

**SCHOOL OF PUBLIC HEALTH
COLLEGE OF HEALTH SCIENCES
UNIVERSITY OF GHANA, LEGON**



**ASSESSMENT OF THE QUALITY OF HIV TESTING AND COUNSELLING IN
ANTENATAL CLINICS IN SELECTED PRIVATE HEALTH FACILITIES IN
AYAWASO SUB-METRO, ACCRA**

BY

YAA ADWO OSEI - OFEI

(10507306)

**THIS DISSERTATION IS SUBMITTED TO THE UNIVERSITY OF GHANA,
LEGON IN PARTIAL FULFILMENT OF THE REQUIREMENT FOR THE
AWARD OF MASTER OF PUBLIC HEALTH DEGREE**

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DECLARATION

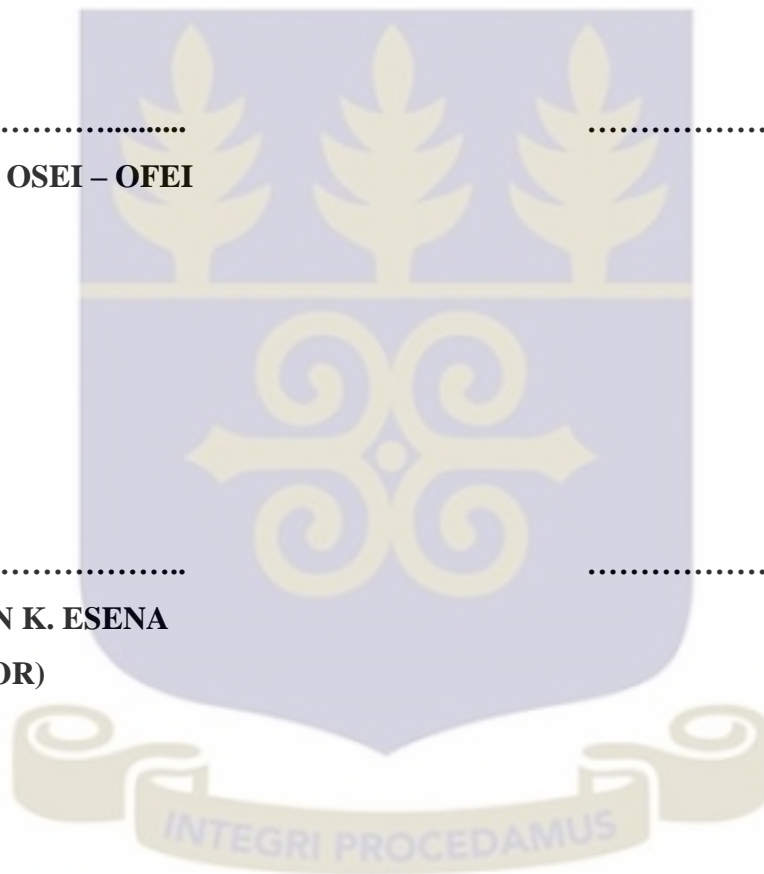
I, Yaa Adwo Osei – Ofei, hereby declare that except for other people’s work which have been duly acknowledged, this work is the result of my own original research done under supervision. This dissertation has neither in part nor whole been presented elsewhere for another degree.

.....
YAA ADWO OSEI – OFEI
(STUDENT)

.....
DATE

.....
DR. REUBEN K. ESENA
(SUPERVISOR)

.....
DATE



DEDICATION

I dedicate this work to the Lord God Almighty, had it not been for His grace, I could not have come this far.



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TABLE OF CONTENTS

Content	Page
DECLARATION	i
DEDICATION	ii
ACKNOWLEDGEMENTS	iii
TABLE OF CONTENTS.....	iv
LIST OF TABLES	x
LIST OF FIGURES	xi
LIST OF ACRONYMS	xii
DEFINITION OF TERMS	xiv
ABSTRACT.....	xv
CHAPTER ONE	1
INTRODUCTION.....	1
1.1. Background.....	1
1.2. Statement of the Problem.....	2
1.3. Conceptual Framework.....	4
1.4. Justification.....	6
1.5. General Objectives.....	7
1.6. Research Questions.....	7
CHAPTER TWO	8
LITERATURE REVIEW	8
2.0. Global view of MTCT – a worldwide challenge	8
2.1. The Policy and Programmatic background.....	8

2.2. The National Guidelines for the prevention of mother to child transmission of HIV	10
2.3. Guiding principles for PMTCT in Ghana	11
2.4. PMTCT In Ghana	14
2.5. Quality of HTC	15
2.6 Dimensions of Quality	17
2.7. Perspectives of Quality	18
2.8 The Private Sector as a key player	21
CHAPTER THREE	23
METHODS	23
3.0. Study Design	23
3.1. Study location/Area	23
3.2. Variables	24
3.2.1. Dependent Variable	24
3.2.2. Independent Variables	24
3.3. Study population	25
3.4. Sampling	25
3.4.1. Sample Size Calculation	26
3.4.2. Sampling method	28
3.4.2.1. Facility selection	28
3.4.2.2. Facility Based Selection of Clients	29
3.4.2.3. Inclusion Criteria	29
3.4.2.4 Exclusion criteria	29
3.5. Data Collection Techniques & Tools.....	29
3.5.1. Data Collection Techniques	29

3.5.2. Data Collection Tools	30
3.6. Pilot Study.....	31
3.7. Quality Control	32
3.8. Data Processing and Analysis	33
3.8.1 Quantitative Data Processing and Analysis	33
3.8.2 Qualitative Data Processing and Analysis	33
3.9. Statistical Methods.....	34
3.9.1. Facility Assessment	34
3.9.2. Client perception of quality of HTC	34
3.10. Ethical Considerations/Issues	35
3.11. Study Limitations.....	36
CHAPTER FOUR.....	38
RESULTS	38
4.0 Introduction.....	38
4.1 Participants' Background Characteristics	38
4.2 Key informants and client codes.....	40
4.3 Assessment of Institutional capacity to provide HTC	41
4.3.1 Minimum Critical Criteria	41
4.3.2 Structures	42
4.3.2.1 Leadership and supervision.....	43
4.3.2.2 Human Resource Management	43
4.3.2.3 Policy Standards and Guidelines	44
4.3.2.4 Referral Systems	44
4.3.2.5 Counselling Aids.....	45

4.3.3 Staff roles	45
4.3.3.1 Staff Training and Experience	46
4.4 Process	47
4.4.1 Content of Counselling Sessions	48
4.4.1.1 Pre-test Counselling	48
4.4.1.2 Testing Process	49
4.4.1.3 Post – Test counselling	50
4.4.1.4 Other Post – test Information	52
4.5 Informed Consent.....	53
4.6 Health care workers’ perspective of quality of services	54
4.7 Health Care Workers’ Assessment of Clients’ perception of service.....	56
4.8 Outcome.....	57
4.8.1 Client satisfaction.....	57
4.8.2 Consent	57
4.8.3 Confidentiality, Health worker attitude, Privacy and the Environment.....	57
4.8.4 Waiting Time	59
4.8.5 Factors associated with clients’ perception of quality of HTC.....	62
CHAPTER FIVE	64
DISCUSSION	64
5.0. Introduction.....	64
5.1 Institutional Capacity to implement HTC.....	64
5.1.1. Physical Structures.....	64
5.1.2. Staff Capacity.....	65
5.2.3. Test kits and Other Logistics	66

5.3. Process	67
5.3. Outcome.....	69
5.3.1. Waiting time.....	69
5.3.2. Clients’ overall satisfaction with Quality of HTC	70
5.4 Chapter Summary	72
CHAPTER SIX	74
CONCLUSION AND RECOMMENDATIONS.....	74
6.0. Introduction.....	74
6.1. Summary of the Study	74
6.1.1. Structural Capacity to provide Quality HTC	74
6.1.2. HIV Counselling and Testing Procedure	75
6.1.3. HTC Outcomes	75
6.2 Overall Assessment of the Quality of HTC in selected Facilities	76
6.3 Recommendations.....	76
6.3.1. Implementation of the National Policy	76
6.3.2. Enhancing Structural Capacity & the Process of HTC.....	78
6.3.3. Community Involvement and Support.....	79
6.4. Contribution to Knowledge.....	79
6.5. Future Research & Policy implications	80
REFERENCES.....	81
APPENDICES	86
Appendix 1: Facility Assessment tool for assessment of HTC sites	86
Appendix 2: Direct Observation tool for Counselling Quality	93

Appendix 3: Client Exit interview – sample questionnaire 97

Appendix 4: Key Informant Interview Guide 103

Appendix 5: Informed Consent Form 104

Appendix 6: GHS-ERC Letter of Approval..... 108

Appendix 7: NACP Letter of Introduction 110



LIST OF TABLES

Table 1: Socio-demographic characteristics of participants	39
Table 2: Key informants and client codes.....	40
Table 3: Results of Facility Assessment	42
Table 4: Assessment of Clients' satisfaction with different aspects of HTC counselling service	60
Table 5: Client's perception of waiting time	61
Table 6: Univariate analysis of selected factors affecting client satisfaction with service....	62
Table 7: Multivariate analysis of selected factors affecting client satisfaction with service.	63



LIST OF FIGURES

Figure 1: Conceptual Framework for Quality of HTC in ANC's in Private Health Facilities .	4
Figure 2: The HTC journey.....	14
Figure 3: Map of Ayawaso sub-metro showing the location of the study sites: Salvation Army Urban Aid Health Center and Hajia Damata Maternity Home	24
Figure 4: Topics covered in counselling session	53



LIST OF ACRONYMS

AIDS	Acquired Immune Deficiency Syndrome
AMA	Accra Metropolitan Assembly
ANC	Ante natal Clinic
ART	Antiretroviral Therapy
CICT	Client Initiated Counselling and Testing
CMS	Central Medical Stores
DALYs	Disability-Adjusted Life Years
EQA	External Quality Assurance
GAC	Ghana AIDS Commission
GHS	Ghana Health Service
HAART	Highly Active Antiretroviral Therapy
HCW	Health Care Workers
HIV	Human Immunodeficiency Virus
HR	Human Resource
HTC	HIV Testing and Counselling
IEC	Information, education and communication
M & E	Monitoring and Evaluation
MDG	Millennium Development Goal
MTCT	Mother to Child Transmission
MOH	Ministry of Health
NACP	National AIDS/STI Control Program
NSP	National Strategic Plan
OPD	Out Patient Department
PICT	Provider Initiated Counselling and Testing
PLHIV	People Living With Human Immunodeficiency Virus
PMTCT	Prevention of Mother to Child Transmission
QA	Quality Assurance

RCH	Reproductive and Child Health
SSA	Sub - Saharan Africa
UNAIDS	Joint United Nations Program on HIV/AIDS
UNGASS	UN Special General Assembly Session on HIV/AIDS
UNICEF	United Nations International Emergency Children's fund
WHO	World Health Organization



DEFINITION OF TERMS

MTCT: mother to child transmission (also called perinatal or vertical transmission) occurs when HIV is spread from an HIV positive woman to her baby during pregnancy, labour and delivery or breastfeeding.

Private Health Facility: any non-government health facility (also referred to as for-profit; not-for-profit and mission or faith based facilities) involved in the delivery of health service.

Provider initiated counselling and testing (PICT): refers to HIV testing and counselling which is routinely recommended by healthcare providers to persons at healthcare facilities as a standard component of medical care.

Quality of care: the degree to which health services for individuals and populations increase the likelihood of desired health outcomes and are consistent with current professional knowledge.

Quality HIV Testing and Counselling: accessible HTC services that meet the needs of clients and providers, in an equitable and acceptable manner, within the resources available and in line with national guidelines.

Prevention of Mother to Child Transmission of HIV (PMTCT): It is an acronym for a comprehensive family centred continuum of promotive, preventive, clinical and supportive services provided in conjunction with other public health interventions to prevent the transmission of HIV from a mother to her infant(s).

ABSTRACT

Introduction: Mother-to-Child-Transmission (MTCT) of HIV is a global health problem. Recent advances in the Prevention of Mother-to-Child Transmission (PMTCT) program have provided the means to drastically reduce infant mortality associated with HIV/AIDS. Quality HIV testing and counselling (HTC) is an important gateway to PMTCT services and concerted effort has been made by the National AIDS/STI Control Program (NACP) to scale up the provision of antenatal HTC in Ghana. Some concerns have been raised about the quality of HTC provided in antenatal clinics especially in the context of rapid scale-up programs. Greater Accra was one of three regions that recorded an increase in ANC HIV in 2013. Ayawaso, a densely populated sub-metro in Accra has the highest concentration of private health facilities, however, the quality of HTC in antenatal clinics in private health facilities within the sub-metro is unknown.

Objectives: The general objective of this study was to assess the quality of HTC services offered in antenatal clinics in private health facilities in Ayawaso in relation to national guidelines. The specific objectives were: to analyse the institutional capacity of private health facilities to offer quality HTC; to assess the patient's perceptions of quality of care rendered in the HTC process in private health facilities and to describe the provider's perception of quality of HTC services and constraints.

Methods: The study is a descriptive cross sectional, mixed methods research carried out in two purposively selected private health facilities in Ayawaso, namely: Salvation Army Urban Aid Health Centre and Hajia Damata Maternity home. Quantitative data were collected using a health facility assessment tool and client exit questionnaires; qualitative data were collected using observations and interviews with key HTC staff.

Findings: The study found that there were inadequate structures in place for the provision of quality HTC. While some aspects of the HTC process were adhered to, principles of informed consent and confidentiality were breached. Both healthcare workers and clients expressed satisfaction with quality of HTC.

Conclusion: Private health facilities have weak structures for the provision of quality HTC. Private health facilities adhere in part to the National Policy guidelines with deviations in obtaining informed consent and communicating confidentiality to the clients. In the perception of the clients and healthcare workers, quality of HTC was good.

CHAPTER ONE

INTRODUCTION

1.1. Background to the Study

The burden of Human Immunodeficiency Virus (HIV) has increased gradually from the early 1980's to become a major contributor of global mortality and disease in present times (Ortblad, Lozano, & Murray, 2013). Research findings indicate that HIV was the fifth leading cause of Disability Adjusted Life Years (DALYs) in 2010 (Ortblad et al., 2013). In terms of human impact, in 2012, an estimated 35.3 (32.2–38.8) million people were living with HIV; 2.3 (1.9–2.7) million new HIV infections occurred globally and the number of AIDS related deaths was still significant at 1.6 million (1.4-1.9)(UNAIDS, 2013).

The highest burden of this disease is in Sub Saharan Africa (SSA), among pregnant women and children under fifteen years of age; women account for approximately 53-63% of the infections in Africa and this in turn has implications for children born to positive women (Behets, et al., 2006; Ubesie, 2012). The transmission of HIV from a positive woman to her child during pregnancy, labour or breastfeeding is known as mother to child transmission of HIV (MTCT) and researchers have estimated that without any interventions, the rate of MTCT of HIV ranges between 15-45% (WHO, 2014). About 90% of children living with HIV and 70% of newly recorded infections in children were recorded in SSA in 2010 and it is estimated that one thousand babies are newly infected with HIV daily (Ubesie, 2012). Furthermore about seven hundred children die from HIV daily (Ubesie, 2012).

Factors that have contributed to the rapid spread of the epidemic include poverty, illiteracy, inequality and inequity (Ubesie, 2012). This is in sharp contrast to the developed world where the rates of mother to child transmission of HIV is virtually zero, achieved through the provision of Prevention of Mother to Child Transmission of HIV (PMTCT) services

(UNAIDS, 2011; MOH, 2010). Recognizing the extent of this threat, the global community in a landmark UN Millennium Declaration placed an effective HIV/AIDS response in the context of a broader development agenda and set a goal for unprecedented action to halt and reverse the epidemic by 2015 as captured in Millennium Development Goal (MDG) 6a (UNAIDS, 2013). As part of the global agreement, member states adopted interventions based on the application of scientific evidence that the timely provision of Antiretroviral Therapy (ART) to pregnant women could reduce the risk of vertical transmission significantly to below 5% (UNAIDS, 2013).

In Ghana, where the HIV epidemic remains generalized with an estimated national prevalence of 1.37% in 2012, the second most common mode of HIV transmission is from pregnant women to their babies accounting for almost all infections in children under fifteen years of age (GAC, 2014; MOH, 2010).

With the current knowledge and interventions, there exists a unique opportunity to reduce the transmission of HIV from mothers to their unborn babies and reduce AIDS related child morbidity and mortality. However this will depend on the extent and efficiency of the measures adopted (Baggaley et al., 2012).

1.2. Statement of the Problem

The HIV epidemic in Ghana is a generalized epidemic with a prevalence of more than 1% in the general population, indicating that the disease is still of public health importance and requires concerted efforts to reverse its impact (GAC, 2012). Among the most highly affected persons are women and children who represented 57% (132,763) and 11.8% (27,754), respectively of the total population of PLWHA in Ghana in 2013 (GAC, 2014). In 2012, it was estimated children contributed over 13% of the national AIDS deaths

(GAC, 2014). Without any intervention, as many as half of all infants born with HIV die before their second birthday adding to the high infant mortality (Shapiro & Lockman, 2010; UNICEF, 2015). It is possible, however, to drastically reduce maternal and infant deaths due to HIV and reduce the risk of Mother-to-Child transmission (MTCT) to less than 2% by implementing appropriate PMTCT programs (Shapiro & Lockman, 2010; MOH, 2010). Experts agree that the ‘gateway’ linking women and their unborn babies to these vital services is quality HIV Testing and Counselling (HTC) (Sibanda et al., 2012; Minnie, van der Walt & Klopper, 2009).

It is therefore not surprising that strenuous efforts have been made in Ghana to make the PMTCT package widely available in public and private facilities in all ten regions. In order to improve health outcomes of HIV positive women and their babies, one of the policy interventions adopted by the National AIDS/STI Control Program (NACP) was to scale – up the PMTCT program by increasing support, training and supply of logistics to community level facilities including private hospitals and maternity homes (MOH, 2010). The 2010 NACP policy on PMTCT includes detailed strategies for HIV testing and counselling and emphasizes the routine offer of HTC to all pregnant women attending antenatal clinics (MOH, 2010).

In recent times, however, concerns have been raised about the rapid – upscale of services and its effect on quality of HTC (WHO, 2010). Experts caution that the expansion of services should not be at the expense of quality as this is likely to have an adverse effect on the uptake and utilization of PMTCT service (Evjen-Olsen, Olsen, & Kvåle, 2009; Kwapong, Boateng, Agyei-Baffour & Addy, 2014). Quality of HIV testing and counselling rendered in private health facilities in Accra since the inception of the PMTCT program in 2001 is largely unknown. To address this information gap, this study seeks to assess the

quality of HTC services offered in antenatal clinics in selected private healthcare facilities in Ayawaso sub- Metro. It is also anticipated that the assessment will furnish recommendations to inform policy decisions.

1.3. Conceptual Framework

As shown in the conceptual framework (Figure 1), structures, processes and outcome are the three components which contribute to quality HTC and inadvertently link to each other.

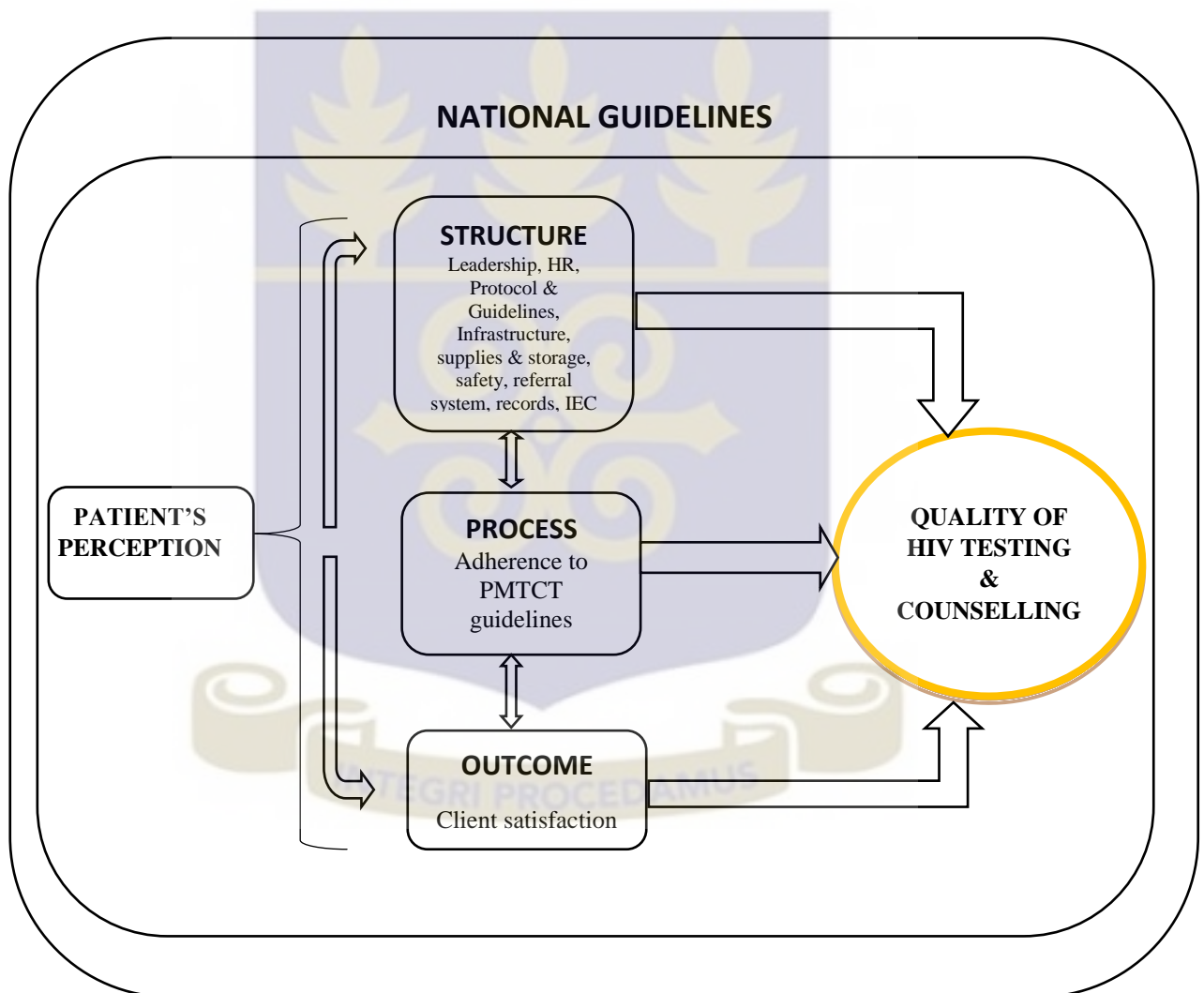


Figure 1: Conceptual Framework for Quality of HTC in ANCs in Private Health Facilities

(Adapted from McQuestion, 2006)

These three components can be analysed individually in light of national program guidelines which specify the fundamental principles for the implementation of PMTCT in Ghana. In order to form a conclusive picture of quality of HTC, the patients' perspective of quality of care in the entire process is also critical as they are key stakeholders in the delivery of PMTCT.

In this context, quality HTC was defined as the degree to which healthcare services for individuals and the population increases the likelihood of desired healthcare outcomes and is consistent with the current professional knowledge (Mosadeghrad, 2012). While there are many proposals and no concordance on how to measure the concept of 'quality', the framework for this study was developed using one of the widely used models – the Donabedian model for quality of health (Donabedian, 2005; Mosadeghrad, 2012) . The components within the HTC health system are the triad suggested by Donabedian, namely:

- **Structure** - refers to the characteristics of people or resources required to provide the healthcare service & the attributes of the settings in which care is provided. In the context of HTC, it includes elements such as: human resource management, leadership and supervision, policy standards & guidelines and infrastructure. It also includes supplies & storage, safety, referral system, records and information, education and communication (IEC) materials.
- **Process** - refers to activities and steps required to provide care to the client: it is also related to interactions within and between practitioners and patients. The extent to which national guidelines are adhered to in these activities and interactions reflects the quality of service.
- **Outcome** - is the end result or the effect, desirable or otherwise, that may be attributable to the healthcare service. In this study, the outcome measure selected was client satisfaction.

(Bannerman, Tweneboa, Baah-Odum, Acquah, & Offei, 2005; Mosadeghrad, 2012; Pentescu, 2014).

1.4. Justification

Even though some gains have been chalked since the inception of the PMTCT in Ghana, the failure to achieve set targets such as 90% coverage of expected pregnancies indicates that there is still room for improvement in service delivery (GAC, 2014; GHS, 2010). Scanty information on the quality of HTC services rendered to pregnant women attending ANC in Ghana indicates that health facility related factors such as inadequate counselling, negative perceptions of privacy and confidentiality, long waiting times among others adversely affect the uptake of HTC services (Kwapong et al, 2014). This mirrors research findings from other countries that the scale up of PICT in resource constrained settings may adversely affect the quality of services (Sibanda et al, 2012).

Unfortunately, since the NACP targeted a scale up of the PMTCT program to include community level and private facilities in Ghana in 2010, there is little evidence in literature that comprehensive research has been undertaken to explore quality of HTC offered in the private health sector, as a key partner in the provision of PMTCT services. With the expiration of the five year term of the scale-up plan in 2015, it is envisaged that this study will help to address the gap identified in literature by exploring the quality of HTC in private health facilities in Ayawaso; and also inform policy decisions on the optimum implementation of the plan for the elimination of Mother to Child transmission of HIV/AIDS.

1.5. General Objectives

To assess the quality of HIV testing and Counselling services offered in Antenatal clinics in selected private health facilities in Ayawaso in relation to national and WHO guidelines.

1.5.1. Specific Objectives

The specific objectives of this study are to:

- (i) Assess the quality of the HIV testing and counselling in selected private health facilities compared to the national policy guidelines.
- (ii) Assess the patient's perceptions of quality of care rendered in the HIV testing and counselling process in ANCs in selected private health facilities.
- (iii) Describe the health provider's perception of quality of care of HTC and their constraints.

1.6. Research Questions

- (i) What is the quality of HTC services in selected private health facilities in Ayawaso sub –Metro?
- (ii) What is the patients' perception of HTC services rendered in selected private health facilities in Ayawaso?
- (iii) What are health provider's perceptions of the quality of HTC and constraints they experience in delivering care in selected private health facilities?

CHAPTER TWO

LITERATURE REVIEW

2.0. Global view of MTCT – a worldwide challenge

In 2001, 189 member states of the UN adopted the Declaration of Commitment on HIV/AIDS representing a global consensus on a comprehensive framework to achieve the MDG of halting and beginning to reverse the HIV epidemic by 2015 at a UN Special General Assembly Session on HIV/AIDS (UNGASS) (GAC, 2012). The root of Ghana's effort to address the challenge of MTCT can be traced back to this broad context of the political commitment by UN member states to speed up the attainment of MDG 6 by halting and reversing the spread of HIV/AIDS by 2015 (UNAIDS, 2011; WHO 2012). Ten years after the UNGASS took place, a review was held in 2011 which led to a new Political Declaration on HIV/AIDs detailing bold new commitments and targets which form the backbone from which Ghana's framework for the mitigation of HIV/AIDS is derived (GAC, 2012).

2.1. The Policy and Programmatic background

Ghana has a positive policy, advocacy and enabling socio-politico environment for implementing a comprehensive multi-sectorial program to combat the HIV epidemic (GAC, 2012). According to the 2012 Country AIDS Progress Report, the Ghana AIDS Commission (GAC), a supra ministerial body, coordinates the national response in collaboration with other key ministries and partners. Since its inception, GAC has made significant strides in its response to the epidemic as evidenced by its policy directives: the NSP I (2001-2005); the NSP II (2006-2010) and the NSP (2011-2015). The NSP (2011-2015) provides a broad framework towards the elimination of MTCT of HIV in Ghana. Toward this end, one of the key documents released was the 2010 PMTCT

guidelines, which has since been operationalized by the NACP. An important component of the PMTCT intervention adopted in Ghana is early counselling and testing of pregnant women, which does not in itself prevent the transmission of HIV but serves as a vital link to the initiation of services for the mother, her unborn child and her partner. While the 2012 Country AIDS report recognized the gains made in the preceding year due to the availability of funds and immense effort of the implementers, it also noted that services still lag behind country targets. On the whole, Ghana could be described as having achieved moderate success in reducing MTCT of HIV. In spite of a recent GAC report which noted that Ghana was one of the countries that was able to reach 75-100% of pregnant women with PMTCT services, the benefits of this coverage in terms of reduction in ANC prevalence is disproportionately seen across the regions. In 2011 for example, sentinel surveillance at ANC sites recorded a slight increase in ANC HIV prevalence from 2.0% to 2.1% (CI 1.48- 2.72) with the Greater Accra region recording an increase in prevalence from 2.6% in 2010 to 3.2%; this was similar to the situation in 2009 when the national ANC prevalence was much higher at 2.9% than that in the general population at 1.8% (GAC, 2012; UNICEF, 2010).

One key area in which Ghana still lags behind the country targets is in the coverage and uptake of PMTCT services as only 68% of women accessing antenatal care in 2010 acceded to HIV testing against the targeted 80% (GAC, 2014). The 2012 Country AIDS report further states that: Ghana has a unique opportunity to achieve its goal. The national antenatal coverage has been consistently over 90% of the expected pregnancies. This affords an opportunity for reaching at least 90% of pregnant women with PMTCT, but creates a challenge of ensuring that PMTCT is provided at all antenatal clinics to achieve this goal. The number of ANCs and the PMTCT uptake at each clinic providing PMTCT is thus critical for achieving this target.

In a study which explored the uptake of HTC services among other factors in Wa, Nyuzaghl, Ohene, and Odoi - Agyarko. (2011) suggested that “setting up a well laid out process to ensure that all pregnant women coming through ANC are routinely offered HIV testing may help to minimize the missed opportunities for utilizing PMTCT services”. (p. 14)

2.2. The National Guidelines for the prevention of mother to child transmission of HIV

According to Kwapong et al. (2014), HTC is critical in the global efforts to reach a goal of universal access to prevention and timely HIV treatment and healthcare; routine testing has been demonstrated to be a lifesaving intervention by prolonging the life expectancy of HIV patients and reducing the annual HIV transmission rate.

The NACP PMTCT guidelines also reiterates that PMTCT services are vital to saving the lives of young children and reducing infant and child mortality (NACP, 2010). In developed countries where there is ready access to the full range of PMTCT services, including routine testing of all pregnant women, MTCT of HIV has been reduced to less than 2% (NACP, 2010). A pregnant woman and her unborn baby can only benefit from the PMTCT strategies if her HIV status is known and as such HTC is a crucial gateway through which pregnant women can access key interventions (Minnie et al., 2009). Accordingly, the national PMTCT guidelines were released in line with a vision to achieve a generation free of HIV. The NACP PMTCT guideline (2010) emphasizes the routine offer of HTC to all pregnant women; this should be followed by the provision of triple ART treatment or prophylaxis to all eligible mothers from 14 weeks of gestation to one week after the cessation of breastfeeding. These methods are to be complemented with improved obstetric practices and safer infant feeding practices and it is further recommended that all HIV exposed infants are provided with antiretroviral prophylaxis for the first six weeks of life.

By way of definition, HIV testing is described in the guidelines as a process that determines whether a person is infected with HIV or not (MOH, 2010). It detects antibodies or antigens associated with HIV in blood and other body fluids. Though HIV counselling is not explicitly defined in the guidelines, the framework for HTC specifies that it shall be integrated into reproductive and child health services (RCH) and that all pregnant women accessing RCH services shall receive information on HIV testing; all HTC shall be performed by trained counsellors (MOH, 2010).

2.3. Guiding principles for PMTCT in Ghana

The PMTCT guidelines were developed in line with WHO recommended guidelines. Some of the key principles are:

- i. A public health approach to service which requires a program built around standardized regimens and protocols according to the National guidelines.
- ii. Integrated delivery of interventions for PMTCT within maternal, new born and child services with linkages between the services.
- iii. Necessity for highly effective ARV regimens for eliminating HIV in infants and young children. Ghana had decided to adopt the more efficacious ARV regimens for PMTCT.
- iv. Urgent need to scale up service to achieve national coverage and universal access aiming for impact and equity.

Consequently, the guidelines offer the following strategies for the provision of PMTCT care within health facilities, both private and public in Ghana where antenatal; delivery and postnatal services are conducted:

- i. Every mother accessing care should be provided services free of charge including antenatal care, labour and delivery, postnatal care for up to eighteen months.
- ii. The healthcare provider will have the responsibility of maintaining confidentiality at all times.
- iii. The main mode of testing for pregnant women shall be provider initiated counselling and testing (PICT). HTC shall be routinely offered to all pregnant women as part of their initial and subsequent ANC services as early as possible in pregnancy. All women shall be encouraged to repeat the HIV test in the third trimester after an initial negative test result.
- iv. Informed consent – it is the responsibility of the provider to ensure clients understand the purpose and benefits of testing and that the client’s testing decision is respected.
- v. Post-test counselling and support services: the result of an HIV test should always be offered in person with appropriate post-test information, counselling or referral.
- vi. The minimum amount of information that should be provided to clients includes:
 - (a) The clinical and prevention benefits of testing
 - (b) The right to refuse
 - (c) Follow up services that are available
 - (d) Assistance available in the event of a positive result especially to inform anyone at risk who may not otherwise suspect they are exposed to HIV infection.
- vii. Approach to clients who decline to test: some clients may initially decline an HIV test as a result of some concerns. Later such clients may accept testing if their reasons for declining are discussed and addressed and the routine offer is repeated at subsequent visits. The decision of women who continue to decline testing

should be respected and documented in their medical records. Their refusal shall not compromise the quality of care which they receive.

viii. Combination ART shall be provided to all eligible pregnant women for prophylaxis for the prevention of MTCT of HIV even when the criteria for the initiation of HAART is not met.

ix. After testing HIV negative women shall be counselled on how to remain uninfected. For pregnant women who test positive, in addition to ART, counselling will be conducted to help them:

(a) Make informed decisions about their pregnancy

(b) Receive appropriate and timely interventions to reduce MTCT including:

- Follow up and ongoing healthcare for themselves and the HIV exposed infants and family member(s).
- To make choices and receive support concerning infant feeding practices.
- To make informed decisions on family planning.

The steps elucidated above in the process of HIV counselling and testing from a client's entry at the ANC clinic to their exit through a negative result; referral or treatment is summarized in Figure 2.

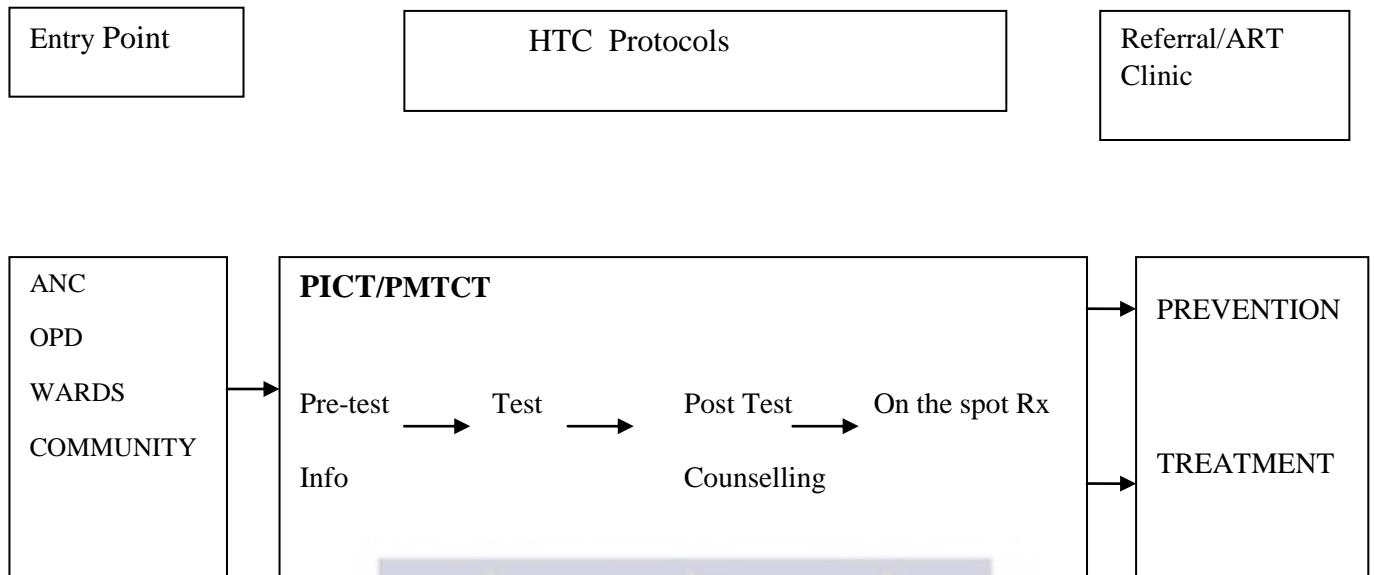


Figure 2: The HTC journey (adapted from WHO, 2010)

2.4. PMTCT in Ghana

In light of the fact that virtually the only way that children under five acquire HIV in Ghana is through vertical transmission, the program for the prevention of mother-to-child transmission of HIV was initiated by the Ministry of Health (MOH) and Ghana Health Service (GHS) with support from development partners in 2001 and it has since been scaled up to all regions in the country (MOH, 2010). Though knowing one's status may ultimately lead to the reduction of MTCT to 0-5% if the client receives timely, comprehensive interventions and care, the benefits of the PMTCT program are yet to be fully experienced in Ghana which at present remains one of the twenty – two countries with the highest burden of ANC prevalence of HIV (UNAIDS, 2011).

In 2013, four hundred and ninety two thousand six hundred and twenty – two (492, 622) pregnant women out of expected one million fourteen thousand one hundred and twenty (1,014, 120) pregnancies got to know their status representing 49% coverage of expected pregnancy (NACP, 2013a). This figure represents a decline in proportion of HTC coverage of expected pregnancies as compared to 2012 in which 63.7% of the women with expected

pregnancies were tested and got to know their results (GAC, 2014). It also falls short of the national target which is 90% of the expected pregnancies (GHS, 2010; NACP; 2013a). The overall HIV prevalence among pregnant women in 2013 was higher than that of the general population at 2% as compared to 1.37% (NACP, 2013a). Furthermore, there was a disparity in the regional distribution of maternal HIV: in 2013 there was a drop in the median prevalence of HIV among antenatal clients tested in the Sentinel Survey from 2.1% (2012) to 1.9% (2013). The Greater Accra region however, recorded an HIV prevalence of 2.7%, the third highest among the regions (NACP, 2013b).

Linking HIV positive women to a continuum of services, which helps to prevent the transmission of HIV to her baby, begins with HTC she receives within the context of ANC. The quality of the service thus rendered will determine the extent to which HTC is accepted and patronized by clients.

2.5. Quality of HTC

The quality of services rendered in the health sector has been a focus of many policymakers for several decades as it has become more apparent that advancements in the scientific and technical knowledge, increased resource allocation and the expansion of services alone cannot guarantee the high quality of healthcare which individuals and the society rightly expect (WHO, 2006). The provision of HIV services in the healthcare sector is not exempt from similar concerns as the 2010 WHO handbook for improving HIV testing and counselling services notes that “updated guidance on service provision is urgently needed as it is vital to ensure that the scale-up of HTC is not at the cost of quality” (p.1). One of the most basic definitions of quality is how good or bad something is (Bannerman et al., 2005). Quality of healthcare, as a concept, is a highly subjective and complex phenomenon as such various definitions have been espoused by different authors, which primarily reflect

the values and goals current in the medical care system and larger society of which it is part (Donabedian, 2005). In the healthcare context, a widely quoted definition of, quality is the American Institute of Medicine's (IOM) definition which states quality of care is:

The degree to which health services for individuals and populations increase the likelihood of desired health outcomes and are consistent with current professional knowledge... How care is provided should reflect appropriate use of the most current knowledge about scientific, clinical, technical, interpersonal, cognitive and organizational elements of healthcare (Pentescu, 2014, p.68).

Research on quality of healthcare studies by Donabedian has demonstrated that two elements are very important and feature in most definitions of healthcare, namely: the technical component which comprises the existing science and technology and an interpersonal side which relates to the application of the existing science and technology in actual practice (Pentescu, 2014). Similarly, the benchmark for assessing the provision of care to patients accessing HTC may be drawn from the WHO (2010) definition of quality testing which is said to occur when:

An HIV test is conducted without coercion, is correctly and safely performed using standard operating procedures, is confidential, gives a swift, valid and reliable result, and the provider/ facility participates in external quality assessment (EQA) (p.3).

The WHO also defines quality counselling as:

Non – judgmental, accessible and client centred. Counselling should increase knowledge of HIV prevention and help the client to focus on solutions for risk reduction. Quality counselling also results in appropriate, timely and acceptable referral, follow-up and treatment adherence (p.3)

Summarizing the perspectives of UNAIDS and WHO on quality HTC, McCarthy et al. (2014) noted that quality HIV testing is that which is conducted with the 3C's namely: consent (informed and voluntary); counselling (pre & post - test counselling) and confidentiality (of the entire process including the disclosure of the results). In addition to these, two further components were suggested being correct test results and connection to a continuum of care for positive individuals transforming the package into the 5C's.

From the policy maker and implementer's perspectives it is important to bear in mind that factors relating to the quality of care impact greatly on the patient's experience of care and utilization of services (Bannerman et al, 2005). Care must therefore be taken to ensure that both the expectations of the client and provider are met. Indeed some writers suggest that in respect to the quality of healthcare, the client's perception is even more important than the health care workers' perception of reality (Peprah, 2014).

2.6 Dimensions of Quality

According to Bannerman et al. (2005) an assessment of the quality of health services is based on the presence or absence of a number of attributes which are termed dimensions of quality, namely:

- (i) **Access** – the ability of an individual to reach and obtain services geographically, financially, organizationally and socio-culturally.
- (ii) **Amenities** – including material resources like infrastructure and measures to improve cleanliness, privacy and the quality of waiting.
- (iii) **Technical competence** – comprises the knowledge and skills needed to provide a service attained through basic training, on- the- job instruction and continuing education. It is important that competence is retained through regular updating of

skills and knowledge.

- (iv) **Efficiency** – refers to how well available resources are utilized to achieve desired outcomes.
- (v) **Effectiveness** – a service that produces desired results is termed effective and in healthcare this refers specifically to a reduction in death, disability, disease, discomfort and dissatisfaction.
- (vi) **Safety** – protecting clients and staff from any unintended/injurious harm or losses.
- (vii) **Continuity of services** – beyond being attended to by the same prescriber on each visit, continuity refers to well documented case notes that convey the patient’s history to any attending physician and the ability of a system to promptly refer clients to the appropriate level for care.
- (viii) **Interpersonal relations** – interactions between the provider and client(s) are especially important; in particular the attitude of staff to clients; the delivery of appropriate information and adherence to the patient’s charter are key to maintain good interpersonal relationships.

2.7. Perspectives of Quality

A health system may also be assessed from the perspectives of the stakeholders being patients, providers, health care managers and the community. Each category of stakeholder may prioritize a different aspect of healthcare and the system must be designed to meet the expectation of each within the resources available (Bannerman et al, 2005).

Though the number of facilities offering PMTCT services has increased from the inception of the program when only two facilities began as pilot sites till date, with 1656 ANC facilities offering services to almost one million women annually, a rapid upscale of

services without the foundation blocks of quality could be counterproductive (Balira, 2014; NACP, 2013; WHO, 2010).

It is interesting to note that while antenatal HTC has been explored to some extent in literature, the quality of HIV services is often overlooked in favour of the quantity of service provision or uptake. Researchers and policymakers are yet to elucidate a singular standard for assessing the quality of care for HTC; several researchers have adopted different means of assessing quality of services in different settings across nations (MacCarthy et al., 2014).

A systematic review undertaken by Minnie et al. (2009) to explore the quality of HIV testing, found that the acceptance of HIV testing could be influenced by the quality of counselling received and that while some women had a prior knowledge of PMTCT, they reported that their informational and emotional needs were often not met. Also of pertinence is the finding by these researchers that both professional and lay counsellors could be effective but that the latter require sufficient training, supervision & mentoring by professional health workers. This review appears to support findings by Chandisarewa et al. (2001) in Zimbabwe where an almost universal uptake of HIV testing and counselling (99.9%) was linked to the use of highly motivated community counsellors and professional counsellors. In that study a significant proportion of respondents, 98% said that the information provided by the counsellors had adequately prepared them for their test results and to manage their health thereafter. Other studies have identified some gaps in the quality of care rendered in HIV testing and counselling process that ought to be addressed. Mtumbuka, Maluwa, Malata, Pindini and Bultemeir (2012) observed that though PMTCT coverage and uptake of routine HTC was high in their study conducted in a district hospital in Dedzi, Malawi, there was a need for service providers to adhere to HTC guidelines to ensure the provision of quality services. From the provider's perspective, Evans and Ndirangu (2009) found that PICT not only greatly increased the workload and stress of

nurses but they also expressed a desire for further training and managerial support. In their study they found that a hierarchal and didactic nursing culture could also be inimical to counselling quality and could obscure lines between informed voluntary consent and coercion.

On the local scene, limited studies seem to support the need for improvement of the quality of HTC services as a means of boosting the patient's utilization and experience of healthcare in the short term, with the long term view of reducing infant and child mortality and maternal mortality as a result of providing timely PMTCT interventions (Kwapong, Boateng, Agyei-Baffour, & Addy, 2014).

In Ghana, the quality of care has often been linked to the uptake of services. Studies done by Nyzugyl et al. (2011) and Kwapong et al. (2014) in Wa and Kumasi respectively both seem to suggest that the uptake of HTC was negatively affected by factors related to the clients' perception of aspects of the quality of services rendered and seem to agree that inadequate/ inappropriate content of counselling received may be the main reason for some patients declining to accept an HIV test. Levey and Wang (2014) in their study also suggested that there were counselling gaps in the information on risk reduction strategies communicated to clients attending health facilities both in the private and public sector in Zambia.

2.8 The Private Sector as a key player

The contribution of the private sector to healthcare service provision in Ghana is largely undocumented (Development Institute, 2006). It is purported that the populace generally obtain about one to two thirds (30%-60%) of their healthcare services from this sector although the quality and provision of private healthcare is barely documented (Development Institute, 2006). In spite of the role the private sector plays in the health sector, the reactions of officialdom toward the participation of the private sector varies from ideological opposition to an eagerness to engage its potential to fill the gap between the demand and supply of healthcare (MOH, 2012). Proponents of a wider role for the sector in healthcare provision allude to a higher quality of care as compared to the public health facilities and this seems to be a commonly held perception among clients in Ghana (Obuobi, Pappoe, Ofosu-Amaah, & Boni, 1999). Studies on the nature of HTC service provision in particular, in the private sector, conducted elsewhere in Africa seem to suggest that it is on par or ahead of the public sector in terms of quality (Johnson & Cheng, 2014; Levey & Wang, 2014).

On the other hand those who are ideologically opposed to their role, express concerns over the consistency of the quality of service and the difficulty of regulation in this sector (MOH, 2012). While there is not much evidence in literature evaluating the performance of the private sector in comparison to standard guidelines in Ghana, a systematic review of research studies conducted by Basu, Andrews, Kishore, Panjabi, and Stuckler (2012) of healthcare provision in LMICs could have important lessons for Ghana. Based the WHO health system themes (accessibility & responsiveness; quality; outcomes; accountability; transparency & regulation, fairness and equity; and efficiency) Basu et al. (2012) found that private health facilities more frequently violated medical standards and had poorer patient outcomes. The same study found that the private health facilities had greater reported timeliness and hospitality to patients.

Documenting the configuration and quality of service is therefore imperative firstly because a significant proportion of the population access these services including the poor, and secondly, the adherence to national policies and guidelines across all parts of the health sector will ensure uniformity and strengthening of the health sector as a whole (Johnson & Cheng, 2014). This work will help to fill the information gap by elaborating on the quality of the provision of HTC in selected private health facilities in Ayawaso considering national guidelines and WHO guidelines as a framework for quality of services. This study also seeks to explore the patient and providers' perception of quality of the services rendered.



CHAPTER THREE

METHODS

3.0. Study Design

This research was a cross sectional, descriptive facility based study undertaken in Ayawaso sub metro. Both quantitative and qualitative research methods (mixed methods) were used.

3.1. Study location/Area

The research was carried out in Ayawaso sub-metro (Figure 3), one of the densely populated areas in the capital city of Ghana, Accra. Ayawaso has a population of 489,820 people, covers an area of 36.6 km sq. and stretches from the Ghana Institute of Management and Public Administration (GIMPA) boundary through the University of Ghana Legon in the North, to the Ring road in the South starting from Ako-Adjei interchange down to the Kwame Nkrumah Circle. In the East, it covers the area from the Independence Avenue to Apenkwa overhead bridge sharing boundaries with the Osu Clotey sub-district on the west – starting from Institute of Professional Studies (IPS) junction through 37 Military Hospital to Ako Adjei interchange (GHS, 2014; Yeboah & Johansson, 2010).

Ayawaso sub-metro is administratively divided into three sub metros namely; Ayawaso East; Ayawaso West- Wugon and Ayawaso Central. The sub metro has a variety of ethnic groups: Gas, Akans, Ewes, various tribes from the Northern sector and other nationals from other countries (GHS, 2013).

The occupational profiles of residents varies widely and includes: petty traders, artisans and civil servants of various categories. Civil servants of the low income group reside primarily in Nima, Maamobi, Accra Newtown, Alajo and Kotobabi. The middle and high income groups are found in places like Airport Residential Area, Roman Ridge, Kanda and

Legon. Some of the residents are engaged in small scale farming mainly between Alajo and Dzorwulu (GHS, 2013).

Ayawaso sub metro has the highest concentration of health facilities among the six sub-metros in Accra consisting of Government, Quasi- Government, Private Hospitals and clinics. There are 3 Government clinics, 2 quasi Government Hospitals, 7 private Hospitals, 64 private clinics including Dental clinics and 10 maternity Homes (AMA, 2006; GHS, 2013).

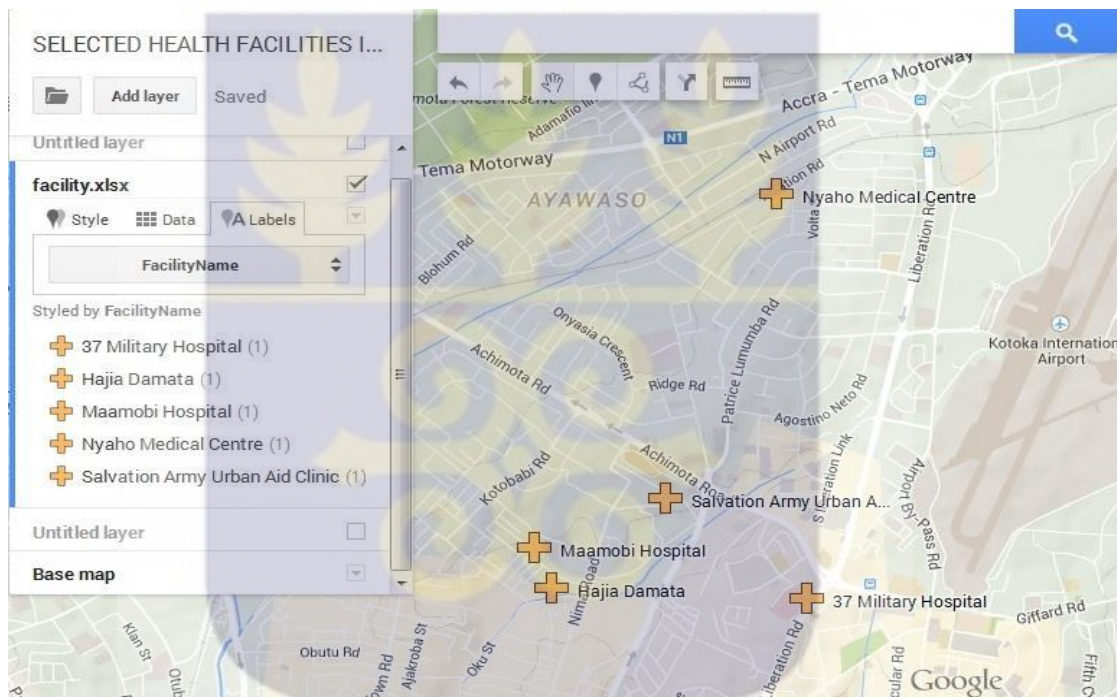


Figure 3: Map of Ayawaso sub-metro showing the location of the study sites: Salvation Army Urban Aid Health Centre and Hajia Damata Maternity Home

3.2. Variables

3.2.1. Dependent Variable

- Quality HTC

3.2.2. Independent Variables

- Client characteristics (socio-demographic characteristics).

Based on the conceptual framework, the following three categories were also assessed: structures, processes, and outcomes.

- Structures: access (number of clinic days), availability of job aids (e.g. clinical guidelines, patient record books & lab log books, IEC materials); leadership and supervision human resource management (number of personnel, last training, profession, competencies, number of counsellor meetings per quarter), policy standards and guidelines; infrastructure; supplies and storage; safety; referral system; records and information.
- Process: adherence to PMTCT guidelines & client –provider interactions.
- Outcome: client satisfaction & provider perceptions of HTC.

3.3. Study population

The study was undertaken among pregnant women attending ANC at selected private health facilities in Ayawaso sub –metro. Ayawaso has the highest number of health facilities in Accra (AMA, 2006). All pregnant women between 15-49 years of age, reporting at the clinic during the data collection period, who had completed at least one antenatal visit and consented to participate, were eligible to participate in the study.

3.4. Sampling

Sampling of the patients for client exit interview was done according to the procedure detailed below (section 3.4.2.2). The site manager or PMTCT coordinator was interviewed to determine the institutional capacity of the site to provide quality HTC according to National guidelines. The perception of health workers involved in HTC was assessed through interviews with six key informants involved with HTC. Pre –test and post –test counselling sessions were also observed during the data collection period based on client and counsellor consent.

3.4.1. Sample Size Calculation

Data covering a period of nine months was collected from the three private health facilities which are actively implementing HTC and report data to the district headquarters (Maamobi General Hospital). The data was then used to determine the sample standard deviation of the mean number of women attending ANC clinics monthly in Ayawaso sub-metro. This was calculated to be 0.3535 which was used in the sample size calculation for the mean, appropriate for a cross sectional study, given by the following equation:

$$n = \frac{\left(Z_{\frac{\alpha}{2}}\right)^2 \sigma^2}{d^2} \quad (\text{Israel, 2013})$$

Where:

n is the sample size

$Z_{\frac{\alpha}{2}}$ is the value on the standard normal distribution curve corresponding to the level of significance which is 5% and the corresponding value is 1.96

σ^2 is the variance of an attribute in the population (number of pregnant women attending private ANCs in Ayawaso)

d is the desired level of precision (or acceptable margin of error) which is 5%

Substituting these values into the equation, sample size is

$$n_o = \frac{(1.96)^2(0.3535)^2}{(0.05)^2}$$

$$n_o = 192$$

As the sample size is more than five percent (5%) of the total population of pregnant women attending the three antenatal clinics, the figure (n_o) can be corrected using the finite population correction factor. Thus the final sample size to be used for the study is

$$n = \frac{n_o}{1 + \frac{n_o}{N}}$$

where n = final sample size

$$n_o = 192$$

$N = 673$ is the population of pregnant women attending ANC clinic at selected sites over the 9 month duration

Substituting the figures, n is given by

$$n = \frac{192}{1 + \frac{192}{673}}$$

$n = 149.3$ which is approximated to 150

The number of pregnant women to be sampled from each clinic out of the total calculated sample size of 150, was determined using sampling proportionate to size based on individual clinic attendance. Data of clinic attendance for a nine month period (January 2014 – September 2014) was used to determine the proportions of women to be sampled in each clinic. Over the duration, total number of clients attending the selected ante natal clinics was six hundred and seventy three (673). The breakdown of clients attending each clinic over this duration was; Salvation Army Urban Aid Health Centre – 659; Hajia Damata Maternity Home – 14.

This data was used to calculate sample size distribution among the two selected facilities as shown below:

Salvation Army Urban Aid Health Centre

$$\frac{659 \times 150}{673} = 147$$

Hajia Damata Maternity Home

$$\frac{14 \times 150}{673} = 3$$

A total sample size of 164 pregnant women attending ANC clinic was achieved; 161 of the participants were from Salvation Army Urban Aid Health Centre and 3 were from Hajia Damata Maternity home.

3.4.2. Sampling method

3.4.2.1. Facility selection

Though all facilities offering ANC are supposed to offer PMTCT services within focused antenatal services, it was determined through a preliminary interview with the coordinator for HIV in Ayawaso and the HIV information officer that not all facilities offer this service. Some have not been taken through the training processes which is a prerequisite for offering service, and yet others which have received training are not actively implementing HTC in their ANCs or reporting data to the district headquarters. For this reason, study sites were selected purposively based on whether they are actively implementing PMTCT as evidenced by their reporting of monthly data to the district headquarters through the HIV information officer (monthly data so captured is reflected in the District Health Information Management System II). This study was restricted to the private health facilities which consented to participate in the study. Based on this criteria, two private health facilities were purposively selected: Salvation Army Urban Aid Health Centre and Hajia Damata Maternity Home.

3.4.2.2. Facility Based Selection of Clients

Based on facility attendance data for the first nine months in 2014, the number of women attending ANC at each of the two selected private health facilities was used to estimate the representative proportions of clients from each facility to be included in the total sample size (refer to section 3.5.1). Giving due consideration to the trend in client attendance observed from 2014 data and methods used by other researchers on HTC quality and client satisfaction, the respondents for the survey were selected consecutively during the duration of the data collection on ANC days until the required sample size was achieved (Chellaiyan, Raut, Khokhar, & Singh, 2014).

3.4.2.3. Inclusion Criteria

All pregnant women, aged between 15-49 years, who attended the participating facilities for ante natal care and had completed at least one ante natal clinic visit, irrespective of whether they have been tested or not in their current pregnancy, were eligible to participate pursuant to obtaining their written consent.

3.4.2.4 Exclusion criteria

All women who were not pregnant or women who were pregnant but withheld their consent were excluded from the study without any repercussions whatsoever on them; including the care they received from the facility.

3.5. Data Collection Techniques & Tools

3.5.1. Data Collection Techniques

The administration of semi structured questionnaires to clients (Appendix 3) and completion of a facility assessment tool (Appendix 1) by the interviewer was the data collection technique employed to gather quantitative data. In-depth interview techniques

were used for key informants (Appendix 4) and observations by the principal investigator (Appendix 2) was used to elicit qualitative data for the study.

3.5.2. Data Collection Tools

Data was collected using the following tools

- (i) A standardized WHO approved tool for site assessment which had been field tested in Kenya was adapted for the study and administered by the principal investigator to the facility manager / PMTCT coordinator. This was done to determine the presence or absence of structures available for HTC as a means of determining the site's institutional capacity for implementing HTC (Appendix 1). Quality of service was determined by assessing whether the facility had met the minimum standards (100%) for the twelve critical criteria and seventy – five percent (75%) for the other criteria.
- (ii) Passive observations of HTC sessions were also undertaken on the data collection days pursuant to agreement by the client and the counsellor to explore the content and process of HIV counselling and testing. In total, five observations were conducted in the two facilities with a checklist for quality of counselling procedure that was adapted from a WHO tool which has been validated and tested in other countries (WHO, 2010) (Appendix 2). Observations of newly enrolled PMTCT clients were undertaken by the principal investigator who had received training as an ART adherence counsellor and has counselled clients in this capacity for six years (2007- 2013).
- (iii) Client exit questionnaires adapted from WHO field tested and validated tools for PICT ANCs were administered to patients exiting the facilities on study days by trained research assistants and the principal investigator to determine their

perception of the quality of services rendered (Appendix 3). Data were collected on patient's socio-demographic status; sixteen (16) positively framed statements (rated on a five point Likert scale ranging from strongly disagree to strongly agree with a middle neutral point) were posed to assess the client's perception of pre and post-test counselling; informed consent, confidentiality, health worker's attitude, convenience and clinic environment. Client exit interview guides also included questions on the test offer and procedure as well as open ended questions about overall perceptions (with their likes/ dislikes serving as a proxy) with the service. Questions and statements were framed in a way to avoid asking clients directly about their satisfaction with service so as to avoid value judgments but rather to cause clients to express satisfaction through agreement with the performance/ conduct of certain key processes within the HTC clinic (WHO, 2010).

(iv) Additionally, interview guides employing open – ended questions were used to obtain qualitative key informant data from health-workers, based on their perceptions of the quality of service they provide (Appendix 4). The interview guide explored pertinent issues in the HTC process including: counselling, test and referral procedures; consent and confidentiality; training and supervision/support well as provider challenges. Questions for the interview were developed based on similar studies carried out in Ghana, Uganda and Zimbabwe (Kwapong et al., 2014; Rujumba, Neema, Tumwine, Tylleskär, & Heggenhougen, 2013; Sibanda et al., 2012). Interviews were recorded using a voice recording device.

3.6. Pilot Study

To ensure the reliability and validity of the study, a pilot study was undertaken in Maamobi General Hospital by the principal investigator to assess the completeness, clarity, brevity

and ease of comprehension of the questions on the study instrument. Ten (10) women attending the ante natal clinic were randomly sampled after their consent was obtained. Subsequently, the research instrument was fine tuned to improve clarity.

3.7. Quality Control

Activities detailed below were undertaken to ensure the quality of data collected. A one day intensive training session was held for three research assistants to train them on the administration of questionnaires to clients. The research assistants were all university graduates; holders of Bachelor's degrees in nursing; fluent in English and Akan. The training covered a comprehensive explanation of the research and data collection process. Topics covered with the research assistants included objectives of the study and a summary of the PMTCT policy using the NACP 2010 guidelines. Copies of the relevant sections of the guidelines were given to the assistants; these sections included definition of some key terms like HIV testing and counselling, PMTCT and MTCT. The protocol, techniques and courtesies to be observed in interviewing were also covered in detail as well as the process for obtaining informed consent from study participants. The study instrument for the client exit interview was reviewed and research assistants were encouraged to ask questions on the aspects that were not clear to them.

Furthermore, the validity and reliability of the data collected was ensured by checking information gathered daily for completeness and correctness before data entry. Recorded interviews with key informants were compared with notes taken by the principal investigator to cross check for accuracy and validity.

3.8. Data Processing and Analysis

3.8.1 Quantitative Data Processing and Analysis

Quantitative data collected was checked for correctness and errors on a daily basis before entry into STATA 13. Daily debriefing sessions were held with research assistants to get and give feedback on interview techniques and procedures. The facility assessment tool was processed according to its accompanying scoring guidelines, and responses from the ‘critical’ and ‘other’ sections weighted. According to the scoring guidelines, for HTC quality to be termed adequate, the critical section and the other sections had to score 100% and 75% or more respectively. Pre - numbered and coded client exit questionnaires were sorted, and kept in labelled files according to the facility from which they were collected. Questionnaires were coded before entry into STATA 13 for analysis; data was presented as percentages and cross tabulations.

3.8.2 Qualitative Data Processing and Analysis

Though it would appear there are many, varied definitions of qualitative research a widely applied definition proposed by Cresswell (2007) helps to contextualize the salient points of the entire process; he suggests that qualitative research begins with assumptions, a world view and the study of research problems by inquiring into the meanings individuals or groups ascribe to social or human problems; this inquiry is undertaken in the natural settings of research participants and involves an inductive approach to data analysis. Qualitative data gathered for this work included observation check lists and interviews with six purposively selected health workers involved with HTC. Respondents selected for this study include four community health nurses, one nurse midwife and a nurse assistant.

Checklists used to observe counselling sessions were checked for accuracy and validity immediately after each observed session. Information gathered from checklists was described in the results to elucidate the process involved in counselling and testing.

Data gathered from key informant interviews were recorded digitally on a recorder. Information gathered was transcribed using Microsoft word. The transcripts were checked for accuracy in comparison to field notes taken by the principal investigator. The interviews were ordered and given codes to ensure interviewee anonymity. Initial readings of the transcript helped to identify patterns, develop a coding framework and form themes based on study objectives. Data was manually sorted according to relevant codes and themes using a matrix framework in Excel. Appropriate quotes were subsequently used to highlight certain themes in the result section such as structure (institutional capacity to implement HTC); process of implementing HTC and client satisfaction.

3.9. Statistical Methods

3.9.1. Facility Assessment

Data collected from the facility assessment tool were summed according to accompanying guidelines and the capacity of the institution to provide quality care was described as either ‘Good’ (minimum standards met) or ‘inadequate’ (minimum standards not met).

3.9.2. Client perception of quality of HTC

The socio- demographic characteristics of the respondents of the client exit interview were tabulated. Data collected from the client exit interviews were described using appropriate tables displaying percentages and proportions showing client perceptions of various aspects of service such as: overall perception of counselling content; benefits of testing; counsellor’s listening skills and ability to communicate information in an understandable manner. In order to further explore the association between different variables such as age, education, marital status, age of current pregnancy and the patient’s perception of quality of care, a new composite variable termed ‘Quality of care’ was developed. Sixteen questions, all on a five point Likert scale, which purported to assess client perception of quality were

each checked for validity and interrelatedness by computing the Cronbach's alpha (a numerical coefficient of reliability) (Santos, 1999).

According to Santos, Alpha coefficients range in value from 0 to 1 and may be used to describe the reliability of factors extracted from multi-point formatted questionnaires or scales. Furthermore, the higher the score, the more reliable the generated scale; 0.7 is frequently used in literature as an acceptable reliability coefficient though lower thresholds are sometimes used (Santos, 1999). In exploring the underlying construct 'Quality of Care' the threshold was set at 0.7, all sixteen items were found to be higher than this threshold and were accordingly included in the summated scale. Cross tabulations were done using logistic regression to determine the associations between 'Quality of care' and all other variables. Significant associations were tabulated. Suitable quotes which complemented or explained quantitative data were included to further explain quality of services rendered.

3.10. Ethical Considerations/Issues

Ethical clearance for this study was sought from the Ghana Health Service Ethical Review Committee (ERC) and the National AIDS/STI Control program.

Consent was sought from site managers to carry out data collection in selected facilities. Written consent was also obtained from all interviewed health workers and clients using informed consent forms. Informed consent was also obtained from clients aged 15-18 as well as from their parents/ guardians.

Researchers explained to respondents that the decision to participate in the study rested solely with them; no coercive measures were used to enrol study subjects. Neither were there any

repercussions for the care they received at the facility as a result of their declining to participate.

The study procedure to be used was communicated to facility managers. They were informed that the study procedure consisted of an interview with the PMTCT coordinator to complete the facility assessment tool, observations, in depth interviews and an exit survey. The relevant study procedure for the collection of data using an interviewer administered questionnaire on client satisfaction and perception of quality of care was explained to the participants in detail. The study procedure for the key informant interviews was also explained to the selected key personnel.

The expected benefits of participating in the study, as relates to its contribution to the extension of knowledge total quality improvement was communicated to participants. Participants were informed that the expected inconvenience to them would be in the form of time taken to answer the interviewer's questions.

Confidentiality and anonymity of the respondents was maintained throughout the research process. Data collection tools were numbered and coded to preclude the use of respondent names.

Caution was taken to ensure data collected was secure. Both hard and electronic copies as well as recorded interviews were kept securely in a locked file cabinet with access to the data set limited to the principal investigator and study supervisor. There was no compensation or payment for the subjects in this study.

3.11. Study Limitations

The main limitation of this study relates to the case study approach selected (using two purposively selected facilities). This approach limits the generalizability of results and

therefore broad, categorical statements may not be made as to whether these findings apply to all private health facilities in Accra. This limitation, however, may be mitigated by the achievement of study ‘reliability’. Reliability is the extent to which details and results of a case study are sufficient and appropriate for a policymaker, manager or healthcare worker in a similar situation to relate his decision making to that described in the case (Bell, 2005). Accordingly reliability supersedes generalizability and is the ultimate aim of a case study.



CHAPTER FOUR

RESULTS

4.0 Introduction

This chapter presents a summary of the key findings from the data collection methods.

4.1 Participants' Background Characteristics

The background characteristics of the respondents for the client satisfaction survey are presented below (Table 4.1). A total of one hundred and sixty four respondents were recruited for the study from the two study sites. The socio demographic characteristics of the respondents (n= 164) are presented in Table 1 below, with the majority of respondents (59.76%) falling in the 20- 29 age bracket. Thirty one point one percent (31.10%) were within the 30- 39 age bracket; five point four nine percent (5.49%) were adolescents in the 15- 19 age bracket and the least respondents (3.66%) were aged over forty years old. The majority of participants were married (71.34 %), had attained a secondary school level education (55.49%), were Christians (60.37%) and are self-employed (64.53%). The majority of women had had at least one previous pregnancy (30.67%) and the majority (27.44%) had had at least three ANC visits in their current pregnancy.



Table 1: Socio-demographic characteristics of participants

Variable	Frequency (n=164)	Percentage (%)
Age (Median age-group = 30-39)		
15-19	9	5.49
20-29	98	59.76
30-39	51	31.1
40 ≥	6	3.66
Marital status of participant		
Single	47	28.66
Married	117	71.34
Education of participant		
No formal	25	15.24
Primary	46	28.05
Secondary/Technical	91	55.49
Tertiary	2	1.22
Religion of participant		
Christian	99	60.37
Muslim	65	39.63
Employment status of participant		
Not employed	40	24.39
Self-employed	106	64.63
Private sector	15	9.15
Public sector	3	1.83
Number of previous pregnancies		
No previous pregnancy	30	18.4
One previous pregnancy	50	30.67
Two previous pregnancies	47	28.83
Three previous pregnancies	26	15.95
Four or more previous pregnancies	10	6.13
Number of ANC Visits (3.30 ±1.44)		
One	15	9.15
Two	35	21.34
Three	45	27.44
Four	42	25.61
Five	14	8.54
Six	8	4.88
Seven	4	2.44
Eight	1	0.61

4.2 Key informants and client codes

In the subsequent presentation of results, codes are used to identify key informants/ health care workers (HCW) and clients, whose quotations from open ended questions included in the questionnaire, are used to highlight key results. The guide to the coding approach is explained in Table 2.

Table 2: Key informants and client codes

Serial Number	Key Informant (HCW) code	Interview Number
1.	HCW 1	First Key Informant
2.	HCW 2	Second Key Informant
3.	HCW 3	Third Key Informant
4.	HCW 4	Fourth Key Informant
5.	HCW 5	Fifth Key Informant
6.	HCW 6	Sixth Key Informant
Serial Number	Client/ Respondent code	Interview number
1.	Respondent code # 12	12 th exit interview
2.	Respondent code # 14	14 th exit interview
3.	Respondent code # 43	43 rd exit interview
4.	Respondent code # 63	63 rd exit interview
5.	Respondent code # 124	124 th exit interview
6.	Respondent code #138	138 th exit interview
7.	Respondent code # 139	139 th exit interview
8.	Respondent code # 140	140 th exit interview
9.	Respondent code # 163	163 rd exit interview

4.3 Assessment of Institutional capacity to provide HTC

A summary of the sites' institutional capacity to provide HTC of adequate quality is summarized in Table 3.

4.3.1 Minimum Critical Criteria

To provide the basic package of HTC services certain basic requirements must be met. Trained HTC counsellors, rapid test kits and the associated logistics must be available as well as a designated space in which the activity can be carried out discreetly. Client records would also need to be stored in the same location securely and the advent of intrusions controlled during the counselling process. Both facilities had the minimum requirements for the implementation of HTC activities. Critical criteria for the provision of service were met: at least two trained counsellors were available on site; access to HTC clinics spanned five or more days; secure cabinets for storing client records were available as well as the availability of appropriate waste disposal mechanisms for the bio hazardous waste and an updated client register. Additionally both sites had the first response rapid test kits with suitable expiry dates in stock as well as Oraquick test kits for confirmatory tests.

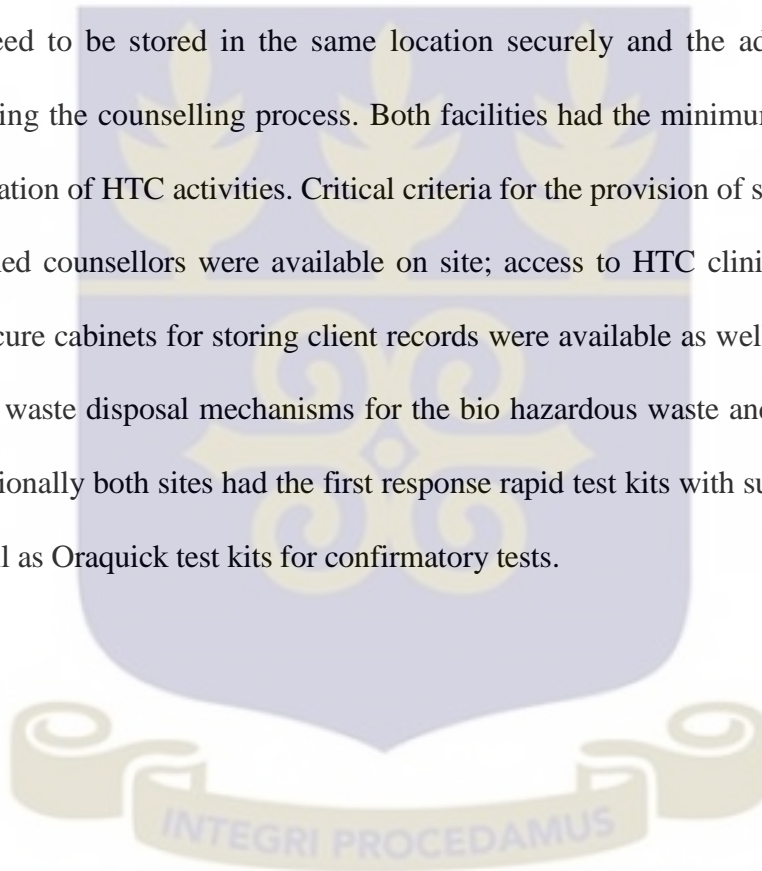


Table 3: Results of Facility Assessment

Domain[‡]	Facility 1	Facility 2
Critical criteria	✓	✓
HTC services available 5 days a week	✓	✓
Two or more counsellors available	✓	✓
Structure		
Leadership and supervision	✗	✗
Human Resource Management	✓	✗
Policy standards and guidelines	✗	✓
Infrastructure	✗	✓
Supplies and storage	✓	✓
Safety	✗	✓
Referral system	✓	✓
Records and information	✓	✗
Information, Education and Communication (IEC) Materials	✗	✗
Process		
Adherence to guidelines	✓	✓
Continuous quality improvements	✓	✗
Results		
Indicator-based performance	✗	✗
Clients' feedback	✓	✗
Provider appraisal	✓	✗
Overall institutional capacity		
Critical criteria	100%	100%
Other criteria	67%	70%

Domain[‡]: For minimum standards to be met, critical criteria questions must score 100%, and all other questions must score $\geq 75\%$

4.3.2 Structures

In addition to the critical criteria, other structures in terms of: leadership and supervision, human resource management, policy standards and guidelines, infrastructure, referral systems, supplies and storage, safety plans, record keeping systems and IEC materials should

all be adequate. Proper management of these aspects contribute to ensure the smooth running of a seamless program. Both facilities were found to be adequate in terms of their supplies and storage facilities.

4.3.2.1 Leadership and supervision

It is worth noting that both facilities had inadequate leadership and supervision structures in place as per the assessment; regular systems for HTC and quality assurance site meetings were not in place. Furthermore both reported the absence of regular supervisory visits from the district level. This may have informed the general perception of some health care workers that support from the district and national levels were inadequate in different respects. One respondent shared her opinion of the support received:

“...it is very low and bad in the sense that we are here, apart from the kit that they give to us, nothing comes. It was world AIDS day, and the national organized something, we went there, we were in our uniform whereas the market women who came there were wearing T-shirts. We were in our uniforms and we were advocating HIV meanwhile what shows?... Those who are not supposed to wear it are wearing it and we the health sectors, we don't have it so, for support, we are not getting anything from them just the kit that they give that's all.” (HCW 2).

Some respondents were of the view that District level visits were infrequent.

“It's once, once. I may say once in a year...” (HCW 3)

4.3.2.2 Human Resource Management

In relation to human resource management, lists of HTC workers, their registration, qualifications and job description were not available in one site but was accessible in the other. Health care workers undertook nursing tasks in addition to PMTCT HTC duties at both

sites. The staff strength in one facility however, was such that certain staff could be assigned exclusively to HTC duties on clinic days; this was not the case in the second facility.

“I’m a senior community health nurse. I do family planning counselling as well as PMTC counselling.” (HCW 2).

4.3.2.3 Policy Standards and Guidelines

In regards to availability of PMTCT policy standards and guidelines, it was observed that both sites had copies of the PMTCT training package for healthcare providers (Participant’s manual) as well as the PMTCT hand book for HTC providers (2012 edition).

There were no displayed protocols on counselling and testing available in-site. Physical infrastructure was inadequate in facility one and adequate in facility two. From observation, it was noted that the counselling room in one facility was co-located with the RCH unit with a partition separating the room into two sections. The HTC section was directly behind the general OPD with a porous wall separating them. The setting, therefore, was not ideal for the conduct of HTC. As one respondent stated:

“Sometimes too the privacy is not enough so some of them feel shy. And even after counselling them... if you want them to even say something that you’ve already told them ... some cannot still say it. It’s too small. You know we are sharing. Family planning is here, we are here; there’s no privacy. Everything is open...except these curtains. Even if you talk and someone is outside the person will hear. So if they could get a separate room for us it will be better.” (HCW 5)

4.3.2.4 Referral Systems

The PMTCT strategy in Ghana specifies four components that must be included: primary prevention of HIV infection; prevention of unintended pregnancies among women infected

with HIV, prevention of HIV transmission from HIV positive women to their children and the provision of treatment, care and support. Both facilities surveyed had not been accredited to provide treatment (anti-retroviral medications) therefore, clients found to be HIV positive are referred to the district health headquarters or other major hospitals for further treatment. From the results of the institutional assessment both facilities had adequate referral systems in place. In some cases health workers indicated that they contacted clients after referrals to preclude loss to follow –up.

“We fill a referral form for her, then we take her contact number, we ask her to go there, when she gets there she should flash (a call which is terminated before the respondent receives the call) us so that we do the follow up... If the test they conducted there too was positive, then we still have to give them some inspirational words to calm them down. We realized that some of them don’t go, because of the fear, they don’t go even though we do counsel them well... (HCW 2)

4.3.2.5 Counselling Aids

Clinical programs such as PMTCT involve extended sessions during which extensive health information is delivered to clients who may not be familiar with the terms and disease. It is quite helpful therefore to give handbills, leaflets and other patient information to patients as a means of reinforcing the message and sensitizing others when the client goes back into the community. Posters were displayed in one facility but facilities lacked IEC materials for client education.

4.3.3 Staff roles

Both facilities had co-opted trained staff into the PMTCT HTC roster. Whereas in one facility all the counsellors are nurses by profession (with post - secondary education), in the other facility, there are trained nurses and one nurse assistant (lay counsellor) involved in the

delivery of PMTCT services. All the staff involved in HTC, except for one, are fulltime workers and routinely counsel patients and perform the rapid test for the clients. Both facilities have laboratories attached however, the PMTCT coordinators indicated that both initial and follow up testing was conducted in the PMTCT office. Counsellors carry out the test using the First Response Rapid Test kit and OraQuick test kit for confirmation. Some respondents explained their roles within the HTC clinic:

“... We give education to mothers, especially pregnant women on HIV/AIDS, then do the testing and then give... the pre and then the post-education to them. Also we do referral when cases are positive.” (HCW 3)

“When a client comes as a pregnant woman, the registration, I explain to her what is PMTCT, and its benefits to she herself and the foetus in the uterus.” (HCW 6)

4.3.3.1 Staff Training and Experience

As with most other fields of clinical practice, the training of staff both through workshops and practical experience is invaluable in building up essential skills. The number of years of work experience among the key informants varied from one year to approximately ten years. Most of the counsellors involved in HTC had not been through the foundational training organized by the NACP/ GHS but had received on the job training from colleagues who had attended the NACP/ GHS training session. A respondent shared her training background:

“Actually when we came, there was one woman ... she received the training. She went for the training but we learnt under her. But for now we have not been to any training.” (HCW 3)

Only one of the key informants had attended an initial training session organized by the GHS and NACP. Some of the healthcare workers reported that they had benefitted from refresher courses to update their knowledge as exemplified by one worker's response:

"... At times too, some people come for monitoring. When they come, they sit with us and talk to us about how to do it; how to talk with the clients..." (HCW 4)

Other informants however, expressed their desire to upgrade their skills through further training:

"It's okay but all the same, since the world is dynamic and things change,..errm, I would have wished I have another program to refresh my knowledge." (HCW 6)

Another health worker said:

"I can say that, when I talk to people, they do listen to the way I present issues to them, I think- if I go for the refresher course, it will be better than how I am doing now...it could have been better than this. So if I'm to grade myself out of 100, I'll give myself, at least 75 which to me is okay."(HCW 2)

4.4 Process

The process by which healthcare workers conducted PMTCT HTC was observed – a total of five pre and post-test counselling sessions were observed. Three purposively selected counsellors were selected for observation based on the unit's rotation schedule for the two observation days. In both facilities counselling was undertaken on an individual basis. In one observed session the client's spouse was in attendance however he was not tested. Due to space constraints it was impractical to observe the sessions unobtrusively however the

counsellor explained the presence of the researcher in the room and obtained verbal consent of the clients for the observations.

4.4.1 Content of Counselling Sessions

4.4.1.1 Pre-test Counselling

The way and manner in which the counsellor welcomes the client and subsequently conducts the session in a friendly, non- judgmental way that increases the client's knowledge of PMTCT is pivotal to the client's experience of HTC. From observation, the majority of health workers had a fair idea of the concept of routine HTC for pregnant women as reported below:

“Routine counselling and testing is the counselling that you do for a person... for the pregnant person, she has to do the PMTCT test twice, that is, within the first trimester, and then when the person gets to the third trimester...” (HCW 2)

Another respondent had a different opinion of routine counselling and testing:

“It's not routine as such, because, you know when we look at WHO clients rights, PMTCT is not routine, that is why you counsel the person first, for her to understand what you're going to do for her...though she is supposed to undergo it, not every client that comes here accepts to undergo the test, so me I don't call it routine.” (HCW 6)

Health care workers also had a good idea of the process involved in pre and post - test PMTCT counselling for pregnant women. Recounting the whole sequence one key informant said:

“You first of all establish rapport, you talk to the client and make sure the client is okay. Then secondly, you make sure that whatever you are going to say or tell her is confidential.

You make sure you establish that side. Then you explain; you ask the client maybe she knows something about HIV/AIDS. They've heard a lot of things about HIV so some will be able to tell you... some too they wouldn't tell so you have to educate them on the mode of transmission, the testing and everything. After that you test them...when they come for the result you tell them their status- is it positive or is it negative?"(HWC 5).

Overall, counsellors in the sessions observed did not vary their delivery; they gave a warm; non- judgmental reception to clients, engaged them to determine their knowledge of HIV in pregnancy and gave them relevant information on the condition and how to prevent it. All counsellors demonstrated effective listening skills, and communicated in simple layman's terms; Even though most of the talking and communication was done by the counsellors, they routinely got feedback and encouraged clients to ask questions.

4.4.1.2 Testing Process

In both facilities, a sequential test algorithm was followed as per National Guidelines with same day results. In all sessions observed, permission of the client was sought before the test was carried out however clients were not informed of the option to decline the test. This mirrored the information gathered from the client survey in which the majority (80.49%) of clients indicated they were not informed of the option to decline. The majority of clients sampled confirmed that they agreed to be tested (n=163). The issue of confidentiality was not raised in all sessions observed but most of the clients sampled (67.68%) confirmed that it was discussed. The sessions observed followed the correct rapid testing algorithm according to the policy guidelines: protective gear was worn, and the test was done with minimum discomfort to the clients. In all cases test results were negative and therefore there was no need to perform a second confirmatory test. All clients sampled in the exit interview also reported negative test results (100%; n = 162).

During the observed sessions, clients were told how to read results and encouraged to read the results on the cassettes themselves to confirm the counsellor's diagnosis. The process by which tests are carried out and read by the counsellor and client was described:

“... I make her understand that I will take just a drop of blood and place it on the cassette. Within some few minutes it will record and if she sees two lines it means it is positive and if she sees one line it means it is negative. And that one she herself has to explain to me. So she will tell you that I've seen one line so I'm not positive or I've seen two lines so I'm positive based on what I've taught her.” (HCW 6)

4.4.1.3 Post – Test counselling

Post - test information given to clients was usually succinct and included the clients test result and advice on risk reduction. To HIV negative clients, key informants highlighted the key information points on risk reduction that would be communicated:

“When the client tests negative, we still advise the client, that now she is negative, it doesn't mean that she's safe from HIV. So another six months' time she will come and do it. In this case too, we advise the client to use condom, because most husbands they sleep outside with some women So when you explain to the client like that, she understands it very well. So when the six months reach, she comes herself to test again.” (HCW 4).

Another informant highlighted the need to explain the “window period concept” to clients. This is the time period, usually three to six weeks, during which antibodies used to confirm the presence of the HIV virus are still being produced by the body and are undetectable in the blood. As a result of the window period, a client who initially tests negative to HIV could test positive a few weeks later; it is for this reason the 2010 National Policy guidelines

encourage testing for the pregnant woman in the first trimester followed by a repetition of the HIV test in the third trimester of pregnancy. In response to how she handles counselling a client with a negative test result, one counsellor said:

“if she’s negative, I counsel her that, though I have already indicated that if you see one line it means negative that does not mean that you are completely out... because we have the window period...so after three months and six months you have to come and do the test again.” (HCW 6)

On the other hand, receiving a ‘positive’ HIV result is a devastating occurrence in the lives of many people as the illness is still shrouded in secrecy and patients are often stigmatized by families and their community. It is therefore to be anticipated that communicating such results will draw deeply on a vast array of the counsellor’s grief and shock management skills. A respondent related how she handles patients with positive results:

“When it comes to two like this, it means that the client has it, so she herself will start even panicking that she saw two lines and she will ask you that does it mean that she is having it? Then you will tell her that yes she’s having it but ...we have drugs to protect her...the person will cry and cry and cry, but you have to advise her so that she will be cool.” (HCW 4)

Another respondent shared her experiences with relaying positive test results:

“Fine, if the client’s test is positive for the first response, we run an OraQuick on the client. After that, if it’s also positive, we sit that client down and give effective counselling ... Because a client may panic when he or she knows that I am positive...after counselling the client, we give a referral note to the client.” (HCW 1)

4.4.1.4 Other Post – test Information

Post-test counselling is a very important part of the HTC service. In this session it is expected that counsellors would provide information to HIV negative women to help them remain uninfected. To HIV positive women, counselling should: help them make informed decisions about their pregnancy and received appropriate and timely MTCT interventions. In the observed sessions, yielding/ granting sexual intercourse to the client's partner as a means of ensuring partner faithfulness was raised as a risk reduction strategy. Clients were counselled more emphatically to avoid sharing blades, sharp objects and toothbrushes. One respondent highlighted some information that is relayed during the post – test session on risk reduction:

“If it is negative, you tell her that, fortunately for her, she has not got the virus in her in that sample ... and that does not mean that she cannot get it ...that doesn't mean that she should live her life anyhow. At this point, the virus is there, a little carelessness that you will be, you'll get it. Especially, using people's sharp objects; blade, cutlery set and stuffs like that.”

(HCW 2)

The client survey also explored the client's recollection of the key points covered during the post- test counselling session. The results are presented in figure five.

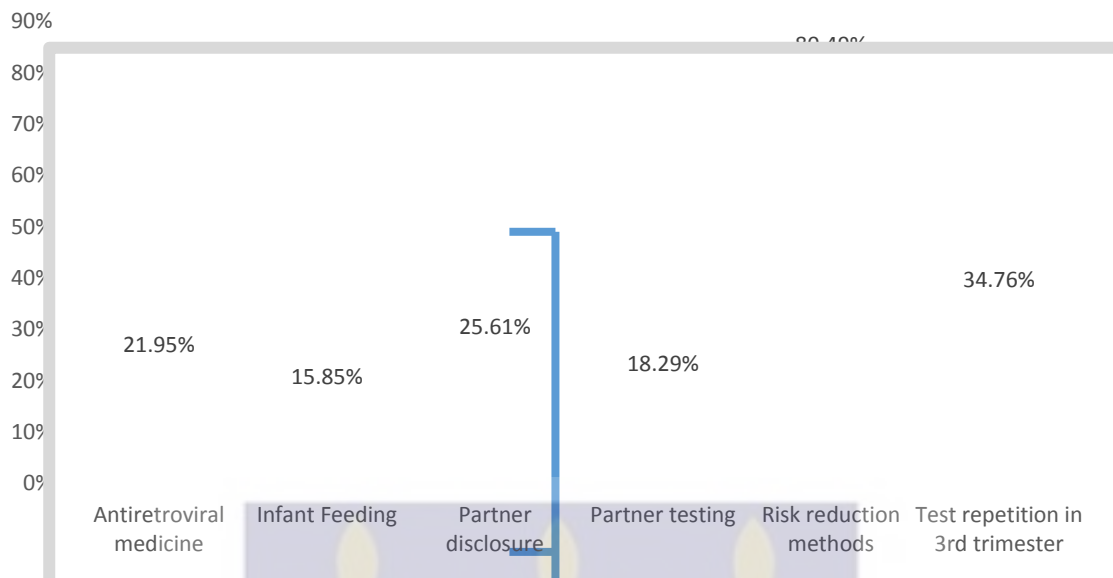


Figure 4: Topics covered in counselling session

Results from the client survey corroborated the observation that post –test information centred mainly on risk reduction strategies with 80.49% of the respondents reporting on it. Information on third trimester repetition of the test was reported by 34.76% of respondents. A smaller number of respondents surveyed reported that they were given information on other components of PMTCT namely: antiretroviral medications (21.95%); partner disclosure (25.61%); partner testing (18.29%) and infant feeding (15.85%) respectively.

4.5 Informed Consent

According to the National PMTCT Guidelines, informed consent is one of the guiding principles of this service. In this context written consent is not required but it is the responsibility of providers to ensure that: clients have a clear understanding of the benefits of testing, their testing decision is respected and they are informed of their right to refuse if they choose. From the survey, most clients (80.49 %) were not aware that there was an option to decline or opt out of HTC (Figure 4). One of the key informants explained their perspective of the clients’ right to consent or to opt out:

“Over here, no! When it comes to pregnancy test, in PMTCT, that one is compulsory for every client according to the, erm, protocols. Anyone that is pregnant that comes here, we check since we are trying to... to eradicate HIV/AIDS in Ghana.” (HCW 1)

On the other hand almost all of the clients sampled (96.95%) expressed satisfaction that their testing decisions were respected by health workers.

Though the incidence of patients declining tests was nil among clients who were surveyed (n=164), the prospect that clients who decline could still be tested without their consent was admitted by counsellors. A respondent relayed:

“We tried and tried but she did not. So we took her antenatal sample and tested it and it was negative. So we didn’t tell her anything because she did not want to do it. Some too, once they make up their mind, they won’t do it no matter what you do. At times we ...we run the test for her but we don’t tell her about it since she doesn’t want to do it.” (HCW 4)

Another informant shared her views on how vacillating patients may be convinced to test:

“... is just that some people are nervous, if you tell them to come and do the test they are nervous. You calm them down, and tell them this is nothing. Now Ebola has taken over the country so HIV/AIDS is no more having any scare in this country again. It’s just a normal sickness. So we calm them down and talk to them and they are okay.” (HCW 5).

4.6 Health care workers’ perspective of quality of services

The healthcare worker is an important conduit for the delivery of health care services and the experience of the clients is often shaped by their interactions with the provider. The in depth interviews helped to explore views of key informants on the quality of services they render. One respondent highlighted the constraint of inadequate counselling space (structural

constraints) as a barrier to the provision of optimal service:

“I’ll not condemn it totally, it’s a small clinic so I’ll not condemn it but I think a great change has to come in.... it should have its own unit... You come in and people are also doing family planning, people are doing HIV... because of that, even the time frame for the counselling is limited.” (HCW 2)

Periodic challenges with the supply of test kits was also a concern for some of the respondents:

“... at times, we are ready to work but there is no kit. We go, they tell you that the kits are finished. We had a case that we went for a kit, the kit had expired and we were told to come and use the kit like that and we were like we can’t work with a kit that is expired. Already, reading the thing and giving the person positive result is something...so we didn’t use the expired kit.” (HCW 2)

Most of the healthcare workers related that one method they used to check the quality of their service was to seek client feedback on previous sessions. The ability of the client to retain the health information message would then be an indicator that the session had achieved its objective. Counsellors expressed concern that client- related factors such as language barriers, and distractions sometimes hampered the free flow of information and the quality of the counselling session. A key informant said:

“Sometimes their language is a barrier. Then, educational level... I think the channels should be similar.” (HCW 3)

Another respondent said:

“Mmm, sometimes a client may come here, and you’ll counsel her for the first time and when she is coming for a second test, you ask, ‘Maame, wobaa first time no, yε kaa dε n kyere wo? Menkai oo’, (Madam, when you first came, what did they tell you? I cannot remember....), how would you feel? You’ll feel bad that you’ve given a counsel and that the person has forgotten since it is free over here. If the person has paid for it, the person would have remembered what has taken place between the service provider and then the client...”

(HCW 1).

4.7 Health Care Workers’ Assessment of Clients’ perception of service

On the whole health care workers seemed to agree that the service was beneficial and that patients appreciated the fact that it attracts no charge as well as the quality of care received.

One counsellor shared her views on the client’s perception of the service:

“It’s okay! Especially where they are not paying anything, you know, Ghanaians like most things to be free-free, so it’s okay. And, they do understand the reason why they have to do it at least to save the unborn baby and themselves. It helps them put much trust in their partners and when they realize that they are negative, oh then it means oh, my husband is not going behind me...” (HCW 2).

As one key informant reported:

“Oooh... they don’t have any bad perception about the services we offer... I’ve never seen any client refusing HIV testing and counselling. They always come.” (HCW 5)

Their views seemed to agree to a large extent with the clients’ reported perceptions of quality of care which were explored further in the client exit interview.

4.8 Outcome

In this survey client satisfaction was used as a proxy to assess the clients' perception of the quality of care. The results of the client satisfaction survey are presented in table 4.

4.8.1 Client satisfaction

Client satisfaction with different aspects of the counselling service was assessed. A significant majority of clients expressed high levels of satisfaction with the pre-test counselling session (92.07%); their understanding of the benefits of testing (90.85%); information imparted about HIV/ STIs (89.02%) and the listening skills of the counsellor (92.07%). Some clients shared the following views on the aspects of service they were most satisfied with:

“The counsellor welcomed me and spoke to me politely.” (Respondent code #12)

“I like the fact that the test was done. It is good all pregnant women are tested to prevent transmission to children.” (Respondent code # 14)

“The education given on HIV testing and counselling was good.” (Respondent code # 124)

4.8.2 Consent

Most clients (80.49%) expressed dissatisfaction with the counsellor's communication of their right to decline the test if they wished. Conversely, the majority of clients were satisfied (96.95%) that their testing decisions had been respected.

4.8.3 Confidentiality, Health worker attitude, Privacy and the Environment

In this study 'privacy' involved a counselling service with only the counsellor and the counselee (with or without her spouse) in attendance in a reasonably secluded office, with

minimum intrusion from outsiders. Significant numbers of clients (67.68%) expressed satisfaction with the overall confidentiality of their session, in particular: the counsellor's friendliness (99.39%), the health worker's ability to maintain confidentiality (93.9%) and privacy during the session (95.73%). In regards to the convenience of the counselling session, majority (96.34%) of the clients expressed satisfaction with the estimated time they spent waiting to see the counsellor for the pre - test session as well as the duration of time they spent with the counsellor in – session (92.09%).

Sampling of clients' views led to the following respondent observations on health worker attitudes and convenience:

“The service is good because if you are not well or have HIV, they will tell you. They are very patient with pregnant women so it is good. When you come early you will be seen early.” (Respondent code #139)

“When you go to some places, the nurses shout at you but it is not like that here which is why I like it.” (Respondent code # 138)

Furthermore, the majority of the client's surveyed, were satisfied with the general environment in the clinics attended (95.71%). One client, however, expressed her dissatisfaction:

“Though it helped me know my HIV status, there was not enough privacy.” (Respondent code # 63)

Yet another client expressed her views on the environment:

“The environment is not conducive.” (Respondent code # 43)

A summary on clients' satisfaction with the different components of service is presented in table 4.

4.8.4 Waiting Time

Waiting time in this study was defined as the client's estimate of the time spent waiting from the end of their OPD consultation with the nurse / midwife until they enter the PMTCT HTC office for counselling services. Table 5 shows the clients' estimated waiting time to see counsellors and their satisfaction with the duration of the counselling time. The majority of respondents, 70.99%, were of the opinion that they spent not more than fifteen minutes waiting; 25.31% estimated their waiting time to be between 16 to thirty minutes; 2.47% estimated their waiting time to be between thirty –one to forty –five minutes whereas only 1.23% estimated their waiting time to be between forty-five minutes to sixty minutes.

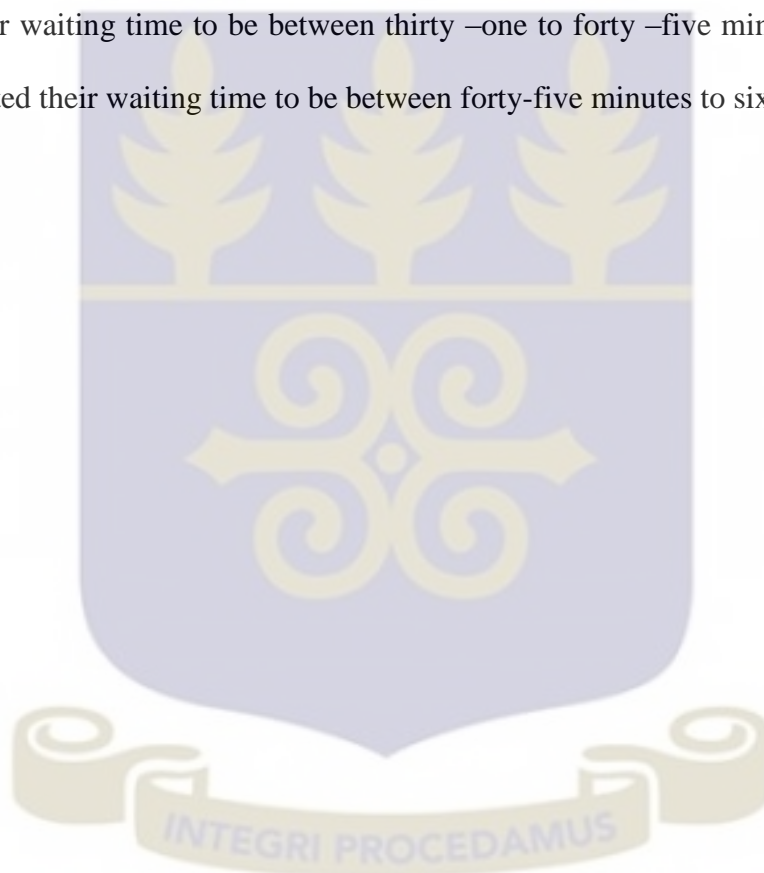


Table 4: Assessment of Clients' satisfaction with different aspects of HTC counselling service

Statement	Response			Total
	Satisfied (%)	Unsatisfied(%)	Neutral(%)	
Counselling				
The health talk on PMTCT of HIV/AIDS was good	151 (92.07)	4 (2.44)	9 (5.49)	164 (100)
The health talk on PMTCT of HIV/AIDS helped me understand benefit of testing	149 (90.85)	7 (4.27)	8 (4.88)	164 (100)
I was given a chance to ask questions about my result	120 (73.17)	40 (24.39)	4 (2.44)	164 (100)
I was given information about preventing HIV/AIDS and STIs	146 (89.02)	15 (9.15)	3 (1.83)	164 (100)
The counsellor listened to me describe my concerns	151 (92.07)	11 (6.71)	2 (1.22)	164 (100)
Informed consent				
My counsellor explained that I could refuse to take the test	24 (14.63)	132 (80.49)	8 (4.88)	164 (100)
The counsellor accepted my testing decision	159 (96.95)	2 (1.22)	3 (1.83)	164 (100)
Confidentiality				
The counsellor explained that the HIV test will be confidential	111 (67.68)	47 (28.66)	6 (3.66)	164 (100)
We had enough privacy during the session	157 (95.73)	6 (3.66)	1 (0.61)	164 (100)
I am confident the result will only be known to only relevant health personnel	154 (93.9)	3 (1.83)	7 (4.27)	164 (100)
Health worker's attitude				
The counsellor was friendly	158 (96.34)	3 (1.83)	3 (1.83)	164 (100)
The counsellor gave information in a way I could easily understand	160 (97.56)	1 (0.61)	3 (1.83)	164 (100)
My test result did not affect the way the counsellor treated me	163 (99.39)	0	1 (0.61)	164 (100)
Convenience				
The length of time spent waiting to see the counsellor was fine	158 (96.34)	5 (3.05)	1 (0.61)	164 (100)
Time spent with the counsellor was enough	150 (92.02)	11 (6.75)	2 (1.23)	163 (100)
The clinic environment was comfortable	156 (95.71)	6 (3.68)	1 (0.61)	163 (100)

** Client responses agree/ strongly agree aggregated into satisfied; disagree/strongly disagree was merged into unsatisfied; neither agree nor disagree was graded neutral.

Table 5: Client's perception of waiting time (n=163)

Estimated Waiting time (Minutes)	Frequency	Percentage (%)
0 – 15	115	70.99
16 – 30	41	25.31
31 – 45	4	2.47
46-60	2	1.23

Satisfaction with counselling time

Strongly agree	44	26.99
Agree	106	65.03
Neutral	2	1.23
Disagree	10	6.13
Strongly	1	0.61

In addition to estimating the time spent waiting to see health workers, clients' views were sought on whether they were satisfied with the length of the waiting time. Ninety- six point three five percent (96.35%) expressed the view that the waiting time was satisfactory.

The survey also explored the view of clients on their satisfaction with the duration of time spent in the counselling session. Sixty five percent and twenty-six percent of the respondents strongly agreed or agreed that the duration of the counselling was satisfactory while approximately seven percent of the clientele were of the opinion that the counselling duration was not satisfactory. One percent of the clients sampled were undecided.

One client made the following remarks in regards to counselling time:

"I like everything about the counselling... time spent with counsellor was enough."

(Respondent code # 163).

A contrary view was expressed by another client who reported:

“The time was a bit short; as a newcomer I think that she should have spent more time to counsel me and give me more details but others were waiting and time was short.”

(Respondent code # 140)

4.8.5 Factors associated with clients’ perception of quality of HTC

Client perceptions of the quality of a service may be informed by several factors: institutional factors, the process they experience in accessing or receiving care; health related results of the service they obtained or even their unique socio - demographic characteristics. Analysis of data collected to determine associations between the different measures of quality (structure, process, outcomes) and the clients’ perception of quality of HTC did not in this study show any significant associations. Significant associations between patient perceptions of quality of HTC and some independent variables are displayed in tables 6 and 7.

Table 6: Univariate analysis of selected factors affecting client satisfaction with service

Variable	Odds ratio	95% CI	p-Values
Number of ANC visits			
1 visit (Ref. category)	1	-	
2 visits	3	0.717 - 12.553	0.132
3 visits	4.8	1.187 – 19.414	0.028
4 or more visits	5.857	1.513 – 22.669	0.010
Current age of pregnancy			
14 or less weeks	1	-	
15 -27 weeks	2.56	0.512 - 12.778	0.253
28 or more weeks	5.33	1.084 - 26.180	0.039

Table 7: Multivariate analysis of selected factors affecting client satisfaction with service

Variable	Adjusted Odds ratio	95% CI	p-Values
Number of ANC visits	1.06	0.7998 - 1.395	0.699
Current age of pregnancy			
14 or less weeks	1	-	
15 -27 weeks	2.42	0.472 - 12.387	0.289
28 or more weeks	4.62	0.805 - 26.518	0.086

The cross tabulation of socio demographic characteristics of the clients with their perception of the quality of care received showed that number of ANC visits (three or more) was significantly associated to clients' perception of quality of care. The more ANC visits a client had paid to the facility in her current pregnancy, the more likely she was to view the quality of care received as "good": clients who had paid two, three and four visits to the facility were three times, four point eight times (4.8) and five point nine times (5.9) as likely to consider quality of care "good" respectively. A gestational age of twenty – eight or more weeks was a strong predictor of clients' viewing quality of care as "good" (OR 5.33, CI 1.084 - 26.180). In the adjusted model (age, religion, occupation, education) however, none of the variables were found to be significantly associated with perception of quality.

CHAPTER FIVE

DISCUSSION

5.0. Introduction

This chapter presents a discussion on the findings of the study which will be linked closely to the structures, processes and outcomes in place at the study facilities and how these relate to their capacity to offer quality HTC.

5.1 Institutional Capacity to implement HTC

The institutional capacity of a facility to implement HTC is an integral part of the PMTCT program. As indicated in the 2010 PMTCT guidelines, it was the intention of the MOH to expand the existing structures for the provision of PMTCT, extend more support, training and logistics to the private sector in order to engage them as partners in the strategic plan to eliminate MTCT of HIV/AIDS. In order for health facilities to fully engage in service provision however, the basic structure by way of: counselling/ office space, leadership/ governance structures; adequate human resource capacity; appropriate documentation system and a constant, sufficient supply of logistics used in the clinic should be available.

5.1.1. Physical Structures

The assessment of the physical structures indicated that one facility had adequate counselling space whereas the other was constrained. While the concept of integrating HTC services into the existing RCH clinic structure is a laudable one, as evidenced by its benefits and wide acceptance among both providers and clients, due regard must be given to the space and confidentiality requirements associated with the implementation of the ANC HTC program (An et al., 2015). This should inform the accreditation and implementation of scale up programs within institutions. Several institutions were built before the inauguration of the PMTCT program, as a result, inadequate confidential space for counselling and

testing may constitute a barrier to the quality of this vital service they render (Sibanda et al., 2012). Patient and provider perceptions in this study echoed the findings of studies in a similar assessment in Zimbabwe in which these stakeholders expressed misgivings about the effect of inadequate structure on quality of care (Sibanda et al., 2012).

5.1.2. Staff Capacity

Next to physical structures, human resource capacity is crucial to the provision of healthcare. The requisite number of staff with adequate knowledge of the policy guidelines for the PMTCT of HIV is possibly the most important building block for a successful implementation structure. Indeed, according to the National guidelines HTC should only be delivered by trained personnel who have an in depth knowledge of the program (MOH, 2010). The foundational training of staff either through NACP/ District level programs or on the job by trained counsellors may therefore be viewed as the next essential step in the framework for ensuring quality. The study revealed that the majority of counsellors in the facilities have received the latter form of training. Only one respondent had undergone training from the GHS/NACP. The re-assignment of staff to other departments or re-configuration of staff availability due to resignations may affect the number and calibre of trained staff available to such programs (Sibanda et al., 2012).

This notwithstanding, it was found during the study that provider training packages and manuals were easily accessible for reference in the clinics. It would appear that moving forward, the NACP will need to further strengthen their capacity building through continual training for staff already engaged in the HTC program. The NACP will also need to scale up their post training mentoring and quality improvement visits to implementing health facilities if they are to realize their objectives as stated in the Scale- up Plan 2011-2015. (GHS, 2010). An ordered district level database of staff involved in PMTCT in each facility,

their training background and skills may be essential to achieving this objective of the scale up - plan. This database will help to keep track on which personnel have received various forms of training and will serve as the basis on which staff who are engaged in HTC can receive support in the areas in which they fall short.

In summary, notwithstanding the providers' perceived lack of post training mentoring and refresher courses, they are perceived by clients as giving "good" quality care based on their receptiveness, interpersonal relationship and attitude; this is similar to findings in a study carried out in Bangladesh on what patients perceive to be quality care (Turkson, 2009).

5.2.3. Test kits and Other Logistics

Ready availability of an adequate supply of test kits and IEC materials are very important in any program. Health workers highlighted periodic stock – outs as one of the challenges they face and expressed concern over the coping mechanisms adopted which involved the use of expired kits. As one respondent explained this increases work related stress:

"...At times, we are ready to work but there is no kit...once we went for kits and the kits had expired. We were told to come and use the kit like that and we were like we can't work with a kit that is expired. Already, giving the person positive result is something, for you to use an expiring kit to work..." (HCW 2)

The survey further revealed that IEC materials were not available for distribution to clients as such there was no way to re- enforce the information - loaded, technical messages that health workers impart. These challenges are not unique; shortages of logistics and test kits were experienced in antenatal clinics in Uganda and Zimbabwe (Medley, Kennedy, Sweat & O'Reilly, 2010; Sibanda et al, 2012).

It is encouraging to note that the role of commodity security in health systems has become a high priority policy issue in recent times. Indeed, part of the GHS 2012 mission espouses a commitment to:

Ensure regular availability of health commodities delivered to health institutions at affordable prices, capable of responding to the total commodity requirement and as a centre of excellence using best practices in storage, distribution of quality safety and efficacious health commodities (Manso, Annan, & Anane, 2013).

An uninterrupted supply of logistics was one of the proposed strategic interventions of the PMTCT scale up plan (2011-2015). Unfortunately, policy efforts such as capacity building, early warning systems and the development of a roadmap for supply chain system strengthening program (SCMP) within the whole public health sector are yet to be felt at the facility level (GAC, 2014). Targeted action to implement these policies must be expedited.

5.3. Process

From observation, the majority of counselling sessions followed the protocol for ANC HTC. Results from the observations were confirmed by clients, 80% of whom indicated the counsellors gave post – test information about risk reduction methods. It was also observed, however, that counsellors stressed alternative methods of HIV transmission rather than heterosexual transmission through unprotected sexual intercourse contrary to current knowledge on modes of transmission. In Ghana, the 2008 modes of transmission study, found the most common modes of HIV transmission are low risk heterosexual sexual activity (30.2%), casual heterosexual sex, (15.5%) and sex with partners of clients of sex workers (23.0%) (GAC, 2014). This is at variance with the information communicated in post –test counselling exemplified in the quote below:

“...that does not mean that she cannot get it, it’s easy for us to get the diseases. But that doesn’t mean that she should live her life anyhow. At this point, the virus is there, a little carelessness and you’ll get it. Especially, using people’s sharp objects; blade, cutlery set and stuffs like that.” (HCW 2)

In observational study in Kenya which had similar findings, researchers noted that it is expedient that extra emphasis be placed on updating and reinforcing counsellors risk reduction strategies in post – test counselling bearing in mind that pregnancy indicates unprotected sex (Delva, Mutunga, Quaghebeur, & Temmerman, 2006).

Another aspect in which surveyed counsellors fell short was in obtaining informed consent from the patients. The policy guidelines requires that the minimum amount of information that should be provided to clients includes their right to refuse testing. Majority of the clients (80.49%) reported that the counsellor did not inform them that they could refuse the test. This is significant because though most healthcare workers had a fair understanding of routine testing and counselling, their practice belied their understanding and precluded informing clients of their right to decline. As one counsellor shared:

“Over here, no! When it comes to pregnancy test, in PMTCT, that one is compulsory for every client according to the, erm, protocols. Anyone one that is pregnant that comes here, we check since we are trying to eradicate, we are trying, to eradicate HIV/AIDS in Ghana.” (HCW 1)

This is similar to the findings in a study by An et al, 2015, in which the authors noted that health worker’s reported that women viewed the HIV test as ‘compulsory orders’ from the Ministry of Health. It also corroborates findings in other African studies in which respondents viewed testing as compulsory (Asefa & Mitike, 2014; Rujumba, Neema, Tumwine, Tylleskär, Heggenhougen; 2013). This study further stated that due to the esteem in which health workers were held, women were unwilling to decline. This fits into the

model of street level bureaucracy suggested by Lipsky (1980) in which street level bureaucrats are defined as public workers who interact directly with citizens and who have substantial discretion in their treatment of client. Out of their desire to cope with the high level stress related to operating in a resource constrained environment they develop coping mechanisms and modify policy to suit their situation which tends to create a gap between the intention of the policy and the implementation of the policy (Walker & Gilson, 2004). This gap can only be addressed by taking a bottom up approach to policy formulation: to review the routine opt out policy, the views of providers on their implementation challenges and experiences will be crucial in crafting a strategy for scale up that is acceptable and practiced by all.

5.3. Outcome

Client satisfaction is a valid indicator used to assess the outcome of the process healthcare delivery as well as client perceptions on certain aspect of care. Though several different indicators may be selected as outcome measures, the wide use of patient satisfaction as a measure of service quality in advanced societies has lent credibility to this patient –centred approach of measuring healthcare quality (Al-Abri & Al-Balushi, 2014). Most clients recognized the benefits of timely testing for HIV, appreciated the information given and were of the opinion that they were well received by the nurses.

5.3.1. Waiting time

In this study, the majority of respondents, 71% of respondents estimated that they spent between 0-15 minutes waiting to see a counsellor and 96% of the clients surveyed expressed satisfaction with the estimated waiting time spent to see an HTC counsellor. 91% of the respondents expressed satisfaction with the duration of their counselling session. Though the national PMTCT guideline does not specify recommended waiting times, this finding is

not dissimilar to findings from a study in Ethiopia in which clients who had a mean waiting time of 24.5 minutes (in the public sector) and 41.5minutes (in the private sector) reported high levels of overall satisfaction with HTC services (74.7%) (Asefa & Mitike, 2014). Alternatively, Ashipa, Ofili, and Ighedosa (2013) found in a similar study in Benin State, Nigeria, 73% of clients waited for over two hours for counselling services. Unsurprisingly, in that study the majority of clients (60.7%) reported a higher levels of dissatisfaction with services which the authors linked to the excessive waiting time.

5.3.2. Clients' overall satisfaction with Quality of HTC

The dual issues of quality of healthcare service & client satisfaction with healthcare quality are very important aspects of healthcare provision; both are matters of priority for policymakers and healthcare providers (Turkson, 2009). This is attributable the deleterious effects of substandard care which many and varied ranging from loss of customers to loss of lives (Turkson, 2009). Healthcare managers and policymakers therefore concerned with assessing and meeting client expectations and satisfaction in regards to quality of health care; it is even suggested that quality is an antecedent for client satisfaction (Awuah Peprah, 2014). Though quality as a concept is complex due to its heterogeneous, intangible and subjective nature, it is well documented that an assessment of healthcare quality should include the provider' as well as the clients' perception and satisfaction with care (Mosadeghrad, 2012).

In this study clients expressed satisfaction with most individual components of HTC such as counselling: clients expressed high levels of satisfaction with the pre – test health talk (92.07%); their understanding of the benefits of testing (90.85%); the information given on HIV/STI (90.84%) and the opportunity given to ask questions (73.17%). In relation to confidentiality, clients were satisfied with the amount of privacy they had during the

counselling session (95.73%) and also with the trustworthiness of health personnel (93.9%). Similarly clients expressed high levels of satisfaction with the attitude of health workers, namely: listening ability (92.07%); friendliness (96.34%); ability to relay information in an understandable way (97.56%) and maintain the same attitude irrespective of test results (99.39%). In relation to convenience clients were also satisfied with the time spent waiting to see the counsellors (96.36%); the duration of the counselling session (92.02%) and the environment (95.71 %).

There were two aspects in which clients expressed high levels of dissatisfaction – the first relates to informed consent and the second to confidentiality. A significant number of clients (80.49 %) were not satisfied that their right to refuse the test had been adequately communicated. Ujiji et al. (2011) also observed high levels of ignorance of the opt – out option among women attending ANC in Kenya. In this study however, it appeared most clients, however did not view this practice negatively nor comment on it as one of the aspects of service they dislike. On the contrary, some thought testing ought to be compulsory for all pregnant women and this view was shared by both healthcare workers and the clients who placed emphasis on testing for the sake of the unborn baby. Indeed these sentiments were echoed in a study in Malawi where patients indicated that even if they had known about an option to decline, they would want to test in order to protect their baby (Mtumbuka, Maluwa, Malata, Pindani, & Bultemeier, 2012). These views of the health workers and the clients maybe situated in the social context within which they live and are most likely shaped by the value placed on children, policies and information they have received concerning PMTCT HTC programs on radio, or through other forms of media and training (Rujumba et al., 2013). It may also reflect an understanding on the part of the women of routine testing as “orders” from the Ministry as suggested by Sibanda et al. (2014) in their assessment of the Zimbabwean HTC program. This general acceptance of

routine testing by clients reflects a high level of acceptability of HTC among antenatal clients; it is consistent with other studies carried out in Ghana and should serve as a motivation to implement PMTCT in every antenatal clinic nationwide in order to achieve a zero transmission of HIV from mother to child in the near future (Nyuzaghl, Ohene, & Odoi-Agyarko, 2011). This notwithstanding, it is important that national guidelines that direct health care providers to inform clients of their rights to decline treatment are carried out in the process of testing in order to ensure that the patient's rights are not infringed upon.

5.4 Chapter Summary

Quality of health care service is a complex, subjective, heterogeneous concept which many have tried to define in the interest of improving client experiences and utilization of care, and ensuring that practitioners provide care that adheres to current clinical and scientific evidence (Mosadeghrad, 2012). There are as many ways of evaluating quality of care as there are different definitions; one of the best known is the triad assessment of structure, process and outcome proposed by Donabedian (Mosadeghrad, 2012). Adherence to National Guidelines, client and provider perspectives' were paramount lenses used to assess the Donabedeian triad of quality of HTC in selected private facilities in Ayawaso sub - metro. The findings of this study are in similar in many aspects to several others conducted in Africa in which inadequate infrastructure, defunct leadership and governance structures and weak training and mentoring structures hamper the delivery of quality care (Kwapong et al., 2014; Mtumbuka et al., 2012; Sibanda et al., 2012) . These inadequacies exist despite the effort of the NACP and the district supervision networks responsible for accreditation and continuous supervision and quality monitoring. This is further compounded by important breaches in provider understanding and implantation of the informed consent, client confidentiality and communication of risk reduction strategies. The study also revealed that

the quality of interpersonal aspects of HTC, specifically clients' satisfaction in the selected study sites was good. Clients expressed high levels of satisfaction with the pre - test health talk, the communication of benefits of testing and various attributes of the health workers such as listening ability and ability to communicate information in an understandable way. Clients were also satisfied with their waiting time and the duration of the time spent in – session with the counsellor.



CHAPTER SIX

CONCLUSION AND RECOMMENDATIONS

6.0. Introduction

This chapter presents the conclusions of the study, its contribution to knowledge, and recommendations.

6.1. Summary of the Study

The study had the objective of assessing the quality of HIV testing and counselling in selected private health facilities in Ayawaso. Both quantitative and qualitative methods were used to gather data for this study. Two facilities in Ayawaso were purposively selected as representative cases of private providers who have been accredited, actively implement HTC and report monthly on their activities to the district health headquarters. In order to get a robust picture of the quality of HTC services, data were collected using different methods: a facility assessment tool to determine the institutional capacity of the health centres to provide HTC; observations of the process of counselling; client exit interviews were used to determine patient perceptions of HTC and key informant interviews were conducted for health care providers to determine their views of the quality of HTC services. The main conclusions of the study are presented below.

6.1 Conclusions

6.1.1. Structural Capacity to provide Quality HTC

The results of the facility assessment tool was used to determine the institutional capacity to provide quality care in the following categories: critical criteria; leadership and supervision; human resource management; policy standards and guidelines; infrastructure; supplies and storage; safety; referral systems; records and information; IEC materials. Components of the HTC process namely: adherence to guidelines; client – provider interaction; continuous

quality improvement and aspects of the immediate results of HTC services were assessed. Based on the facility scores both facilities had inadequate structures in place to provide good quality care. Interviews with key informants supported these findings in that they highlighted insufficient training updates and poor leadership and mentoring / monitoring systems from the district level as one of the main constraints to the optimal performance of their duties.

6.1.2. HIV Counselling and Testing Procedure

Data from observed sessions, client responses and health worker in-depth interviews helped to construct a clear picture of the process of HIV testing and counselling in the study sites. In the large part, HTC adhered to the guiding principles of the 2010 PMTCT guidelines which are currently in use. Each woman attending ANC was routinely offered HTC, individual sessions were held to give pre – test information to the client and tests were performed according to test algorithms specified in the protocol. Results were communicated on the same day and post - test counselling sessions were held individually. Three major deviations from standards were; the failure of health care workers to inform the majority of clients of their right to decline the test; to reassure the clients' of the confidentiality of their information and inaccurate information on certain risk reduction methods.

6.1.3. HTC Outcomes

The health care providers were of the general opinion that in spite of certain challenges they experience the overall quality of their service was good and that the clients' viewed the quality of their service in the same way. The client exit survey confirmed their opinion as clients reported high levels of satisfaction with most aspects of HTC which was interpreted as a high estimation of the quality of these aspects of service. Majority of the clients were

satisfied with the quality of the pre – test counselling; communication of the health benefits of testing, information about HIV/AIDS and STIs. Clients reported high levels of satisfaction with the providers’ ability to communicate information in understandable terms; elicit questions; friendliness and acceptance of their testing decision. In terms of convenience, the majority of clients were satisfied with the waiting time; duration of the counselling session and the general clinic environment.

6.2. Overall Assessment of the Quality of HTC in selected Facilities

Structurally, the capacity of selected private healthcare facilities to provide quality HTC is poor and adherence to national guidelines for the process of HTC should be strengthened. There remains a high appreciation for routine testing and counselling of pregnant women among clients and providers. From the perspective of the clients surveyed, based on their levels of satisfaction, the quality of HTC provided was good which agreed with the provider’s perspectives of services delivered.

6.3. Recommendations

The following recommendations are made with the view of strengthening the implementation of HTC and the various components which were found to be inadequate. It is envisaged that this will contribute to the overall quality of HTC delivered in private health facilities.

6.3.1. Implementation of the National Policy

1. It is recommended that the NACP develops and publishes a standardized tool based on the National policy guidelines for the assessment of quality of HTC which can be used for the NACP M&E department and also by management in all facilities to assess and improve the quality of their services. The WHO recommends that each country should develop a

comprehensive tool for the assessment of quality in the PMTCT program which is adapted specifically to their National guidelines (WHO, 2010). This will facilitate total quality improvement. The different dimensions of quality of HTC should be captured in the tool in addition to the indicators which are routinely assessed in order to elicit a more comprehensive analysis of the quality of health care delivery in this field of practice.

2. It is further recommended, appropriate measures are developed by the MOH to preclude the shortage of vital logistics such as rapid test kits and IEC materials without which the implementation of policy guidelines is severely constrained. In light of forecasting and funding gaps, which have been noted in several NACP annual reports and unexpected disasters such as the recent destruction of the CMS by fire, a more innovative, proactive approach should be developed by interested MOH, NACP and all other stakeholders to procure logistics and ensure commodity security for the program.

3. A review of the district leadership, training and mentoring system by the NACP and District PMTCT team is also recommended with a view to strengthening the human resource component of the PMTCT program. Specific timelines for the training / upgrading of all counsellors involved in HTC should be developed so that counsellors can update their information on National guidelines at least once a year.

4. A district level database of HTC counsellors; training & upgrades they have undergone should be developed to help track training and developmental needs. This will guide the District PMTCT team to plan for continuing training.

5. It is also highly recommended in light of the upcoming expiration of the tenure of the 2010 scale up plan for PMTCT that a participatory, bottom – up approach is adopted by NACP towards the development of new content to guide the provision of PMTCT in Ghana. Stakeholder meetings held at the district level and client/community surveys to determine stakeholder perceptions and constraints associated with the implementation of the PMTCT program will provide more robust input for the development of the next phase of the PMTCT strategy.

6.3.2. Enhancing Structural Capacity & the Process of HTC

1. The structural capacity of health care facilities to provide quality HIV testing and counselling should be evaluated periodically by the NACP's monitoring and evaluation unit to ensure standards are maintained.

2. A well – laid out plan for the routine (preferably annual) training and upgrading of providers' knowledge of guidelines and protocols is essential for the delivery of quality care. This should be initiated at the district level and supervised by the NACP.

3. It is recommended the management of each facility ensure that individual copies of the National PMTCT policy guidelines from the NACP are disseminated to all healthcare workers involved in testing and counselling.

4. Posters about PMTCT from the NACP should be prominently displayed in health facilities and IEC materials should also be provided regularly to facilities offering this service for dissemination to clients.

5. It is also recommended that the NACP develops a module for continuous professional development to encourage self-learning by HTC counsellors. The modules could be available on their website and would serve to update practitioners on the current guidelines for HTC and any subsequent amendments.

6.3.3. Community Involvement and Support

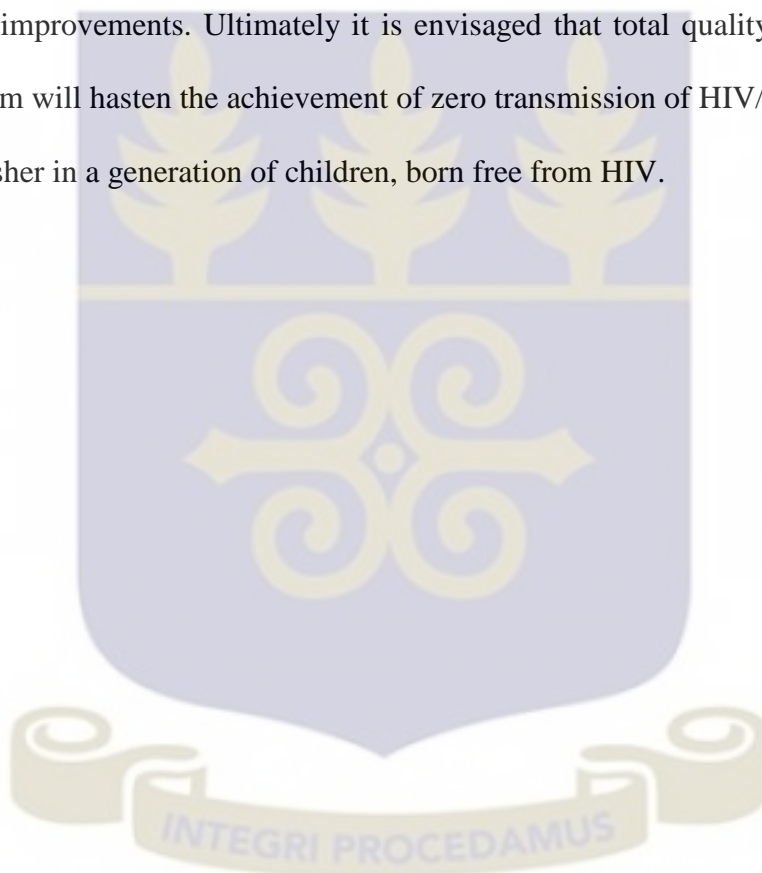
There is a need to sustain and enhance the current level of acceptability of HTC as a gateway to the continuum of services for HIV and as a strategy for the elimination of mother – to – child transmission of HIV/AIDS. It is therefore recommended that community educational drives using health care workers, local opinion leaders & AIDS ambassadors be intensified. All forms of media, television, radio, print and social media should be used to reinforce messages on the benefits of routine testing and counselling not only for women but their partners and all individuals at large. Continuing dissemination of public health information among school children and the general public about modes of transmission and the availability of routine testing and counselling will also serve to empower members of the general public.

6.4. Contribution to Knowledge

The mixed – method approach of this study enabled the researcher to use triangulation to analyse quality of HTC by assessing the institutional capacity of selected private health facilities to provide quality HTC as well as the patient and provider perceptions of the quality of service delivery. This approach helped to build a detailed picture of the quality of healthcare based on the structures available, processes employed and provider and patient perceptions. As such this work will help to address the gap in literature concerning the nature of the quality of HTC provided in selected ante natal clinics in Ayawaso sub- Metro.

6.5. Future Research & Policy implications

Due to time and resource constraints, a case study approach was selected for this study. In future, a more comprehensive sampling strategy incorporating facilities from the public and the private sector and a larger sample size could be used. The same methodology, employing a mixed methods approach, could be used in order to assess multiple perspectives of quality of HTC; this will help to construct a more in depth picture of the quality of HTC service provision in the district or nationwide and serve as a basis for on - going quality improvements. Ultimately it is envisaged that total quality improvements in the HTC system will hasten the achievement of zero transmission of HIV/AIDs from mother to child and usher in a generation of children, born free from HIV.



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APPENDICES

Appendix 1: Facility Assessment tool for assessment of HTC sites

(adapted from: VCT Site Accreditation Tool, Kenya 2003)

This assessment tool focuses on adequacy of existing structures/ inputs (e.g. human resources, guidelines, infrastructure safety issues and information systems, key processes and results) in the delivery of HTC services.

Facility name:	Date:
Site code:	Time started:
District:	Time finished:
Assessors: 1.	
Staff interviewed: 1. 2. 3. 4. 5.	

Purpose: To ensure that continuous quality improvement systems are in place for assuring compliance with national HTC standards and guideline

Objectives

1. Assess availability of staffing levels.
2. Assess adherence to protocols.
3. Assess availability of health education materials.
4. Assess availability and use of records-keeping formats.
5. Assess availability of test kits and medical consumables.
6. Assess adherence to staff roles and responsibilities.
7. Assess general aspects of site operations.

Staff profile

Please complete the table for each member of staff working on HTC in the facility.

Name	Position (supervisor, counsellor etc)	Completed training (certificate, registration, license)	Full-time (F/T) Part- time(P/T) (Hours/ week)	Employment status (permanent contract, paid volunteer, etc)
1				
2				
3				
4				
5				
6				
7				

Work Schedule: HTC Clinic hours

Days of week	Opening hours
Monday-Friday	
Saturday	
Sunday	
Public holidays	

Scoring system (Facility Assessment Tool)

YES	Minimum standard met
NO	Minimum standard not

Critical criteria questions must score 100% (12/12) and all other question \geq 75%

	Critical criteria	YES	NO
1	Two HTC-trained counsellors available?		
2	Trained lab technician or counsellor able to do rapid tests available?		
3	Secure lockable cupboard for storing client records available (counsellor access only)?		
4	Kits within expiry date?		
5	Protective clothing available and used for testing (gown and gloves)?		
6	Sharps container used for disposal of lancets and needles?		
7	Separate, lined bin in testing room for disposal of contaminated waste (gloves, cotton)		
8	Safe site storage of contaminated waste until disposal?		
9	Pit, incinerator or contractual arrangement in place for disposal of contaminated waste?		
10	Client register available and maintained daily?		
11	Laboratory log book available and maintained daily?		
12	For discrepant results, third test performed or referred to laboratory?		

I. Structure

1.	Leadership and supervision	YES	NO
1.1	Regular HTC site meetings taking place?		
1.2	Regular QA site meetings taking place?		
1.3	Named district HTC coordinator (DASCO) making regular supervisory visits?		
1.4	Trained counsellor-supervisor supervising counsellors?		
1.5	Trained laboratory supervisor supervising systems for testing?		

2.	Human resource management	YES	NO
2.1	List of HTC staff available including registration, qualifications, etc.?		
2.2	Job descriptions of HTC staff available?		
2.3	Receptionist or clerk oriented in HTC available?		
2.4	HTC site-manager or in-charge available?		

3.	Policy standards and guidelines	YES	NO
3.1	National HCT/PMTCT guidelines easily accessible?		
3.2	HTC counselling protocols available and on display?		
3.3	HTC testing protocols available and on display?		
3.4	Safety guidelines available and on display?		

4.	Infrastructure	YES	NO
4.1	Facility registered to provide HTC services?		
4.2	Is testing done in counselling room?		
4.3	Adequate counselling room/s available (well lit, spacious, ventilated, private)?		
4.4	Room/s adequately equipped with three chairs, one table and separate testing area?		
4.5	Room/s and waiting area well maintained and clean?		
4.6	Adequate waiting area (chairs and space)?		
4.7	Accessible clean toilets with hand washing facilities?		

5.	Supplies and storage	YES	NO
5.1	Uninterrupted and adequate supply of non-pharmaceutical (gloves, lancets, spirits, cotton wool, chlorine, detergent, disposable syringes)?		
5.2	Uninterrupted and adequate supply of rapid test kits in stock?		

6.	Safety	YES	NO
6.1	All HTC staff received hepatitis B immunization?		
6.2	Running water available in testing room?		

7.	Referral system	YES	NO
7.1	Referral system in place and functioning?		
7.2	Referral directory/list available?		
7.3	Designated referral site for care and support?		
7.4	Post-test support available (post-test counselling, people living with HIV, etc.)?		

8.	Records and information	YES	NO
8.1	Uninterrupted and adequate supply of HTC data forms and clients cards?		
8.2	Systems for anonymous client coding in place and functioning?		
8.3	Easily retrievable copies of quarterly reports sent to DHMT available?		
8.4	Stock register available and used?		
8.5	Accident/incident book available and used?		
8.6	QC report from certified labs easily accessible?		

9.	Information, education and communication (IEC) materials	YES	NO
9.1	Signboard, signs labels and directions for HTC room/s?		
9.2	Opening hours prominently displayed?		
9.3	Door tags used for privacy (please enter/counselling in progress)?		
9.4	Uninterrupted and adequate supply of HTC leaflets and posters?		
9.5	HCT leaflets on display and available for clients?		
9.6	HTC posters prominently displayed?		

II. Process

10.	Adherence to guidelines/ client-provider interaction	YES	NO
10.1	HTC services available on advertised days?		
10.2	Same-day blood testing conducted on site?		
10.3	Correct testing algorithms used?		
10.4	All forms are checked for missing items at the end of the each day?		
10.5	All counsellors attending regular group supervision?		
10.6	All counsellors receiving individual or peer supervision?		
10.7	Counsellors working scheduled hours (not assigned to other non-HTC services)?		
10.8	Each counsellor sees < 10 clients/day?		

11.	Continuous quality improvement	YES	NO
11.1	Regular monitoring and analysis of HTC data conducted (summary sheets, graphs)?		
11.2	QA tools used for systematically monitoring quality of service provision (client exit interviews, counsellor self-assessment or other alternatives)?		
11.3	QA meetings identify areas for improvement and plan accordingly?		
11.4	10% of blood samples sent for quality control to a certified laboratory?		
11.5	All discrepant results and filter papers sent to a certified laboratory?		

III. RESULTS

12.	Performance: Are the following indicators calculated on a quarterly basis?	YES	NO
12.1	Breakdown of clients by age, sex and test result		
12.2	Average number of clients/counsellor/day		
12.3	% Counselling clients who takes HIV test		
12.4	% Clients coming back for follow-up counselling		
12.5	% Test results given same day		
12.6	% test results indeterminate		
12.7	Levels of concordance with reference laboratory		
12.8	Timely submission of monthly/quarterly reports		

13.	Client	YES	NO
13.1	Mechanisms for client feedback in place (exit interviews, suggestion box, complaints procedures, community meetings, etc.)?		
13.2	Client satisfaction improved over time?		

14.	Provider	YES	NO
14.1	HCT staff attitude, motivation, job satisfaction and professional improvement is assessed and monitor over time (annual appraisal)?		

Appendix 2: Direct Observation tool for Counselling Quality

SCHOOL OF PUBLIC HEALTH, COLLEGE OF HEALTH SCIENCES

UNIVERSITY OF GHANA

OBSERVED PRACTICE – PMTCT HIV TESTING AND COUNSELLING

Date:		Site:		Counsellor		Supervisor	
						Session:	
<p>I am here to observe you as part of my data collection for my thesis. I will only observe you (counsellor) with the consent of the client, whose confidentiality I will maintain. Thank you for your participation.</p>							

Section A: Counselling skills

1. Provides warm reception
 Yes No N/A
2. Explains confidentiality
 Yes No N/A
3. Engages client in conversation
 Yes No N/A
4. Exhibits a non-judgmental attitude
 Yes No N/A
5. Listens effectively
 Yes No N/A
6. Avoids giving inappropriate advice
 Yes No N/A

7. Communicates at the client's level of understanding

Yes No N/A

8. Provides relevant and correct information

Yes No N/A

9. Seeks clarification where necessary

Yes No N/A

10. Uses and responds to non-verbal communication

Yes No N/A

11. Uses silence well to allow for self-expression

Yes No N/A

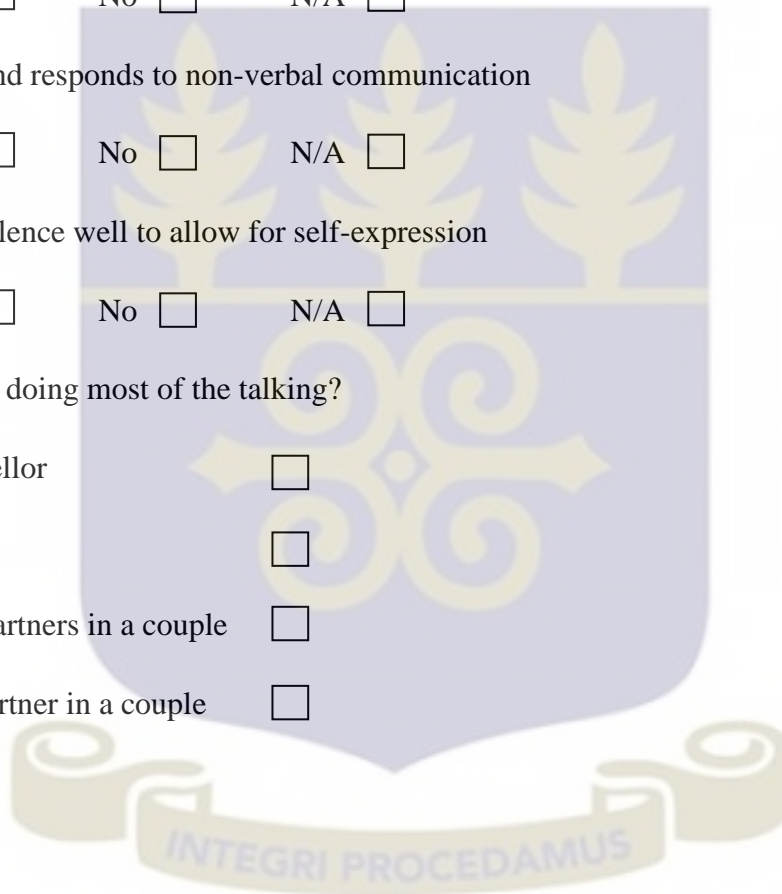
12. Who is doing most of the talking?

Counsellor

Client

Both partners in a couple

One partner in a couple



Section B: Individual/group pre test

1. Assesses knowledge of HIV the
Yes No N/A
2. Assesses client motivation for testing
Yes No N/A
3. Collaboratively develops risk reduction plan encouraged
Yes No N/A
4. Demonstrates condom use
Yes No N/A
5. Discusses disclosure with partner
Yes No N/A
6. Obtains informed consent
Yes No N/A

Couples Pre Test

1. Ensures that each member of couple has given informed
Yes No N/A
2. Ensures that each member of couple is aware that she/he is to disclose their status to their
Yes No N/A
3. Demonstrates condom use
Yes No N/A
4. Discuss possibility of sero-discordance
Yes No N/A
5. Discusses impact of testing on each member of the couple
Yes No N/A

Section C: Testing Skills

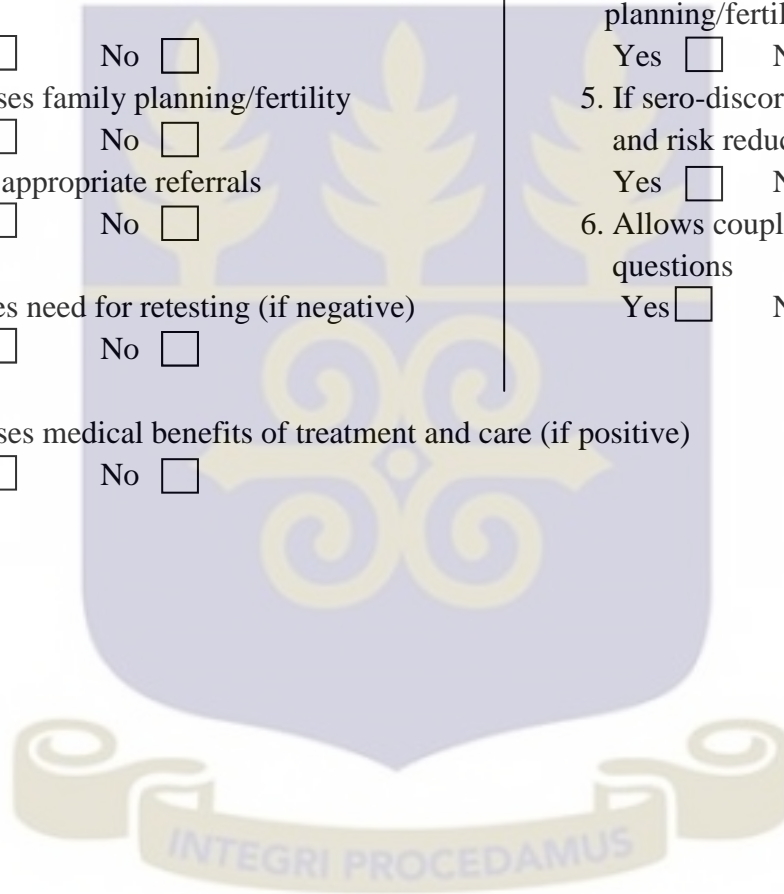
1. Number of finger-pricks 1 2 More
2. Follows standard operating procedures Yes No N/A
3. Fills out standard laboratory register Yes No N/A

Section D: Individual Post Test

Couples Post Test

1. Sensitively provides test result and assesses impact on client
Yes No
2. Addresses client reaction
Yes No
3. Makes collaborative risk reduction plan
Yes No
4. Discusses disclosure with partner
Yes No
5. Discusses family planning/fertility
Yes No
6. Makes appropriate referrals
Yes No
7. Clarifies need for retesting (if negative)
Yes No
8. Discusses medical benefits of treatment and care (if positive)
Yes No

1. Sensitively provides test assesses impact on both
Yes No
2. Assists with disclosure
Yes No
3. Develops joint risk reduction plan
Yes No
4. Discusses family planning/fertility
Yes No
5. If sero-discordant discuss issues and risk reduction strategies
Yes No
6. Allows couple to raise questions
Yes No



Appendix 3: Client Exit interview – sample questionnaire

SURVEY ON QUALITY OF HIV TESTING AND COUNSELLING IN ANTENATAL CLINICS IN PRIVATE HEALTH FACILITIES IN AYAWASO

Date:	District:	Site:	Patient Code:	Sex:
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As part of the requirements for my thesis in Public health, University of Ghana, Legon, I am conducting a survey with users of the health centre to find out what you think about the quality of care in the PMTCT program. Your answers are strictly confidential. Please read and complete the informed consent form before you fill this. Thank you for your participation and honesty.

Please tick the appropriate response

A. Respondents' Background Characteristics

1. Age at last birthday (years).....
2. Marital status Single Married Divorced Widowed
3. Religion Christian Moslem Other
4. Education No formal Primary Sen. Sec/Tech
Tertiary
5. Employment status: Self-employed Public Sector
Private Sector Not employed
6. Number of previous pregnancies: 0 1 2 3 4 or more
7. Age of current pregnancy (weeks): 14 or less 15-27 28+
8. How many ANC visits have you paid to this facility in your current pregnancy?
(indicate 1, 2 etc).....

Please indicate beside the most appropriate response ()

B. COUNSELLING

Pretest Counselling

9. The health talk on preventing mother to child transmission (PMTCT) of HIV/AIDS was good

- a. Strongly agree () b. Agree () c. Neither agree or disagree () d. Disagree ()
e. Strongly disagree ()

10. The health talk on preventing mother to child transmission (PMTCT) of HIV/AIDS helped me to understand the benefits of testing

- Strongly agree () Agree () Neither agree or disagree () Disagree ()
Strongly disagree ()

Post test Counselling

11. Were you counselled about your test result?

- Yes () No ()

12. I was given the chance to ask questions about my results

- Strongly agree () Agree () Neither agree or disagree () Disagree ()
Strongly disagree ()

13. I was given information about preventing HIV/AIDS and Sexually transmitted infections

- Strongly agree () Agree () Neither agree or disagree () Disagree ()
Strongly disagree ()

14. The counsellor/ clinician listened to me describe my concerns

- Strongly agree () Agree () Neither agree or disagree () Disagree ()
Strongly disagree ()

15. Were the following topics discussed with you?

- a) Antiretroviral medicine () b) Infant feeding ()
c) Partner disclosure () d) Partner testing ()
e) Ways to reduce risk of transmission () g) Need to repeat test in third trimester()

C. Informed Consent

16. My counsellor explained that I could refuse to take the HIV test

- Strongly agree () Agree () Neither agree or disagree () Disagree ()
Strongly disagree ()

17. The counsellor accepted my testing decision (whether to test or not to test)

- Strongly agree () Agree () Neither agree or disagree () Disagree ()
Strongly disagree ()

D. Confidentiality

18. The counsellor explained that the test result would be confidential

- Strongly agree () Agree () Neither agree or disagree () Disagree ()
Strongly disagree ()

19. We had enough privacy during the session

- Strongly agree () Agree () Neither agree or disagree () Disagree ()
Strongly disagree ()

20. I am confident that the results will be known only to relevant health personnel

- Strongly agree () Agree () Neither agree or disagree () Disagree ()
Strongly disagree ()

E. Testing

21. Were you offered an HIV test today/ previously?

Yes () No () N/A ()

22. Were you asked to give any of the following samples

a) Saliva () b) finger prick () c) venous blood ()

23. Did you agree to be tested?

Yes () No () N/A ()

24. If no, why did you not agree?

- a) Need to consult partner ()
- b) I don't believe I am at risk ()
- c) I am afraid of the results ()
- d) I tested in a previous pregnancy ()
- e) Previously tested positive ()
- f) Other – (please specify).....

25. Where did the test take place?

Consultation room () Lab () Counselling room ()

Other.....

26. Did you receive your test result

Yes () No () N/A ()

27. My result was

Negative () Positive ()

F. Health Worker's Attitude

28. The counsellor was friendly

Strongly agree () Agree () Neither agree or disagree () Disagree ()
Strongly disagree ()

29. The counsellor gave information in a way I could easily understand

Strongly agree () Agree () Neither agree or disagree () Disagree ()
Strongly disagree ()

30. My test results did not affect the way the counsellor treated me

Strongly agree () Agree () Neither agree or disagree () Disagree ()
Strongly disagree ()

G. Convenience

31. Length of time spent waiting to see the counsellor was fine

Strongly agree () Agree () Neither agree or disagree () Disagree ()
Strongly disagree ()

32. How long did you wait before you were seen by the counsellor?

.....

33. Time spent with the counsellor was enough

Strongly agree () Agree () Neither agree or disagree () Disagree ()
Strongly disagree ()

34. The clinic environment was comfortable

Strongly agree () Agree () Neither agree or disagree () Disagree ()
Strongly disagree ()

35. What did you like/dislike about the HIV testing and counselling service?

.....
.....

36. Do you have any suggestions on how service could be improved?

.....
.....

Thank you for your time and participation.



Appendix 4: Key Informant Interview Guide

In depth Interview Guide For Health Workers Involved in Antenatal HIV Testing and Counselling (HTC) Services in Selected Private Health facilities in Ayawaso sub- Metro.

Interview Protocol

1. Please state your role in the PMTCT (Prevention of Mother to child transmission of HIV/AIDS) clinic and the number of years you have been involved.
2. Can you explain what routine testing and counselling is?
3. Could you please describe the counselling procedure for PMTCT clients? (Probe for pre & post-test counselling procedure; key counselling information/ points)
4. How do you document the procedures? (Probe: records keeping procedures)
5. If a client's test result is positive what do you do?
6. If a client's test result is negative what do you do?
7. Please explain the referral Procedure to me
8. Is there a means to follow- up clients?
9. Do clients decline tests? (Probe: what do you do if a client declines?)
10. Please describe any challenges you face in discharging your duties as a counsellor/ tester
11. Please tell me about any training you have had for this role (probe: initial & refresher courses/training)
12. What are your thoughts on your training in relation to PMTCT/ HTC? (Probe: how training has equipped you for this role)
13. What are your thought on the facilities/ infrastructure available for PMTCT?
14. Can you please explain your understanding of quality HIV testing and counselling (HTC)?
15. What do you think are your clients' perceptions of your services? (Probe: client's ideas of HTC services)
16. Please describe any way by which you think quality of PMTCT HTC can be improved.
17. Is there anything else you would like to add?

Thank you.

Appendix 5: Informed Consent Form

Project Title: Assessment of the Quality of HIV testing and counselling in antenatal clinics in selected private health facilities in Ayawaso sub-metro, Accra.

I am Yaa Adwo Osei-Ofei, a student from the Department of Health Policy, Planning and Management, School of Public Health, College of Health Sciences, University of Ghana. I am here, with my research assistants, to carry out a survey to assess the quality of HIV testing and counselling in antenatal clinics in private health facilities in Ayawaso sub-metro, Accra. This is a purely academic exercise which forms part of the requirements for the award of a Master of Public Health Degree. I am pleased to invite you to be a part of this study. I would be grateful if you could kindly read this consent or let someone read it to you so that you can decide on whether to take part in the study or not.

Study Procedure, Benefits and Risk

If you consent to participate, you will be required to fill a form/ participate in an interview which will take about thirty (30) minutes of your time. You are allowed to stop answering questions whenever you wish and you may skip questions you are not comfortable with. This study involves no risk and the researcher(s) will be on hand to assist with any queries. You will be required to provide some information about yourself and your experience of service in this facility. You may also provide any additional thoughts or comments as appropriate. The information you provide will contribute to knowledge on acceptability of HIV Counselling and Testing. Findings and recommendations would be made available to the facility and the National HIV/AIDS control program to help improve on quality of care to patients.

Confidentiality

Your name, identity are not needed for the study. However, the information you would provide is going to be identified by a special code number and would be treated as strictly confidential. We assure you that your name shall not appear or be mentioned in any report that might come out of this study.

Apart from the research team, members of the University/ MOH Ethics committee and staff of the National HIV/AIDS Control Program (NACP) no one will have access to the information which will be kept under lock and key at all times.

Data collected will be stored under lock and key then destroyed after a minimum of three years as per research protocol. A copy of the data collected will be maintained in the NACP archives as per their research requirements.

Right to Refuse

Participation in this study is voluntary. You are allowed to answer any individual question or all the questions. You can withdraw from the study at any time. This will not affect your treatment in any way. However, you are encouraged to fully participate in the study.

Before taking the Consent

Do you have any concerns about the study that you wish to be addressed?

Yes

No

If yes, please indicate your concern below.

.....
.....

Voluntary Consent

Please indicate your consent below if you agree with the Statement. Guardians or witnesses for participants below 18 years may indicate their assent as well below the consent of their ward.

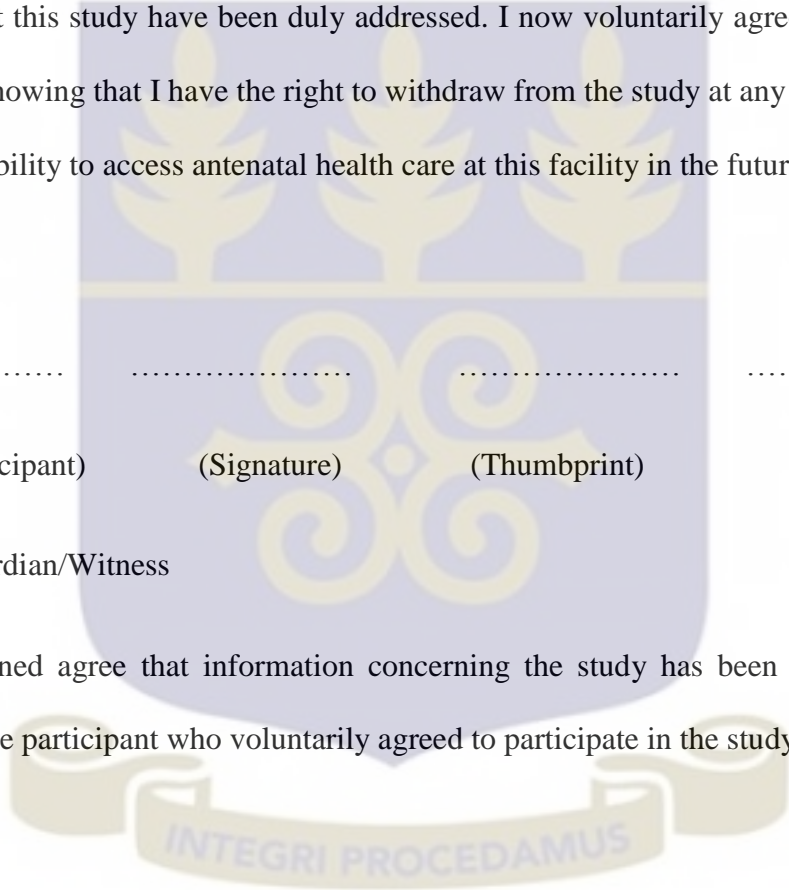
I have read the information given /information has been read and duly explained to me. My concerns about this study have been duly addressed. I now voluntarily agree to participate in this study knowing that I have the right to withdraw from the study at any time without it affecting my ability to access antenatal health care at this facility in the future.

.....
(Name of participant) (Signature) (Thumbprint) (Date)

Assent of Guardian/Witness

I the undersigned agree that information concerning the study has been fully read and explained to the participant who voluntarily agreed to participate in the study

.....
(Name of Guardian/Witness) (Signature) (Thumbprint) (Date)



Interviewer’s Statement

I, the undersigned, have explained this consent to the subject in English//Twi/Ga and ensured that she understands the purpose of this study, procedures to be followed as well as the risks and benefits of this study.

The participant has agreed to fully participate in this study.

Name of Research Assistant.....

Signature

Date.....

Address.....

If you have any questions you may contact Yaa Osei-Ofei on 0244 733075/
yaadwo@yahoo.co.uk or Ms. Hannah Frimpong on 0243235225 / 0507041223.



Appendix 6: GHS-ERC Letter Of Approval

GHANA HEALTH SERVICE ETHICAL REVIEW COMMITTEE

In case of reply the number and date of this Letter should be quoted.

My Ref. :GHS-ERC: 3
Your Ref. No.

Research & Development Division
Ghana Health Service
P. O. Box MB 190
Accra

Tel: +233-0302-681109
Fax + 233-0302-685424
Email:
Hannah.Frimpong@ghsmai.org
10th June, 2015

Yaa Adwo Osei-Ofei
School of Public Health
University of Ghana
Legon, Accra

ETHICAL APPROVAL FOR AMENDMENT - GHS-ERC50/02/15
RE-Request for Amendments to Protocol titled: "Assessment of the Quality of HIV Testing and Counselling in Antenatal Clinics in Selected Private Health Facilities in Ayawaso Sub-Metro, Accra"

Reference is made to your letter dated 1st June, 2015, requesting permission to implement amendment 1 version of the above-mentioned on-going Study Protocol.

Please be informed that the Committee has reviewed the request and is satisfied with the explanation thereof. We therefore wish to inform you that ethical approval is hereby granted for you to implement the Amendment 1 to the Protocol.

The approval covers the following only:

- Modification to the study title.
- Modification to study population
- Modification to sample size calculation.
- Modification to sampling procedure or method.

This approval requires that you submit periodic review of the protocol to the Committee and a final full review to the Ethical Review Committee (ERC) on completion of the study. The ERC may observe or cause to be observed procedures and records of the study during and after implementation.

Please note that any modification of the project must be submitted to the ERC for review and approval before its implementation.

1

You are also required to report all serious adverse events related to this study to the ERC within seven days verbally and fourteen days in writing.

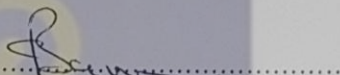
You are requested to submit a final report on the study to assure the ERC that the project was implemented as per approved protocol. You are also to inform the ERC and your sponsor before any publication of the research findings.

Please note that this approval is given for a period of 12 months, beginning June 10th, 2015 to June 9th, 2016.

However, you are required to request for renewal of your study if it lasts for more than 12 months.

Please always quote the protocol identification number in all future correspondence in relation to this approved protocol

SIGNED.....



DR. CYNTHIA BANNERMAN
(GHS-ERC CHAIRPERSON)

Cc: The Director, Research & Development Division, Ghana Health Service, Accra



Appendix 7: NACP Letter Of Introduction

