] / [_][_][_][_]
dd mm yyyy

B3 What is the reason(s) for your visit to this health facility today?
PROBE FOR ONE MAIN REASON
- a) Management of opportunistic infection

b) Management of ARV side effects
c) Adherence counseling
d) Refill of ARV drugs
e) Laboratory tests
f) Other (specify_____)

C. Quality of care

a. Accessto HIV Care (in the last 6 months)

Ca1 How far is your residence from the health facility?
_____ minutes (if stated in hours, convert to minutes)

Ca4 Where do you get your Antiretroviral drugs from?
a) a Pharmacy within this health facility
b) b Pharmacy outside the health facility

Ca5 Are you currently on Septrin?
a) Yes
b) No

Ca6 How many CD4 count tests did you have in 2014?
a) None
b) 1
c) 2
d) More than 2

Ca7 Where do you conduct your CD4 test?
a) Laboratory within this health facility
b) Laboratory outside the health facility

Ca8 Did you miss any appointment in the ART clinic in 2014?
a) Yes
b) No

Ca9 If yes, how many appointments?
_____

Ca10 Why were you not able to come to the hospital to see the doctor as prescribed?
_____

b. Nonmedical Needs(in the last 6 months)

Cb1 What other kind of care is provided for you by this health facility
SELECT MULTIPLE
a) Home based care [_] [_]
b) Financial support [_] [_]
c) Family/Caregiver Support [_] [_]
d) Nutritional Support [_] [_]

e) Mental Health Counselling/ [_] [_]
f) PLWHA Support Group [_] [_]

c. Your HIV Medical Visit (in the last 6 months)

Cc1 Are you usually treated by the same HIV Care Provider?
a) Strongly agree
b) Disagree
c) Uncertain
d) Agree
e) Strongly disagree

Cc2 Are you satisfied with the HIV care and treatment you receive?
a) Strongly agree
b) Disagree
c) Uncertain
d) Agree
e) Strongly disagree

Cc3 Do the doctors in this clinic explain the reason for your HIV follow-up tests well?
a) Strongly agree
b) Disagree
c) Uncertain
d) Agree
e) Strongly disagree

Cc4 Does this health facility have everything needed to provide complete HIV care and treatment?
a) Strongly agree
b) Disagree
c) Uncertain
d) Agree
e) Strongly disagree

Cc5 Has the HIV care you have been receiving in this facility perfect?
a) Strongly agree
b) Disagree
c) Uncertain
d) Agree
e) Strongly disagree

Cc6 Do doctors in this health facility make you wonder if their diagnosis is correct?
a) Strongly agree
b) Disagree
c) Uncertain
d) Agree
e) Strongly disagree

Cc7 Can you get the HIV treatment you need here with the finances you have?

a) Strongly agree
b) Disagree
c) Uncertain
d) Agree
e) Strongly disagree

Cc8 Are they careful to check everything when examining you in the ART clinic?

a) Strongly agree
b) Disagree
c) Uncertain
d) Agree
e) Strongly disagree

Cc9 Do you have to pay for more of your HIV care and treatment here than you can afford?

a) Strongly agree
b) Disagree
c) Uncertain
d) Agree
e) Strongly disagree

Cc10 Do you have easy access to the medical HIV specialists you need in this facility?

a) Strongly agree
b) Disagree
c) Uncertain
d) Agree
e) Strongly disagree

Cc11 Do people have to wait too long to see the doctor in this clinic?

a) Strongly agree
b) Disagree
c) Uncertain
d) Agree
e) Strongly disagree

Cc12 Do the doctors in this ART clinic act businesslike towards you?

a) Strongly agree
b) Disagree
c) Uncertain
d) Agree
e) Strongly disagree

Cc13 Do the doctors in this ART clinic treat you with respect?

a) Strongly agree
b) Disagree
c) Uncertain
d) Agree

e) Strongly disagree

Cc14 Do those who provide care in this clinic hurry too much when they treat you?

a) Strongly agree
b) Disagree
c) Uncertain
d) Agree
e) Strongly disagree

Cc15 Do the doctors in this ART clinic sometimes ignore what you tell them?

a) Strongly agree
b) Disagree
c) Uncertain
d) Agree
e) Strongly disagree

Cc16 Do you have some doubts about the ability of the doctors in this ART clinic?

a) Strongly agree
b) Disagree
c) Uncertain
d) Agree
e) Strongly disagree

Cc17 Do the doctors in this clinic usually spend plenty of time with you?

a) Strongly agree
b) Disagree
c) Uncertain
d) Agree
e) Strongly disagree

Cc18 Do you find it hard to conduct laboratory tests in this health facility?

a) Strongly agree
b) Disagree
c) Uncertain
d) Agree
e) Strongly disagree

Cc19 Are you able to get your antiretroviral drugs in this health facility whenever you need it?

a) Strongly agree
b) Disagree
c) Uncertain
d) Agree
e) Strongly disagree

E. Closing

E1 Would you recommend this clinic to your HIV-positive friends with similar needs?

a) Yes
b) No
c) Not sure

E2 Why did you choose this particular health facility?

E3 Is there anything you would like to change about this hospital?

Thank you very much for your participation

Appendix 4: Ethical Clearance

FEDERAL CAPITAL TERRITORY
HEALTH RESEARCH ETHICS COMMITTEE
Research Unit, Room 10, Block A Annex, HHSS
FCT Secretariat No. 1 Kapital Street Area 11, Garki, Abuja - Nigeria

Name of Principal Investigator	Dr. Oladejo Abiodun
Address of Principal Investigator:	Nigerian Field Epidemiology & Laboratory Training Program, No. 50 Halle Sellasi Street, Asokoro District - Abuja
Date of receipt of valid application:	22/12/2014

NOTICE OF RESEARCH APPROVAL

Protocol Approval Number: HHREC/2015/01/04/04-02-15

Study Title: [illegible] HIV Care and Treatment for Patients on Antiretroviral Therapy: The Role of Private Health Facilities in Abuja, FCT.

This is to certify that the FCT Health Research Ethics Committee (FCT HREC) has fully approved the research described in the above stated protocol.

Approval Date: - 04/02/2015
Expiration Date: - 03/02/2016

Note that no activity related to this research may be conducted outside of these dates. Only the FCT HREC approved informed consent forms may be used when written informed consent is required. They must carry FCT HREC assigned protocol approval number and duration of approval of the study.

The National Code of Health Research Ethics requires you to comply with all institutional guidelines, rules and regulations, as well as the tenets of the code. The FCT HREC reserves the right to conduct compliance visit to your research site without previous notification.

Modifications: Subsequent changes are not permitted in this research without prior approval by the FCT HREC.

Problems: All adverse events or unexpected side effects arising from this project must be reported promptly to FCT HREC.

Renewal: This approval is valid until the expiration date. If you are continuing your project beyond the expiration date, endeavor to submit your annual report to FCT HREC early, and request for renewal of your approval to avoid disruption of your project.

Closure of Study: At the end of the project, a copy of the final report of the research should be forwarded to FCT HREC for record purposes, and to enable us close the project.

Desmond Emeneonyeokwe
For: Secretary, FCT HREC
February 04, 2015

Appendix 5: Project Implementation Timeline

	PHASES AND TASKS	February 2015												March 2015												April 2015												May 2015								June 2015								July 2015							
	INCEPTION PHASE																																																													
1	Pre-testing																																																														
A	Printing of questionnaire and initial training of 5Research assistants																																																														
B	Field visit																																																														
	Data entry, analysis and questionnaire review																																																														
	Printing of pretested questionnaires																																																														
2	**MAIN FIELD PHASE**																																																														
A	Training of Research assistants																																																														
B	Field work (questionnaire administration)																																																														
C	Data entry																																																														
D	Data analysis																																																														
		August 2015																																																														
	POST –FIELD PHASE	**M**	**T**	**W**	**T**	**F**	**S**	**M**	**T**	**W**	**T**	**F**	**S**		**M**	**T**	**W**	**T**	**F**	**S**		**M**	**T**	**W**	**T**	**F**	**S**		**M**	**T**	**W**	**T**	**F**	**S**		**M**	**T**	**W**	**T**	**F**	**S**		**M**	**T**	**W**	**T**	**F**	**S**		**M**	**T**	**W**	**T**	**F**	**S**	
1	Report writing																																																													