FACTORS INFLUENCING ACCEPTANCE OF ROUTINE HIV TESTING AND COUNSELING AMONG PREGNANT WOMEN IN KIBERA INFORMAL SETTLEMENT, NAIROBI, KENYA

FLORENCE ALICE MATHINGAU

(B.A SOCIAL WORK)

I57/12631/05

A RESEARCH THESIS SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENT OF DEGREE OF MASTER OF PUBLIC HEALTH IN THE SCHOOL OF PUBLIC HEALTH OF KENYATTA UNIVERSITY

AUGUST 2013
DECLARATION

This thesis is my original work and has not been presented for a degree or other awards in any other University.

Signature: ……………………………. Date: ……………………………..

Florence Alice Mathingau

School of Public Health

Supervisors’ Approval

This thesis has been submitted to graduate school with our approval as University Supervisors.

Signed __________________________ Date: ____________________________

Dr. Okello Agina B. M

Department of Obstetrics and Gynecology
Kenyatta University

Signed: __________________________ Date: ____________________________

Dr. Daniel. M. Muia

Departments of Sociology
Kenyatta University
DEDICATION

To my loving family, my son Andrew and my daughter Amani for your love and patience during all the times I had left you when you needed me most. This is also dedicated to my beloved late mother Maria who taught me the importance of excelling in education, and virtues of hardwork, patience and humility. And to all the families out there, especially the women and children who are infected or affected by HIV/AIDS.
ACKNOWLEDGEMENTS

First I am sincerely grateful to God for seeing me through my study. I truly thank my supervisors Dr. Okello Agina B.M. and Dr. Daniel M.Muia both of Kenyatta University for their support and professional guidance in the course of my study. I thank all the staff of the School of Public Health Kenyatta University for their support and wise counsel. I am grateful to the Ministry of Science and Technology and the Provincial Medical Officer of Health, Nairobi, for allowing me to carry out research in Kibera informal settlements. I am truly grateful to all the pregnant women who agreed to participate in this study. Many thanks to the District AIDS/STI Coordinator (DASCO) Langata District, and both officers incharge of Langata District at the National AIDS Control Council (NACC) and the National AIDS and STD Control Program (NASCOP). I sincerely thank my fellow students and colleagues of the Department of Community Health, Kenyatta University for support and encouragement during my study. God bless you all.
# TABLE OF CONTENTS

DECLARATION ............................................................................................................................... ii
DEDICATION ................................................................................................................................. iii
ACKNOWLEDGEMENTS ............................................................................................................... iv
LIST OF TABLES ........................................................................................................................... viii
LIST OF FIGURES ......................................................................................................................... ix
DEFINITION OF TERMS ............................................................................................................. xi

1. CHAPTER ONE .......................................................................................................................... 1
   1.0 Introduction .......................................................................................................................... 1
   1.1 Background ........................................................................................................................ 1
   1.2 Problem statement ............................................................................................................. 4
   1.3 Justification of the study ................................................................................................... 5
   1.4 Objectives of the study ..................................................................................................... 6
       1.4.1 Broad Objective ........................................................................................................ 6
       1.4.2 Specific objectives .................................................................................................... 6
   1.5 Research questions .......................................................................................................... 6
   1.6 The null hypothesis .......................................................................................................... 7
   1.7 Significance ....................................................................................................................... 7
   1.8 Limitations of the study .................................................................................................. 7

2. CHAPTER TWO .......................................................................................................................... 10
   2.0 Literature Review ............................................................................................................. 10
   2.1 Global Overview of HIV/AIDS in pregnancy .................................................................. 10
       2.1.1 Overview of HIV/AIDS during pregnancy in Africa .................................................. 12
   2.2 Types of HIV testing during pregnancy ......................................................................... 14
       2.2.1 Voluntary testing ...................................................................................................... 15
       2.2.2 Universal or routine testing ..................................................................................... 15
       2.2.4 Mandatory testing .................................................................................................. 16
   2.3 Factors that affect acceptance of routine HTC in PMTCT services ............................... 16
       2.3.1 Service-related factors ............................................................................................ 17
       2.3.2 Client related factors .............................................................................................. 19

3. CHAPTER THREE ....................................................................................................................... 23
   3.0 Methodology ..................................................................................................................... 23
   3.1 Introduction ....................................................................................................................... 23
   3.2 Research design ............................................................................................................... 23
   3.3. Variables ....................................................................................................................... 24
       3.3.1 Dependent variable .................................................................................................. 24
       3.3.2 Independent variables ............................................................................................ 24
   3.5 The study area .................................................................................................................. 24
   3.6 Target population ............................................................................................................. 27
   3.7 Study population ............................................................................................................. 27
       3.7.1 Inclusion criteria ...................................................................................................... 27
       3.7.2 Exclusion criteria ..................................................................................................... 27
   3.8 Sample size and sampling techniques ............................................................................. 27
       3.8.1 Sample size ............................................................................................................. 27
       3.8.2: Distribution respondents across the villages ......................................................... 29
3.8.3 Qualitative sampling methodology .......................................................... 30
3.9 Construction of research instruments .......................................................... 30
  3.9.1 Questionnaire ......................................................................................... 30
  3.9.2 Key informant interview guide ............................................................... 31
3.10 Data collection procedures ......................................................................... 31
  3.10.1 Interviews ............................................................................................. 31
  3.10.2 Key informant interviews ...................................................................... 31
3.11 Pilot study .................................................................................................... 32
3.12 Data analysis ................................................................................................ 32
3.13 Ethical considerations .................................................................................. 32
4. CHAPTER FOUR ............................................................................................. 34
  4.0 Results and Discussion ............................................................................... 34
    4.1: Introduction .............................................................................................. 34
    4.2: Socio-demographic characteristics ......................................................... 34
      4.2.2 Marital status .................................................................................... 36
      4.2.3 Education level of respondents ........................................................... 36
      4.2.4 Number of pregnancies ..................................................................... 38
      4.2.5 Number of antenatal visits during the current pregnancy .................. 39
      4.2.6 Trimester of the respondents’ current pregnancy ............................... 39
      4.2.7 Occupation of respondent and family’s monthly income .................... 40
      4.2.8 Respondent’s religion ....................................................................... 41
    4.3: Knowledge, attitudes, beliefs and practices ........................................... 42
      4.3.1: Knowledge about HIV and AIDS, and its transmission ................. 42
      4.3.2 Knowledge on MTCT and PMTCT .................................................... 45
      4.3.3 Attitude, beliefs and practices about HIV/AIDS .................................. 47
      4.3.4: Respondents counseling before HIV testing .................................... 48
      4.3.5: Respondents satisfaction with the received counseling .................... 49
      4.3.6: Respondents knowledge of someone tested for HIV ....................... 50
      4.3.7: Respondents perception on who benefits from HIV testing ............. 51
      4.3.8: Method of choice for HIV testing, test results delivery and sharing ... 52
    4.4: Acceptance of routine HTC ..................................................................... 54
      4.5: Socio-demographic Characteristics influencing acceptance of routine HTC... 60
        4.5.1: Age ................................................................................................. 60
        4.5.2: Marital Status ............................................................................... 60
        4.5.4: Number of antenatal visits ............................................................ 61
        4.5.5: Trimester of the current pregnancy ................................................. 62
      4.6: Institutional Characteristics influencing acceptance of routine HTC .......... 62
      4.7: Knowledge factors influencing acceptance of routine HTC .................. 63
    4.9: Discussion ................................................................................................. 66
5. CHAPTER FIVE ............................................................................................... 71
  5.0 Conclusions and Recommendations .......................................................... 71
  5.1 Introduction .................................................................................................. 71
  5.2 Conclusions .................................................................................................. 71
  5.3 Recommendations ....................................................................................... 71
  5.4 Suggestion for further research ................................................................... 72
REFERENCES ....................................................................................................... 73
APPENDIX II: INTERVIEW GUIDE (ENGLISH) ................................................................. 78
APPENDIX III: FOMU YA KUKUBALI KUHOJIWA [CONSENT FORM] ..................... 88
APPENDIX IV: KIDADISI (KISWAHILI) .................................................................... 89
APPENDIX V: KEY INFORMANT INTERVIEW GUIDE .............................................. 99
APPENDIX VI: MASWALI YA WAHUSIKA MUHIMU .............................................. 100
LIST OF TABLES

Table 3-1: Distribution of Participants ................................................................. 29
Table 4-1: Distribution of respondents by age ..................................................... 35
Table 4-2: Number of pregnancies of respondents .............................................. 38
Table 4-3: Monthly income of the respondents ................................................. 41
Table 4-4: Knowledge about HIV and its transmission ....................................... 43
Table 4-5: Respondents’ knowledge about MTCT and PMTCT ........................... 46
Table 4-6: Attitudes, beliefs and practices about HIV/AIDS ............................... 48
Table 4-7: HIV testing processes .......................................................................... 53
Table 4-8: Factors related to acceptance of routine HTC ...................................... 57
Table 4-9: Influence of Age on the acceptance of Routine HTC ............................ 60
Table 4-10: Influence of Marital Status on acceptance routine HTC .................... 60
Table 4-11: Influence of education on the acceptance of routine HTC ................. 61
Table 4-12: Influence of number of ANC visits on acceptance routine HTC ....... 61
Table 4-13: Trimester of current pregnancy and acceptance of routine HTC ......... 61
Table 4-14: Satisfaction with Pretest counseling and acceptance of routine HTC ... 63
Table 4-15: Default from ANC and acceptance of routine HTC ........................... 63
Table 4-16: Availability of HIV/AIDS cure and acceptance of routine HTC ......... 64
Table 4-17: Knowledge of routine HTC and acceptance of routine HTC .......... 64
Table 4-18: Pretest counseling and acceptance of routine HTC ........................... 65
LIST OF FIGURES

Figure 1-1: Conceptual Framework ................................................................. 9
Figure 3-1: A Map of Kibera ................................................................. 26
Figure 4-1: Age of Respondents into two categories .................................. 35
Figure 4-2: Respondents according to marital status .................................. 36
Figure 4-3: Level of education of the respondents ....................................... 37
Figure 4-4: Level of education of the respondents into two categories .......... 38
Figure 4-5: Antenatal visits in the current pregnancy ............................... 39
Figure 4-6: Trimester of respondents’ current pregnancy ........................... 40
Figure 4-7: Religion of the respondents .................................................... 41
Figure 4-8: Received counseling before testing ......................................... 49
Figure 4-9: Satisfaction with the counseling .............................................. 50
Figure 4-10: Aware of someone tested for HIV ........................................ 51
Figure 4-11: Perception on who benefits from HIV testing ....................... 52
Figure 4-12: Acceptance of Routine HTC ................................................. 54
### ABBREVIATIONS AND ACRONYMS

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Acronym/Full Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANC</td>
<td>Ante Natal Clinic</td>
</tr>
<tr>
<td>AMREF</td>
<td>African Medical Research Foundation</td>
</tr>
<tr>
<td>AIDS</td>
<td>Acquired Immuno Deficiency Syndrome</td>
</tr>
<tr>
<td>ART</td>
<td>Anti Retroviral Therapy</td>
</tr>
<tr>
<td>CDC</td>
<td>Centres for Disease Control</td>
</tr>
<tr>
<td>HIV</td>
<td>Human Immunodeficiency Virus</td>
</tr>
<tr>
<td>HCT</td>
<td>HIV Counseling and Testing</td>
</tr>
<tr>
<td>IPT</td>
<td>Intermittent Preventive Treatment</td>
</tr>
<tr>
<td>IOM</td>
<td>Institute of Medicine</td>
</tr>
<tr>
<td>KAIS</td>
<td>Kenya AIDS Indicator Survey</td>
</tr>
<tr>
<td>KII</td>
<td>Key Informant Interview</td>
</tr>
<tr>
<td>KNASP</td>
<td>Kenya National HIV and AIDS Strategic Plan</td>
</tr>
<tr>
<td>MTCT</td>
<td>Mother to Child Transmission</td>
</tr>
<tr>
<td>MCH</td>
<td>Maternal and Child Health</td>
</tr>
<tr>
<td>MOH</td>
<td>Ministry of Health</td>
</tr>
<tr>
<td>MOHSS</td>
<td>Ministry of Health and Social Services</td>
</tr>
<tr>
<td>NACC</td>
<td>National AIDS Control Council</td>
</tr>
<tr>
<td>NASCOP</td>
<td>National AIDS and STD Control Program</td>
</tr>
<tr>
<td>PMTCT</td>
<td>Prevention of Mother to Child Transmission</td>
</tr>
<tr>
<td>SPSS</td>
<td>Statistical Package for Social Science</td>
</tr>
<tr>
<td>UNAIDS</td>
<td>United Nation Program on AIDS.</td>
</tr>
<tr>
<td>PITC</td>
<td>Provider Initiated HIV Testing and Counseling</td>
</tr>
<tr>
<td>WHO</td>
<td>World Health Organization</td>
</tr>
<tr>
<td>FGD</td>
<td>Focused Group Discussion</td>
</tr>
</tbody>
</table>
### DEFINITION OF TERMS

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acceptance of HTC</td>
<td>Voluntary acceptance of HIV testing and counseling by pregnant women after counseling</td>
</tr>
<tr>
<td>Non-acceptors of HTC</td>
<td>Pregnant women who had HIV counseling and refuse to take the test during the current pregnancy</td>
</tr>
<tr>
<td>HIV-prevention counseling</td>
<td>An interactive process of assessing risk, recognizing specific behaviors that increase the risk for acquiring or transmitting HIV, and developing a plan to take specific steps to reduce risks</td>
</tr>
<tr>
<td>Voluntary HIV testing</td>
<td>A process of willingly accepting an HIV test after informed consent</td>
</tr>
<tr>
<td>Knowledge</td>
<td>Information stored in the memory related to HIV/AIDS and Mother to Child Transmission</td>
</tr>
<tr>
<td>Attitude</td>
<td>Predisposition to respond in favorable or unfavorable manner towards HIV/AIDS and routine HTC</td>
</tr>
<tr>
<td>Perceived benefit</td>
<td>Outcome expectation from taking HIV test</td>
</tr>
<tr>
<td>Risk perception for HIV/AIDS</td>
<td>Respondents feeling of vulnerability for HIV/AIDS</td>
</tr>
<tr>
<td>Informed consent</td>
<td>A process of communication between patient and provider through which an informed patient can choose whether to undergo HIV testing or decline to</td>
</tr>
</tbody>
</table>
Elements of informed consent typically include providing oral or written information regarding HIV, the risks and benefits of testing, the implications of HIV test results, how test results will be communicated, and the opportunity to ask questions.

<table>
<thead>
<tr>
<th><strong>Opt-out screening</strong></th>
<th>Performing HIV screening after notifying the patient that 1) the test will be performed and 2) the patient may elect to decline or defer testing. Assent is inferred unless the patient declines testing</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Diagnostic testing</strong></td>
<td>Performing an HIV test for persons with clinical signs or symptoms consistent with HIV infection</td>
</tr>
<tr>
<td><strong>Targeted testing</strong></td>
<td>Performing an HIV test for subpopulations of persons at higher risk, typically defined on the basis of behavior, clinical, or demographic characteristics</td>
</tr>
</tbody>
</table>
ABSTRACT

Acceptance of routine HIV counselling and testing (HCT) can go along way in providing the much needed support including treatment to alleviate suffering from HIV/AIDS. However, there is low uptake of routine HCT. The purpose of this study was to determine factors influencing acceptance of routine HCT. Specific objectives included to: determining the level of acceptance of routine HTC among pregnant women in Kibera informal settlement; determine socio-demographic characteristics influencing acceptance of routine HTC among pregnant women in Kibera informal settlement; determine institutional characteristics influencing acceptance of routine HTC among pregnant women in Kibera informal settlement; and, assess the knowledge, attitudes, and practices influencing acceptance of routine HTC among pregnant women in Kibera informal settlement. The study was a cross-sectional descriptive in nature employing both quantitative and qualitative approaches. Data was collected using structured interview schedules with open and closed type questions where a total of 400 respondents were interviewed. Three key informants from NASCOP, NACC, and the DASCO in Langata District were interviewed. Data was analyzed using SPSS version 17. Data was presented using charts, graphs and frequency tables. Factors that were significantly associated with acceptance of routine HIV testing and counseling were being married ($\chi^2 = 5.6$, df = 1, P = 0.018), attending ANC at least once ($\chi^2 = 5.06$, df = 1, P = 0.024), being in second or third trimester of pregnancy ($\chi^2 = 7.26$, df = 1, P = 0.007), satisfaction with pretest counseling ($\chi^2 = 33.417$, df = 1, P = 0.000), Default from ANC ($\chi^2 = 5.081$, df = 1, P = 0.024), knowledge whether HIV is curable ($\chi^2 = 5.312$, df = 1 P = 0.021), knowledge on availability of routine HIV counseling and testing ($\chi^2 = 17.848$, df = 1, P = 0.000), pretest counseling ($\chi^2 = 12.661$, df = 1, P = 0.000). Key informant interviews showed that low education level, ignorance and poverty contributed to low acceptance of routine HTC. It was concluded that marital status, low education level, lack of knowledge of risk factors for HIV infection and not attending ANC contribute to low acceptance of routine HTC. In addition, lack of access to government hospitals and awareness of routine HTC are major impediments of acceptance of routine HTC. Based on these findings to improve the acceptance of routine HTC the study recommends to Government of Kenya and other stake holders to design integrated HIV and reproductive health programmes targeting the youth and establish more public health facilities to increase accessibility.
1. CHAPTER ONE

1.0 Introduction

1.1 Background

In a medical setting, routine HIV counseling and testing occurs when health care workers recommend an HIV test and the patient chooses to accept (WHO, 2010). The individual undergoes counseling to enable her/him to make an informed decision about being tested for HIV, assess their personal risk for HIV and develop a risk reduction strategy. When the HIV test was developed in the mid 1980s, testing tended to be accompanied by little HIV counseling (De Cock et al., 2009).

There is also increasing international support for "routine" or "opt-out" testing, where all patients are counseled and tested unless they decline. Routine testing occurs in selected health care settings, such as pre-natal clinics or medical wards with high prevalence of HIV, Tuberculosis, or sexually transmitted infections. This approach has successfully identified many patients in need of treatment and care (WHO, 2010).

Routine HTC during pregnancy is a starting point for instituting a PMTCT prevention program. This strategy promotes adequate treatment for HIV positive women and has a positive impact on child HIV transmission rate. For HIV negative women it provides opportunity for education and behavioral change (De Cock et al., 2009). But experience to-date in many countries show great variation in willingness to make use of the service that are available and very low acceptance of routine HTC services (UNAIDS, 2010).
This is true for Kenya and Kibera informal settlements in particular. Nevertheless, the factors responsible for the low acceptance in Kibera have not been documented. This study therefore seeks to fill this gap.

To fully integrate routine HTC in ANC; the US Institute of Medicine revised guidelines in 1998 (Ref). These revised guidelines emphasize HIV testing as a routine part of prenatal care and strengthen the recommendation that all pregnant women be tested for HIV, recommend simplifying the testing process so that pretest counseling is not a barrier to testing, increase the flexibility of the consent process to allow for various types of informed consent, recommend that providers explore and address reasons for refusal of testing, and emphasize HIV testing and treatment at the time of labor and delivery for women who have not received prenatal testing and chemoprophylaxis (Zandile, 2010). These guidelines maintain a voluntary approach to HIV testing which preserves a woman's right to make decisions regarding testing and supports a woman's right to refuse testing if she does not think it is in her best interest (Bernard et al., 2009).

The social conceptualization and representation of HIV and HIV testing have an influence on HIV test acceptance rates (Stringer et al., 2008). For example, the association of HIV with immediate death and discrimination, belief that a person is outside the category of risk, lack of awareness or knowledge about rates in one’s community, fear of being labeled and stigmatized by the significant others, perception of the consequences of living with HIV, user friendliness of testing sites, symptom driven health seeking, lack of knowledge about available treatment are some factors that have
been alleged to deter people from HIV testing (MOH, 2010). Establishing whether these factors are present in the Kibera informal settlement is the objective this study.

Initially in most parts of Europe, HIV testing services were offered on an "opt-in" basis, perhaps due to a Western concern for personal privacy. But this method showed limited success and, if a woman is unaware of her HIV infection, it is of course difficult to provide appropriate PMTCT services. The reasons why women often decline opt-in screening include unawareness of HIV risk factors or fear of stigmatization by healthcare workers for merely agreeing to be tested. Furthermore, stigmatization and discrimination in the community are also leading causes for declining to be tested (CDC, 2009). Given the relatively low acceptance with the opt-in method, alternative testing method with higher successful acceptance was adapted: "opt-out" screening, a method in which a woman is routinely tested unless she actively declines (CDC, 2009).

In Sub Saharan Africa, routine HTC rates among pregnant women approached for participation in PMTCT clinical trials range between 33 to 95% (Lindsay, 2008). In a population-based study in Botswana, 43% of respondents believed that the HIV testing policy would lead people to avoid going to the doctor for fear of testing, suggesting that many do not fully understand the voluntary nature of testing (Weiser, 2009). Preliminary data from another study, undertaken in Kinshasa, Democratic Republic of the Congo, show that 41% of TB nurses and HIV counselors believed it would be difficult for patients to opt-out of an offer of routine testing, as did 33 percent of patients (Corneli, 2010).
In a survey of women in Tanzania three months after they received testing and counseling, the women who were HIV positive reported more violence from their current partners than the women who were HIV negative (Maman, 2009). Studies thus show that a significant minority of women report negative outcomes following disclosure of their HIV positivity. At the same time, they show that the majority of HIV-positive women surveyed report positive outcomes with disclosure of their HIV status, including less anxiety, fewer symptoms of depression, increased social support and, in many cases, a strengthening of the relationship with their partners (WHO, 2010).

In many of these settings, several factors have been associated with reluctance to HIV testing some of which include fear of HIV positive test result, stigmatization, discrimination, domestic violence, separation or divorce, and higher education. Time for HIV test result has also been described as a cause of low acceptance (Lindsay, 2008). However it is not known whether these factors could be behind the low routine HTC acceptance in Kibera or a host of others hence need to carry out this study.

1.2 Problem statement
Globally, 4.3 million children under the age of 15 have died of AIDS and 90% were infected by their mother at birth or during breastfeeding (CDC, 2009). In 2009, an estimated 370 000 children contracted HIV during the perinatal and breastfeeding period (UNAIDS, 2010). HIV/AIDS is one of the most serious public health problems that continue to face Kenya (KDHS 2008). Trends in maternity care indicators shows that the births occurring in health facilities have been decreasing between 1989 (50%) and 1993, (45%) (KDHS, 2008). A slight increase from 40% in 2003 to 43% in 2009 was observed
(KDHS, 2008), this means that despite the government policy of routine HTC for every pregnant woman, a large proportion of pregnant mothers (57%) have not been utilizing routine HTC (KDHS, 2008). This therefore reduces the acceptance of PMTCT and increasing the risk of MTCT of HIV through vertical transmission during pregnancy, delivery or breast feeding. This study therefore tried to establish the factors which influence acceptance of routine HTC among pregnant women in Kibera.

1.3 Justification of the study
The third Kenya National AIDS Strategic Plan clearly points out that, there is a continuing high incidence of pediatric infection, due to vertical transmission. This is also due mainly to inefficient, inaccessible, or underutilized Prevention of Mother to Child Transmission services (NACC, 2009). The public health benefit of routine HTC has been very significant especially in reducing risky behavior (Crepaz et al., 2007). It has also been proven to be cost effective (Forsythe et al., 2008). Studies in risky sexual behaviors among both the HIV infected people and those who are not, helps to prevent the risk of spreading HIV/AIDS to uninfected people (CDC, 2009).

Increasing access to routine HTC among pregnant women ensures that people are able to know their status and plan for their future needs and those of their family and make informed choices on child bearing (UNAIDS, 2010). Many, but not all women accept routine HTC. The services have been slow to gain acceptance and understanding of those factors could help intervention design to promote routine HTC among pregnant women in poor resource settings (Knut et al., 2010). Identifying these factors would help scale up
the acceptance of routine HTC therefore reducing MTCT of HIV through vertical transmission.

1.4 Objectives of the study

1.4.1 Broad Objective
The broad objective was to assess factors influencing acceptance of routine HIV Counseling and Testing, among pregnant women in Kibera informal settlement, Nairobi, Kenya.

1.4.2 Specific objectives
The specific objectives included the following:

i. To determine the level of acceptance of routine HTC among pregnant women in Kibera informal settlement.

ii. To determine socio-demographic characteristics influencing acceptance of routine HTC among pregnant women in Kibera informal settlement.

iii. To determine institutional characteristics influencing acceptance of routine HTC among pregnant women in Kibera informal settlement.

iv. To assess the knowledge, attitudes, and practices influencing acceptance of routine HTC among pregnant women in Kibera informal settlement.

1.5 Research questions
The specific research questions included the following:

i. What is the level of acceptance of routine HTC among pregnant women in Kibera informal settlement?

ii. What are the socio-demographic characteristics influencing acceptance of routine HTC among pregnant women in Kibera informal settlement?
iii. What are institutional characteristics influencing acceptance of routine HTC among pregnant women in Kibera informal settlement?

iv. What knowledge, attitudes, and practices influence acceptance of routine HTC among pregnant women in Kibera informal settlement.

1.6 The null hypothesis
There are no socio-demographic, institutional characteristics; knowledge, attitude and practice factors influencing acceptance of routine HTC among pregnant women in Kibera informal settlement.

1.7 Significance
The findings of the study provided useful data which may be used in formulation of new policies or in scaling up the existing national programs in response to ongoing intervention strategies for the Kenyan government and other stakeholders. The findings may also be used to provide guidance on the counseling and HIV testing for managers of antenatal clinics and other pregnancy-related services, whether public, private or non-profit. They may also be used as basis for discussions in developing national policy in this increasingly important area, so as to increase acceptance of routine HTC services in MCH facilities in low socio-economic setups like Kibera.

1.8 Limitations of the study
HIV/AIDS is associated with a lot of stigma and this might pose a challenge in respondents consenting to participate in the study or freely discuss issues related to HIV/AIDS.
3.4 Conceptual framework

(Adapted from Nyambura A. 2007)

Figure 1-1: Conceptual Framework
2. CHAPTER TWO

2.0 Literature Review

2.1 Global Overview of HIV/AIDS in pregnancy

The impact of HIV worldwide will be felt for decades to come. Promising developments have been seen in recent years in global efforts to address the AIDS epidemic, including increased access to effective treatment and prevention programmes (UNAIDS/WHO, 2010). However, the number of people living with HIV continues to grow, as does the number of deaths due to AIDS (Ref). Approximately 39.5 million people worldwide were living with HIV in 2006 (UNAIDS/WHO, 2010). In 2007, new data showed global HIV prevalence and the number of new infection had declined, in part as a result of the impact of HIV programmes (WHO, 2007). In 2007, 33.2 million people were estimated to be living with HIV, 2.5 million people became newly infected and 2.1 million people died of AIDS worldwide (UNAIDS/WHO, 2008).

The impact of HIV/AIDS during pregnancy has been reported in developed countries. In the USA a 14-state study of HIV counseling and testing data for 1996-1997 reported that the proportion of pregnant women voluntarily tested for HIV was 58%--81% (CDC, 2005). Women most likely to receive HIV counseling and testing during pregnancy were those who were African-American, had less than a high school education, were aged less than 25 years, received care in public rather than private health-care settings, and were Medicaid beneficiaries (CDC, 2009).

In a multicity study of prenatal clinic patients in the USA, 74%--95% of participants accepted HIV testing (Fernandez et al., 2009). The most commonly cited factors for
acceptance were a belief that knowledge of positive HIV sero status during pregnancy (and subsequent chemoprophylaxis) can be beneficial to both mother and infant and strong provider endorsement for prenatal HIV testing. The most reasons for declining the test were no perceived risk, administrative scheduling difficulties, history of previous testing, and lack of provider endorsement (Fernandez et al., 2009).

Although most providers agreed that all women should be tested for HIV, some offered testing only to women whom they considered at risk for infection (Royce et al., 2008). Risk-based testing approaches identified fewer HIV-infected women than routine voluntary testing of all pregnant women and also decreases in effectiveness as more women are infected through heterosexual contact without knowing their partner's HIV risk status (CDC, 2009).

Only 20% of women in Eastern Europe were aware of their HIV status before pregnancy, as opposed to the majority of patients in other parts of Europe; 61% of Ukrainian women found out their HIV status during pregnancy, and 19% were only diagnosed at the time of labor and delivery (Ref). In Western Europe, elective C-section rates in HIV-infected women were 66% much higher than other areas (CDC, 2009).

In the past five years, in Eastern Europe, MTCT rates were 6.7%, and in Western/Central Europe transmission rates were 1.6% (Ref). By therapy breakdown, MTCT rates were 14.5% in women without treatment (Western/Central Europe), 6.4% among women receiving ARV mono therapy, and 1.3% among women receiving HAART. In Eastern Europe, the breakdowns of MTCT rates were 20% among women receiving no ARVs,
6.9% in women receiving single-dose nevirapine, 7.8% in women receiving short-course zidovudine regimens (CDC, 2009).

2.1.1 Overview of HIV/AIDS during pregnancy in Africa

Almost all the new child infections are in developing countries, with 90% in sub-Saharan Africa alone (CDC, 2009) and AIDS deaths are reversing gains in child health and survival (Ref). Forecasts for Zimbabwe in 2010, for example, show that AIDS is expected to push the infant mortality rate 138% higher and the under-five mortality rate 304% higher than they would have been in the absence of AIDS. In Côte d’Ivoire, child mortality will rise by over two-thirds. Caring for HIV infected children carries heavy costs for families and health systems (CDC, 2009).

Southern Africa remains the worst affected region in the world in prevalence of HIV among pregnant women. In Soweto, South Africa, for example, one-third of pediatrics hospital admissions are HIV-related. Data from antenatal clinics in urban area showed that HIV prevalence of over 25% following a rapid increase from just 5% in the 1990s (CDC, 2009).

In Swaziland the average prevalence among pregnant women was 39% in 2002 showing an increase to 34% in 2000 from only 4% in 1992. In Botswana antenatal prevalence has been sustained between 35 and 37% in the period 2001-2003 (CDC, 2009). In Kenya, Malawi, Namibia, Rwanda, South Africa, the United Republic of Tanzania, Zambia, and Zimbabwe, over 10% of women attending antenatal clinic in urban areas were reported to be HIV positive, with a rate of almost 60% in some sites (WHO, 2010).
From March 1999 to November 2000, 1735 mothers visiting maternal and child health clinics in Botswana were approached for routine HTC and study participation (Ref). Out of 798 women who refused HIV testing, 29% mentioned fear of a positive HIV test as the main reason for their refusal and 15% requested more time to consider undergoing HIV testing. Fourteen percent desired a partner or parental consent before considering routine HTC and 5% were not interested in the study or were not living in the study area. Thirty seven percent of women who refused testing did not provide a reason for their refusal. Univariate and joint predictors of acceptance of routine HTC indicate maternal age, education level, marital status, occupation, and study sites were all significantly associated with acceptance of routine HTC (Ibou et al., 2009).

Only 54% of women who were approached for the study in Botswana accepted HIV testing. Acceptance of routine HTC decreased with age. Those who were 21 years of age or younger were more likely to accept routine HTC than the group of women 32 years of age or older because of older women perceiving themselves to be more likely to be HIV infected due to previous unsafe sexual practices or fear of an HIV-positive result after having lost relatives or friends with AIDS (Ibou et al., 2009).

Unmarried women were more likely to accept routine HTC than married or cohabiting women (44% vs 57%, respectively) (Langen, 2010). In Botswana like in many African countries, married women are still often subject to their husband’s authority (Van der Straten et al., 2008; Kebaabetswe et al., 2009), and may therefore refuse routine HTC or
request permission from their partners for routine HTC in order to avoid potential negative consequences in case of disclosure of a positive HIV test result (Langen, 2010).

Women who were educated were less likely to accept routine HTC as compared to those who were uneducated. Women who were educated feared HIV testing due to their evaluation of risks or implications of a positive HIV result (Ibou 2009). In fact 72% of women in the study in Botswana study who cited fear as a reason for not accepting routine HTC had at least 7 years of education (Fako, 2010). The quality of counseling may also be a contributory factor in different rates of acceptance (Ibou, 2009). A study was conducted in Uganda by Matovu et al., (2008) to assess the acceptance of HIV counseling and testing (routine HTC) and the effects of routine HTC on sexual risk behavior and HIV acquisition in Rakai, Uganda. In a rural cohort, 10694 consenting adults were interviewed, provided blood for HIV testing and were offered free routine HTC by community resident counselors. The results showed that although 93% initially requested HIV results, 62.2% subsequently accepted routine HTC. Routine HTC acceptance was lower among persons with no prior routine HTC individuals with primary education or higher (individuals who were HIV-positive and persons reporting condom use in the past 6 months) inconsistent users, routine HTC acceptance was higher among the currently married and previously married. Receipt of results was not significantly associated with age, gender, and self-perception of HIV risk. There were no significant differences in sexual risk behaviors or in HIV incidence between acceptors.

2.2 Types of HIV testing during pregnancy
Every pregnant woman should be offered an HIV test as early as possible in her pregnancy. The offer to test should be accompanied by individual, culturally competent counseling and should discuss benefits of determining her HIV status, as well as its implications for her life, pregnancy and potentially, her unborn child (UNAIDS/WHO, 2009).

2.2.1 Voluntary testing

In this setting, pregnant women are advised about HIV testing. Women have the right to accept or refuse the test (WHO, 2010). When appropriately offered a voluntary HIV test, women overwhelming accept. Indeed, acceptance rates have been shown to be 90% and higher as counseling and voluntary testing are also the best mechanisms to actively engage women as equal partners in their care (WHO, 2010).

The main problem with voluntary testing is that routine HTC services are not available in most regions in Africa (Gibier et al., 2008). Most HIV testing in Africa is conducted in urban clinics whose clients mainly consist of either pregnant women attending ante-natal clinics or referred patients with HIV related symptoms (de Graft-Johnson et al., 2004). Factors that impact the decision to go to routine HTC may also be correlated with the location of the routine HTC center which biases the estimates of the demand for HIV testing (Matovu et al., 2008).

2.2.2 Universal or routine testing

This policy of universal or routine testing includes an HIV test in the standard battery of tests that all women receive when they are pregnant. With routine testing there is often no guarantee of counseling. Routine testing should carry a right of refusal. However, this,
too, can take several forms. Some must be signed by the woman and documented in medical records. Recently, this policy has gained the support of some policy makers and medical groups. Although there are several ways that a universal testing procedure would be implemented, it is likely that there could be a decreased emphasis on pre-test counseling and informed consent. Additionally, the use of documented refusals with no protection from legal action can be more coercive or intimidating than voluntary testing (Michael et al., 2008). In Kenya the routine HIV test is offered as routine HTC in healthcare setups for all pregnant women who attend ANC (NACC, 2009).

2.2.4 Mandatory testing

In this setting, all pregnant women and/or newborns get tested for HIV. Mandatory testing generally means that there are sanctions or penalties for those who refuse to test, including criminal penalties. Currently, New York and Connecticut are the only two states with mandatory testing policies (Michael et al., 2008). A testing policy that does not allow a woman to make informed decisions violates her right to be an active participant in her own healthcare. Coercive HIV testing also runs the risk of alienating women from HIV testing and appropriate follow-up care. This may be especially true for certain groups of women, including immigrants. In the worst cases, coercive, involuntary, or poorly handled testing could cause a woman to leave care altogether. If the goal of public health efforts is to ensure that every pregnant woman is able to access and use the information and care that will benefit her and her unborn child, efforts to mandate testing or treatment should be defeated (CDC, 2009)

2.3 Factors that affect acceptance of routine HTC in PMTCT services
A number of varied and complex factors serve as barriers to the acceptance of routine HTC. These factors may include both service and client-related factors. Whether these factors are present in the Kibera informal settlement is a function of this research.

2.3.1 Service-related factors

2.3.1.1 Accessibility and availability of routine HTC services
Routine HTC has generally not been seen as a priority in HIV care and prevention programs. In many parts of the world, and particularly in developing countries, routine HTC is not widely available or not available at all (MOH/NASCOP, 2009).

A study was carried out in Kijabe, Kisumu and Kericho in Kenya on low acceptance of routine HTC. In particular, reports from Kijabe and Kericho indicate that fear among women that they will be banished from their homes, expelled from their families, and stigmatized by the societies in which they live is a major determinant for not being tested (CDC, 2009).

In an abstract presented at the International AIDS Conference in Bangkok, Thailand in 2004, barriers to PMTCT at Nyanza Provincial General Hospital in Kisumu, Kenya were described (Muhenje et al., 2009). Of the 122 women interviewed, the majority identified lack of spousal support, fear of partner violence, and disclosure of HIV status as the foremost impediments to accepting routine HTC services (Muhenje et al., 2009).

In a four-year study to examine the introduction of PMTCT services within maternal and child health programs in Kenya and Zambia, about two-thirds of more than 22,000 women who sought antenatal care as new clients received pretest counseling, but less than one-third went on to have an HIV test. Reasons for disapproving routine HTC
acceptance at ANC/PMTCT sites throughout Africa may include logistic barriers (for example results are unavailable the same day or tests are expensive) and fears that test results will not remain confidential. Even when women are tested, a substantial number do not return for their results (Cartoux, 2008).

2.3.1.2 Confidentiality and attitude of health workers
Voluntary screening programs for HIV may be either confidential or anonymous: the process for each is unique (Stanhope, 2009). A qualitative study investigating routine HTC acceptance by pregnant women using focus group discussion in South West Uganda revealed that pregnant women were anxious about taking up routine HTC, due to the fear for confidentiality and fear that maternity staff might refuse to assist them when the time come to deliver if their status were known (MOH, 2010). It is alleged that in some health facilities nurses disclose the HIV status of their clients in the public without informed consent (Stanhope, 2009). In addition, patients are said not to accept being counseled by counselors who are younger than themselves, which increases the pressure on the availability of counseling services (MOH, 2010).

In Namibia, a very low acceptance of routine HTC (less than 10%) was recorded during the pilot PMTCT program and this was attributed primarily due to the lack of trained counselors in Namibia (MOHSS, 2009). Several key factors may contribute to the poor and inconsistent utilization of maternal health care services for PMTCT such as stigma and fear for HIV positive pregnant women to disclose their status to health workers. On the other hand, the quality of care (good or bad) received from a health facility during previous pregnancy or delivery can have an associated effect on her future utilization of the facility.
2.3.2 Client related factors

2.3.2.1 Knowledge, attitude and practice about HIV/AIDS and routine HTC
Knowledge about HIV/AIDS has been expanding in the past two decades, as has the number of infections globally. The routes of HIV spread are now firmly established, and includes sexual contact, transfusion of infected blood or blood product and mother to child transmission (WHO/UNAIDS 2009). The main mode of transmission is heterosexual sex, which accounts for 75% of all the HIV cases in the country (MOH, 2010).

In Kenya the 2008-2009 KHDS indicate that over 99% of women had heard of AIDS and the modes of transmission. Seventy five percent of the women aged between 15-49 years know that people can reduce the risk of getting AIDS by using condom every time they have sex. Ninety two percent of the women know that limiting sexual intercourse to uninfected partner can reduce the chances of getting HIV. Ninety percent of the women know that abstinence can lower chances of HIV infection (KDHS, 2008).

The KNASP 2009/10-20012/13 noted low levels of knowledge about HIV status. Only 36 per cent of Kenyan adults (15-64 years) have tested at least once for HIV and received results. However, an estimated 80 per cent of HIV infected people do not know their correct status, and testing rates show little difference across provinces, despite large geographical variation in prevalence (KNASP, 2009).

2.3.2.2 Literacy and routine HTC in PMTCT
The majority of women in many developing countries are illiterate, which contributes to them not understanding health related problems. A pilot study investigated factors related to acceptance and acceptability of routine HTC for HIV among pregnant woman in
Kigali, Rwanda, found that women whose partners had skilled and well paid jobs were about four times more likely to accept HIV testing, than were women whose partners were unemployed (Kowalczyk et al., 2009).

2.3.2.3 Discrimination, fear and stigma

Stigma is largely driven by social and familial pressure “family name” (Khan, 2009). For example, in some cases people living with HIV are given names by their relatives which are associated with their symptoms such as “that one with diarrhea or sores”. Stigma is also driven by some cultural or religious norms and value as well as by fear of AIDS and secrecy (Khan, 2009).

WHO (2009) carried out a secondary data review to synthesize the rates, barriers, and outcomes of HIV sero-status disclosure among women in developing countries. Seventeen studies from peer-reviewed journals and international conference abstracts were identified - 15 from sub-Saharan Africa and 2 from south-east Asia - that included information on either the rates, barriers or outcomes of HIV sero-status disclosure among women in developing countries (Ref). The rates of disclosure reported in these studies ranged from 16.7% to 86%, with women attending free-standing voluntary HIV testing and counseling clinics more likely to disclose their HIV status to their sexual partners than women who were tested in the context of their antenatal care (WHO, 2010).

Barriers to disclosure reported by the women included fear of accusations of infidelity, abandonment, discrimination and violence (Ref). Between 3.5% and 14.6% of women reported experiencing a violent reaction from a partner following disclosure (ref). The low rates of HIV sero status disclosure reported among women in antenatal settings have
several implications for prevention of mother-to-child transmission of HIV (PMTCT) programmes as the optimal acceptance and adherence to such programmes is difficult for women whose partners are either unaware or not supportive of their participation (WHO, 2010).

2.3.2.4 HIV Risk perception

Measures of HIV/AIDS knowledge and risk perception are important because they are often linked to behavioral change both in theory and in practice. A study was carried out in a rural district of Malawi to examine the knowledge and risk perception by assessing the respondents’ relationship with demographic characteristics, first source of HIV/AIDS information, and behavioral and cognitive risk exposures among men and women. The data come from a panel study of 940 women aged 15–34 years and 661 men aged 20–44 years (WHO 2010). The results indicate that knowledge of HIV/AIDS does not necessarily translate into perceived risk. In addition, there appears to be a gender difference in the influence of cognitive and behavioral factors on perceived risk (Barden-O Fallon et al., 2008).

In summary, the literature reviewed shows that acceptance of routine HTC among pregnant women is influenced by many factors which are related to the client or the provider. This study therefore sought to establish if the findings of the literature reviewed were applicable in Kibera and whether they influenced acceptance of routine HTC among the pregnant women.

The impact of HIV/AIDS during pregnancy has continued to be felt both globally and in Africa. However among many pregnant women acceptance of routine HTC is still very low. This is true for Kenya and Kibera informal settlements in particular. Nevertheless,
the factors responsible for the low acceptance in Kibera have not been documented. Therefore, the gap this study addressed was to establish the factors which influence acceptance of routine HTC among pregnant women in Kibera. Identifying and documenting these factors will help scale up the acceptance of routine HTC therefore reducing MTCT of HIV through vertical transmission and enhancing PMTCT of HIV.
3. CHAPTER THREE

3.0 Methodology

3.1 Introduction
In this chapter, the various methodologies which were used to attain the study objectives are explicitly explained. The chapter looks at study area, study design, target and study populations, sampling techniques, research instruments, ethical considerations, data collection, data quality control, data management and analysis.

3.2 Research design
A cross-sectional study design was used employing both quantitative and qualitative approaches. A cross-sectional study examines the relationship between two variables of interest as they exist in a defined population at a single point in time or over a short period of time. It provides a snapshot of the frequency one variable and other related characteristics. Cross sectional studies have the following benefits: They are relatively cheap, quick and easy to conduct without long periods of follow-up, data on all variables is only collected once, it is able to measure prevalence for all factors under investigation, multiple outcomes and exposures can be studied, the prevalence of disease or other health related characteristics are important in public health for assessing the burden of disease in a specified population and in planning and allocating health resource and it is good for descriptive analyses and for generating hypotheses. However, with this design it is difficult to determine whether the outcome followed exposure in time or exposure resulted from the outcome, it is not suitable for studying rare diseases or diseases with a short duration. As cross-sectional studies measure prevalent rather than incident cases, the data will always reflect determinants of survival as well as aetiology, unable to measure incidence and the associations identified may be difficult to interpret. This study will
ensure that the weaknesses are circumvented by having a population size large enough to reduce bias. The data provided information about the presence and strength of associations between variables, permitting the testing of hypothesis about such associations.

3.3. Variables

3.3.1 Dependent variable
The dependent variable was acceptance of routine HTC among pregnant women in Kibera informal settlements.

3.3.2 Independent variables
These were categorized into various factors. These include:

i. Socio-demographic Factors (e.g. age, marital status, ethnicity, number of pregnancy, religion, or number of ANC visits).

ii. Institutional characteristics such attitude of staff, accessibility, availability quality of services.

iii. Knowledge, attitude and practice: to include knowledge about HIV, MTCT and routine HTC, knowledge on the perceived benefit of HCT and knowledge on perceived risk of HIV, stigma, discrimination and fear and perceived benefit.

3.5 The study area
Kibera is one of the largest informal settlements in Africa. According to the 2009 Kenya Population and Housing Census the population of Kibera is reported to be 170,070 (KNBS, 2009). The name “Kibera” is derived from kibra, a Nubian word meaning “forest” or “jungle.” Geographically, it is located southwest of Nairobi city centre with Nairobi Dam to the south. It is sited approximately 5 km south east of the city centre of Nairobi.
The estimated population density is 300,000/km². The housing structures are built of mud with corrugated iron sheets roofing (AMREF, 2007).

Kibera is composed of 10 sub-locations, sub-divided into multiple ‘villages.’ There are a number of villages, including Kianda, Soweto, Gatwekera, Kisumu Ndogo, Lindi, Laini Saba, Siranga/Undugu, Makina and Mashimoni. A railroad track runs through the center of Kibera, which is commonly considered a boundary separating the poorest and most dangerous parts of Kibera below the tracks, from the relatively “better off” parts of Kibera above the tracks. Kibera is home to multiple ethnic groups, who tend to dominate within specific villages (AMREF, 2009).

Due to its informal nature, it has limited essential public services like healthcare, sanitation, water, and education; which is most strikingly illustrated by the flying toilet phenomenon where polythene or paper bags in which human excreta are disposed of by throwing them on roofs or in the cramped allies (AMREF, 2007).
Figure 3-1: A Map of Kibera

KEY

--------  Railway line

Kibera villages
Geographical boundaries

Figure 3-1: A Map of Kibera
3.6 **Target population**
Target population was pregnant women.

3.7 **Study population**
The study population comprised pregnant women living in Kibera informal settlement who met the inclusion criteria.

3.7.1 **Inclusion criteria**
Participants were included if they were pregnant; residents of Kibera and living in the villages where the study was being conducted; had consented to participate in the study; and had lived in the area for at least one year.

3.7.2 **Exclusion criteria**
Participants were excluded if they were not living in the villages where the study was being conducted; had refused to participate; had lived in the area for less than one year; and were incapacitated to the extent that they could not give information regarding the objectives of the study.

3.8 **Sample size and sampling techniques**

3.8.1 **Sample size**

*Sample size determination for Quantitative survey*

Sample size for this research was determined using the formula by Fisher *et al* (1998) as given in equation 3.1.

Using the formula by Fisher *et al* (1998)

\[ n = \frac{z^2pq}{d^2} \]
Where:

\[ n = \text{the desired sample size when the target population is over ten thousand people.} \]

\[ z = \text{the standard normal deviate corresponding to 95\% confidence interval (} z = 1.96). \]

\[ p = \text{the proportion of the target population estimated to have the characteristics being investigated [43\% of pregnant women in Kenya utilizing PITC because they attend ANC) (KDHS 2009)]. } p = 0.43 \]

\[ q = \text{the proportion of the target population without the characteristics being investigated (usually given by 1-p)} \]

\[ d = \text{the degree of accuracy at 95\% confidence interval (0.05)} \]

Thus \[ n = \frac{1.96^2 \times 0.43 \times 0.57}{0.05^2} = 376.6 \]

This figure was adjusted for non response and incomplete questionnaires to 400

The study therefore had 400 respondents who were interviewed using the structured questionnaire to get quantitative data.
This study used both quantitative and qualitative methods. Interviewer administered questionnaire was used to gather information which were quantitative in nature. Since more information might have been vital, probing technique was employed to gather qualitative data which was able to elicit more elaborate answers.

3.8.2: Distribution respondents across the villages
In this study, five villages within Kibera were randomly selected to ensure that all 13 villages in Kibera were given an equal chance to be represented. These villages were selected considering factors such as the distribution of both private and government health care facilities, their accessibility, wealth indicators or geographical location. Population proportional to size was used to calculate sample size for each village to provide representative information for each village. Table 3-1 shows the distribution of respondents across the villages. The number required for each village was calcuted using the following formula:

\[
\text{Sample size village } x = \frac{\text{number of women in village } x}{\text{Total number of women in the five village}} \times 400
\]

Table 3-1: Distribution of Participants

<table>
<thead>
<tr>
<th>Village</th>
<th>Population of women</th>
<th>Household</th>
<th>Number required</th>
</tr>
</thead>
<tbody>
<tr>
<td>Laini Saba</td>
<td>12 494</td>
<td>28 356</td>
<td>87</td>
</tr>
<tr>
<td>Siranga</td>
<td>7 165</td>
<td>17 363</td>
<td>50</td>
</tr>
<tr>
<td>Makina</td>
<td>12 277</td>
<td>25 242</td>
<td>85</td>
</tr>
<tr>
<td>Kianda</td>
<td>14 127</td>
<td>29 356</td>
<td>98</td>
</tr>
<tr>
<td>Gatwikira</td>
<td>11 411</td>
<td>24 991</td>
<td>80</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>57 474</strong></td>
<td><strong>125308</strong></td>
<td><strong>400</strong></td>
</tr>
</tbody>
</table>
During sampling, which was quantitative, the center of the village was located with the help of village elders and while at the centre a pen was thrown to determine the direction of movement during data collection. The direction that the pen pointed was followed while trying to maintain a straight line. The first household with a pregnant women (determine by presence of ANC card) was interviewed. Any household without a pregnant woman was skipped. The process was repeated until the sample size for that village was met. The same process was repeated in the other villages until the sample size for the study was obtained.

3.8.3 Qualitative sampling methodology

This methodology aims to gather an in-depth understanding of human behavior and the reasons that govern such behavior. It investigates the why and how of decision making, not just what, where or when. Hence, smaller but focused samples are more often needed, rather than large samples. It is subjective where individuals’ interpretation of events is important. This methodology was used to get more detailed data from the respondents. The method allowed the FGD respondents to give more elaborate explanations on the topic of study which had not been captured during the individual interviews.

3.9 Construction of research instruments

3.9.1. Questionnaire

This was used where the research assistants asked the respondents' questions and then ticked the answer she gave per each specific question. This was to reduce respondent bias where some respondents might have answered the questions uphazardly if given a self administered questionnaire. The questionnaire had closed ended questions and was written in English and translated into Kiswahili. It was administered in Kiswahili which most people in Kibera could understand. The questions focused on assessing some of the socio-demographic factors among the respondents as well as comparing knowledge about HIV,
MTCT, and PMTCT. Assessment of some of the factors influencing acceptance of routine HTC among pregnant women was also dealt with.

3.9.2 Key informant interview guide
To collect qualitative data, a key informant guide was used. This consisted of open ended questions where the respondent were able to give more detailed explanations as the research assistants' probed for more information.

3.10 Data collection procedures
Data was collected through an interactive process between the respondent and the investigator using key informant guides and interview guides.

3.10.1 Interviews
These were conducted for those pregnant women who fitted in the inclusion criteria. The interviews elicited the respondent views on the demographic factors determining PICT among pregnant women, their knowledge level on HIV, MCT and PMTCT and factors associated with acceptance of routine HTC.

3.10.2 Key informant interviews
These were mainly conducted by the principal researcher. The purpose was to gather additional information. Participants for the key informant interviews were elected based on their knowledge on the research topic. These key informants were those persons who were able to give in-depth knowledge on the factors influencing acceptance of routine HTC among pregnant mothers in Kibera. Various topics were outlined for discussion and tackled issues which had not been addressed by individual respondents. Probing was used to get additional information.
3.11 Pilot study
A pilot study was conducted before the onset of the main survey. Ten structured questionnaires were pretested on ten respondents who fitted in the inclusion criteria from other villages in Kibera which were not included in the main survey. These respondents did not form part of the final sample. Pretesting the too was useful to assess its clarity. In this survey a closed ended questionnaire was used.

3.12 Data analysis
Data was sorted, coded, and entered into the computer using Statistical Package for Social Sciences (SPSS version 17). Descriptive statistics were computed. Statistics such as mean, frequencies and percentages were calculated for appropriate variables. Analysis of contingency tables was done and Chi-square statistics used to test for association between variables and level of significance. Data was presented using charts, graphs and frequency table.

3.13 Ethical considerations
Before the data collection commenced, ethical clearance was sought from the Graduate School in Kenyatta University, and the Ministry of Education, Science and Technology. During data collection; the administrators of the particular village in Kibera were asked permission to carry the survey in their area. These included the District Officer, Kibera Division and the Chiefs from each village. There were no known risks associated with participation in the study. All efforts were made by the principal investigator and the assisting staff to ensure confidentiality. When filling the questionnaires, no names or associate comments with any personal identifiers were recorded. The final report was prepared where no names were mentioned. The questionnaires were stored in a locked cabinet. A password-protected computer was used to store any computer documents during
data analysis. No personal information or identifiers was noted, and participants needed not provide their real names. The questionnaires were kept in safe custody and only the researcher could access them.
4.0 Results and Discussion

4.1: Introduction
This chapter presents results of quantitative and qualitative findings. The section covers the following findings: General characteristics of the respondents, level of acceptance of routine HTC, factors influencing acceptance of routine HTC and Knowledge attitude, beliefs and practices about acceptance of routine HTC. The analysis is based on the objectives and research questions.

4.2. Socio-demographic characteristics

4.2.1. Age
Table 4-1 presents a summary of the distribution of respondents by age. Majority (77%) of the respondents were aged between 19-30 years old, followed by those aged below 18 years old (12%). Only 1% of the respondents were aged above 41 years old. The distribution of the respondent’s age shows a concentration in the age category 19-30 years followed by those below 18 years then those in age group 31-40 and 41-50 years old. This means that the underlying population structure in the study area was dominated by the youth. The study sample was further split into two categories comprising of young and old, with the young aged between below 30 years and the old falling between 31-50 years and above. Figure 4-1 shows that majority (89%) of the respondents were young (aged below 30 years) and only 11% were in the old category (above 31 years).
Table 4-1: Distribution of respondents by age

<table>
<thead>
<tr>
<th>Age category</th>
<th>Frequency</th>
<th>Percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Below 18 years</td>
<td>46</td>
<td>12</td>
</tr>
<tr>
<td>19-30 years</td>
<td>309</td>
<td>77</td>
</tr>
<tr>
<td>31-40 years</td>
<td>42</td>
<td>10</td>
</tr>
<tr>
<td>41-50 years</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>400</td>
<td>100</td>
</tr>
</tbody>
</table>

![Age category of respondents](image)

Figure 4-1: Age of Respondents into two categories

As shown in the pie chart, 89% of the respondents were categorized as young while 11% were old respondents.
4.2.2 Marital status

![Marital status chart](image)

**Figure 4-2: Respondents according to marital status**

Figure 4-2 summarizes the distribution of the respondents according to marital status. From figure 4-2, majority (79%) of the respondents were in the married category while 21% were in the single/widowed category. The distribution of the marital status of the respondents showed a concentration in the married category, and indication that many of them had settled in life.

4.2.3 Education level of respondents

Figure 4-3 presents the level of education of the respondents. Slightly more than half (61%) of the respondents had lower than secondary school level of education and 35% had secondary school education, while 4% had attained college or university education. The distribution of respondents’ level of education disclosed a high proportion of
respondents in the category of lower than secondary level of education. This means the population in the study area was dominated by youthful women with low formal education.

Level of education was further categorised into two where the respondents had either attained low or high level of education. Those who were completely illiterate ("none" category) were not included. Figure 4-4 shows the results of this analysis. Majority (61.9%) of the respondents had low level of education, while 38.1% had high level of education. The high percentage of those who had attained low levels of education probably explains the rate of HIV/AIDS infection in the area as it is an indicator of HIV/AIDS awareness.

![Level of education of respondents](image)

**Figure 4-3: Level of education of the respondents**
Figure 4-4: Level of education of the respondents into two categories

4.2.4 Number of pregnancies
Table 4-2 presents the distribution of respondents’ number of pregnancies including the current one. The results show that 38% of the respondents were in their first pregnancy, 31% were in their second pregnancies, 20% were in the third pregnancy while 11% were in their fourth or more pregnancy. The distribution of the respondents by number of pregnancy showed that 89% of the respondents were in the category of having had one to three pregnancies. This means that the fertility level of the underlying population in the study area was moderate. Eleven respondents did not respond to this question.

Table 4-2: Number of pregnancies of respondents

<table>
<thead>
<tr>
<th>Number of pregnancies</th>
<th>n</th>
<th>Percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>One</td>
<td>148</td>
<td>38</td>
</tr>
<tr>
<td>Two</td>
<td>121</td>
<td>31</td>
</tr>
<tr>
<td>Three</td>
<td>77</td>
<td>20</td>
</tr>
<tr>
<td>Four and above</td>
<td>43</td>
<td>11</td>
</tr>
<tr>
<td>Total</td>
<td>389</td>
<td>100</td>
</tr>
</tbody>
</table>

NB: Eleven respondents did not respond to this question
4.2.5 Number of antenatal visits during the current pregnancy

Figure 4-5 summarizes the number of antenatal visits during the current pregnancy. The results show that 28% of the respondents had visited the antenatal twice, 22% of respondents had visited antenatal once, 19% thrice, and 19% more than four times and 12% did not seek antenatal care at all. The distribution of respondents by number of antenatal visits reveals a high proportion (66%) of respondents who had sought antenatal care more than twice and low proportion (34%) of respondents who had either sought antenatal care once or not at all.

![Bar chart showing the number of antenatal visits](chart.png)

**Figure 4-5: Antenatal visits in the current pregnancy**

4.2.6 Trimester of the respondents’ current pregnancy

Figure 4-6 presents the summary of age of the current pregnancy. Of the respondents, 45% were in their second trimester, 35% in the first trimester and 20% were in the third trimester of the pregnancy. The distribution of respondents by trimester of their current pregnancy show that 80% of the respondents were in their second and third trimester. This means that the study sample tended to seek antenatal care in the second and third trimester.
4.2.7 Occupation of respondent and family’s monthly income

Table 4-3 presents the distribution of respondents according to occupation and monthly income. As can be seen from Table 4-3, 68% of respondents lie in the unemployed category and 32% in the employed category. The distribution of respondents by occupation shows a concentration in the unemployed category. This means that the underlying population in the study area is dominated by women of reproductive age who are unemployed. Table 4.4 also shows that 10% of respondents’ families earn less than Kshs 3000 per month, 33% earn between Kshs 3001-4000, 34% earn between Kshs 4001-5000 and 23% earn above Kshs 5000. The distribution of respondents’ family monthly income reveals a high proportion (77%) of families in the income category of Kshs 1000-5000 per month. This means the underlying population in study area is largely composed of low income earning families.
Table 4-3: Monthly income of the respondents

<table>
<thead>
<tr>
<th>Respondents’ economic characteristics</th>
<th>Frequency</th>
<th>Percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Occupation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unemployed</td>
<td>271</td>
<td>68</td>
</tr>
<tr>
<td>Salaried employment</td>
<td>32</td>
<td>8</td>
</tr>
<tr>
<td>Self employed</td>
<td>76</td>
<td>24</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>399</strong></td>
<td><strong>100</strong></td>
</tr>
<tr>
<td>Family monthly income</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Below Kshs 3000</td>
<td>38</td>
<td>10</td>
</tr>
<tr>
<td>Kshs 3001-4000</td>
<td>124</td>
<td>33</td>
</tr>
<tr>
<td>Kshs 4001-5000</td>
<td>130</td>
<td>34</td>
</tr>
<tr>
<td>Above Kshs 5000</td>
<td>90</td>
<td>23</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>382</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

4.2.8 Respondents religion
Figure 4-7 summarizes the religion of the respondents. Most of the respondents were Protestants (49%), followed by catholics (40%) and Muslims (10 %). Only 1% had no religion. A high proportion of the respondents were Christians (89%). This means the underlying population in the study area was predominantly Christians.

![Religion of the respondents](image-url)
4.3: Knowledge, attitudes, beliefs and practices
This section examines knowledge, attitudes, beliefs and practices about HIV, MTCT and PMTCT.

4.3.1: Knowledge about HIV and AIDS, and its transmission
Table 4-4 presents the distribution of respondents by knowledge about HIV and AIDS and its transmission. It is observed that 98% reported that they had heard about HIV and AIDS; 99% indicated that HIV can be transmitted through sexual intercourse; 56.5% reported that HIV can be transmitted through coming into contact with infected blood; 60% reported that HIV can be transmitted through sharing contaminated sharps; 37% indicated that, HIV can be transmitted through injection by unsterilized needle and 84% reported that, HIV and AIDS is not curable. The distribution of respondents by knowledge of HIV/AIDS and its means of transmission revealed a concentration in the knowledge indicators such as HIV/AIDS is not curable; HIV can be transmitted through sexual intercourse, transfusion of contaminated blood, sharing of contaminated sharps and injection by unsterilized needle. This means that the underlying population in the study area was highly knowledgeable about HIV transmission.

Table 4-4 further shows that 8% of respondents had heard about routine HTC through media, 96% through health work or institution, 17% through friends, and 7% through neighbours. The distribution of respondents’ ways of learning about routine HTC reveals a high proportion (96%) of those who learnt through health work or institution. This means the underlying population in the study area was dominated by women of reproductive age accessing limited health information through media, friends and or community. Table 4-4 finally shows that 100% of the respondents approved routine HTC.
Table 4-4: Knowledge about HIV and its transmission

<table>
<thead>
<tr>
<th>Indicators of knowledge</th>
<th>Response</th>
<th>Frequency</th>
<th>Percent (100%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ever heard of HIV/AIDS</td>
<td>No</td>
<td>7</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>390</td>
<td>98</td>
</tr>
<tr>
<td>Ways of HIV transmission</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>i. Through sexual intercourse</td>
<td>No</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>372</td>
<td>99</td>
</tr>
<tr>
<td>ii. Through contaminated blood</td>
<td>No</td>
<td>164</td>
<td>43.5</td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>213</td>
<td>56.5</td>
</tr>
<tr>
<td>iii. By sharing sharps object with infected person</td>
<td>No</td>
<td>151</td>
<td>40</td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>226</td>
<td>60</td>
</tr>
<tr>
<td>iv. Injection by un sterile needle</td>
<td>No</td>
<td>236</td>
<td>63</td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>141</td>
<td>37</td>
</tr>
<tr>
<td>v. Can HIV and AIDS be cured</td>
<td>No</td>
<td>335</td>
<td>84</td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>65</td>
<td>16</td>
</tr>
<tr>
<td>Ways through which respondents heard about routine HTC</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>i. Media</td>
<td>No</td>
<td>352</td>
<td>92</td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>32</td>
<td>8</td>
</tr>
<tr>
<td>ii. Health work or institution</td>
<td>No</td>
<td>15</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>369</td>
<td>96</td>
</tr>
<tr>
<td>iii. Friends</td>
<td>No</td>
<td>318</td>
<td>83</td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>66</td>
<td>17</td>
</tr>
<tr>
<td>iv. Neighbours</td>
<td>No</td>
<td>357</td>
<td>93</td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>27</td>
<td>7</td>
</tr>
<tr>
<td>v. Is routine HTC important</td>
<td>No</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>397</td>
<td>100</td>
</tr>
</tbody>
</table>

The results were further corroborated through key informant responses. Many of the observation were consistent with the quantitative data as reported in the following paragraphs that follows.

“Routine HTC is generally low in Nairobi and particularly in Kibera, acceptance is still low, I can put it at 60%, which is generally low”, as reported by the monitoring and evaluation officer interviewed from National AIDS Control Council.

“We have only one Government health facility in Kibera sub-location. Other health care providers who are supporting us are NGOs such AMREF Kibera situated in ‘Laini saba’, 
MSF Spain and MSF Belgium who have been asked to offer routine HTC. There is also a community health facility called ‘ushirika’ which is managed by the community itself and they are offering ANC services together with routine HTC. I would say the acceptance of routine HTC in Kibera is about 75% so far”, as reported by the District AIDS and STI Coordinator incharge of Langata County.

“Despite the concerted efforts to reduce HIV and AIDS, the prevalence still remains high in Kibera largely because of lack of information. Many people in informal settlement cannot access education due to poverty. Ignorance and lack of use of condom are the main challenges”, the National AIDS and STI Control Program officer incharge of Kibera.

“The reason why the HIV prevalence is still high in Kibera is basically low acceptance of routine HTC. Another factor why HIV prevalence is still high in Kibera is low access to antenatal care by most residents in Kibera. There is low education levels among most residents in Kibera. Generally we have seen in the most of our surveys we have carried, a relationship between education level and utilization of routine HTC. The lower the education level the lower the utilization of services. Poverty is another factor; most residents in Kibera are low income earners. Then we can say the main factor is lack of consistent use of condom in every sexual exposure”, as reported by the monitoring and evaluation officer at National AIDS Control Council

“I would say HIV prevalence is going down in Kibera. In the recent rapid initiative (RRI) in year 2010 the prevalence between 7% -7.3% and that is lower than the regional prevalence of Nairobi which was 9%. However, the prevalence can be attributed to
poverty. In low income settlements like Kibera poverty is a big issue, people come and go, and we don’t have permanent resident in Kibera”, as reported by the District AIDS and STI Coordinator incharge of Langata County.

4.3.2 Knowledge on MTCT and PMTCT
Table 4-5 presents the distribution of respondents by knowledge about MTCT and PMTCT. It is observed that, 2% said that, a mother can transmit HIV during pregnancy; 89% said that, a mother can transmit HIV to her child during birth and 54% said that, a mother can transmit HIV to her child during breast feeding. The distribution of respondents’ knowledge of MTCT indicate that on average 48% are aware that a mother can transmit HIV to her child during pregnancy, child birth and or during breast feeding. This means that more than half of the underlying population in the study area was not aware of the means of mother to child transmission of HIV.

Table 4-5 further show that, 46% of the respondents reported that, antiretroviral drugs can be used to prevent mother to child transmission of HIV while 55% reported that avoiding breast feeding can be used to prevent mother to child transmission of HIV. The distribution of respondents knowledge about PMTCT revealed that on average 50% of respondents are aware antiretroviral drugs and avoidance of breast feeding can be used to prevent of mother to child transmission of HIV. This means that only half of the underlying population in the study area is aware of the methods of preventing mother to child transmission of HIV.
Table 4-5: Respondents’ knowledge about MTCT and PMTCT

<table>
<thead>
<tr>
<th>Indicators of knowledge</th>
<th>Routine HTC</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>No</td>
</tr>
<tr>
<td><strong>Ways of MTCT of HIV</strong></td>
<td></td>
</tr>
<tr>
<td>During pregnancy</td>
<td>6</td>
</tr>
<tr>
<td>At child birth</td>
<td>349</td>
</tr>
<tr>
<td>During breastfeeding</td>
<td>211</td>
</tr>
<tr>
<td><strong>Ways of PMTCT of HIV</strong></td>
<td></td>
</tr>
<tr>
<td>Through use of antiretroviral drugs</td>
<td>182</td>
</tr>
<tr>
<td>Avoiding breast feeding</td>
<td>216</td>
</tr>
</tbody>
</table>

Analysis of the Key Informant Interviews and Focused Group Discussions revealed consistent results with the quantitative data as reflected in the following paragraphs.

“Antenatal care is very important. During ANC, if a pregnant woman tests HIV positive, we do care of the pregnancy, some prophylaxis is done during the pregnancy and during birth. The new born is given nevirapine syrup immediately after birth while the mother is given stavudine. We monitor ANC because this is the sensitive area we need to know, the environment, hygiene and information given to the pregnant women. Pregnant women are provided with relevant information especially if they are HIV positive, they are prepared psychologically and what they are supposed to do during the pregnancy”, a NASCOP officer reported.
“During antenatal care we ensure diagnostic testing and counseling (DTC) is done, mothers who turn positive are counseled, prophylactic measures are taken to prevent mother to child transmission of HIV. We make sure that HIV positive mothers are put on full treatment after delivery”, a DASCO officer reported.

4.3.3 Attitude, beliefs and practices about HIV/AIDS
Table 4-6 presents the distribution of respondents’ attitudes and beliefs about HIV/AIDS. Majority (75%) of the respondents thought they have low chance of HIV infection, 14% thought they had moderate chance of getting infected, 9% thought they had high chance of getting infected and 2% could not categorize their chance of getting infected with HIV. The distribution of respondents’ thoughts of getting infected with HIV discloses a concentration in the category of those who thought they had low chance of getting infected. This means the underlying population in the study area was dominated by women of reproductive age who perceive themselves at low risk of HIV infection. Table 4-6 also shows that, 8% underwent HIV test because of marriage, 8% to protect their partner and 78% to know their status. The distribution of respondents’ reasons for undergoing HIV test reveals a concentration in category of those who test to know their status. This means that the underlying population in study area was dominated by women of reproductive who would undergo HIV test primarily to know their status.

Table 4-6 further shows that, 90% of the respondents were in category of those who underwent HIV testing voluntarily and 10% underwent HIV testing upon request. This means that the underlying population in the study area was dominated by women of reproductive age who would voluntarily undergo HIV testing during their pregnancy.
From table 4-6, it is also observed that, 90% of pregnant women would accept subsequent routine HIV testing with a main intention to protect their baby.

Table 4-6: Attitudes, beliefs and practices about HIV/AIDS

<table>
<thead>
<tr>
<th>Attitude, beliefs and practices about HIV/AIDS</th>
<th>Response</th>
<th>Frequency</th>
<th>Percent (100%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chances of HIV infection (risk perception)</td>
<td>Low</td>
<td>286</td>
<td>75</td>
</tr>
<tr>
<td></td>
<td>Moderate</td>
<td>54</td>
<td>14</td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>36</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>I don’t know</td>
<td>6</td>
<td>2</td>
</tr>
<tr>
<td>Last time HIV test was done</td>
<td>In past 1 year</td>
<td>364</td>
<td>94</td>
</tr>
<tr>
<td></td>
<td>In past 1-2 years</td>
<td>18</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>In past 2-4 years</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Reason for HIV testing</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Marriage</td>
<td>No</td>
<td>355</td>
<td>92</td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>33</td>
<td>8</td>
</tr>
<tr>
<td>Protect partner</td>
<td>No</td>
<td>356</td>
<td>92</td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>32</td>
<td>8</td>
</tr>
<tr>
<td>Know my status</td>
<td>No</td>
<td>87</td>
<td>22</td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>301</td>
<td>78</td>
</tr>
<tr>
<td>Was HIV testing voluntary or requested</td>
<td>Voluntary</td>
<td>348</td>
<td>90</td>
</tr>
<tr>
<td></td>
<td>Requested</td>
<td>37</td>
<td>10</td>
</tr>
<tr>
<td>Accept subsequent routine HIV during current pregnancy</td>
<td>No</td>
<td>39</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>354</td>
<td>90</td>
</tr>
<tr>
<td>Reason for accepting routine HIV testing</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Protect my baby</td>
<td>No</td>
<td>101</td>
<td>28</td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>256</td>
<td>72</td>
</tr>
<tr>
<td>Protect my family</td>
<td>No</td>
<td>153</td>
<td>43</td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>202</td>
<td>57</td>
</tr>
</tbody>
</table>

4.3.4: Respondents counseling before HIV testing.
Figure 4-8 presents the distribution of respondents according to whether they were counselled before HIV testing. It is observed that 97% of the respondents indicated that they received counseling before HIV testing and 3% said they did not receive counseling.

The distribution of respondents by receipt of counseling before HIV testing reveals a
concentration in the category of those who receive counseling before HIV testing. This means the health care providers serving the underlying population in the study area provided counseling before HIV testing.

![Pie chart showing 97% satisfaction and 3% dissatisfaction with counseling before testing.]

**Figure 4-8: Received counseling before testing**

**4.3.5: Respondents satisfaction with the received counseling**

Figure 4-9 presents the respondents’ level of satisfaction with the counseling received before HIV testing. Majority of the respondents (97%) reported satisfaction with the counseling received before HIV testing and only 3% were not satisfied. The distribution of respondents’ satisfaction with the counseling received before HIV testing discloses a concentration in the category of those who were satisfied. This means that health care providers serving the underlying population in the study area were offering quality HIV counseling before HIV testing.
4.3.6: Respondents knowledge of someone tested for HIV
Figure 4-9 presents the distribution of respondents by knowledge of someone tested for HIV. It is observed that 70% of the respondents knew someone tested for HIV and 30% did not. The distribution of respondents’ knowledge of someone tested for HIV reveals a high proportion in the category of those who knew someone tested for HIV. This means the underlying population in the study area was dominated by women of reproductive age who are ready to disclose their HIV status although there could be some stigma.
Figure 4-10: Aware of someone tested for HIV

4.3.7: Respondents perception on who benefits from HIV testing

Figure 4-11 presents the respondents’ perception on who benefits from HIV testing. It shows that 88% of the respondents thought that HIV testing benefits both the mother and child, 9% thought HIV testing benefits from the mother alone while 3% thought HIV testing benefits the baby alone. The distribution of respondents’ thoughts on who benefits from HIV test discloses a concentration in the category of those who thought the test benefits both the mother and the baby. This means the underlying population in the study was largely composed of women of reproductive age who knew that HIV testing is beneficial to the mother and the child.
Figure 4-11: Perception on who benefits from HIV testing

4.3.8: Method of choice for HIV testing, test results delivery and sharing
Table 4-7 presents the distribution of respondents on various aspect of HIV testing including; method of choice for HIV testing, results delivery and sharing of the test results. Most respondents (93%) preferred confidential HIV testing; most (95%) preferred result being delivered face-to-face; and, most (96%) were satisfied with post test councelling. The distribution of the respondents by method of choice for HIV testing revealed a concentration in the category of those who preferred confidential HIV testing. The distribution of respondents’ preferences regarding HIV testing and sharing of results reveals high preference of confidentiality and reluctance to disclose the test results. This means AIDS patients in the underlying population in the study area were likely to suffer from stigma. In addition Table 4.8 shows that 85% of the respondents would discuss with the partner before HIV testing though they were reluctant to share the results with the partner whether positive or negative.
Table 4-7: HIV testing processes

<table>
<thead>
<tr>
<th>Method of HIV test, result delivery, post test counseling and result sharing</th>
<th>Response</th>
<th>Frequency</th>
<th>Percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Method of testing preferred</td>
<td>Confidential linked testing</td>
<td>369</td>
<td>93</td>
</tr>
<tr>
<td></td>
<td>Anonymous</td>
<td>22</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>I don’t know</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td><strong>Test results delivery</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Face to face(verbally)</td>
<td>No</td>
<td>21</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>376</td>
<td>95</td>
</tr>
<tr>
<td>Written on the maternity card</td>
<td>No</td>
<td>375</td>
<td>95</td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>22</td>
<td>5</td>
</tr>
<tr>
<td>Through relative or partner</td>
<td>No</td>
<td>396</td>
<td>99</td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Received post test counseling</td>
<td>No</td>
<td>15</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>376</td>
<td>96</td>
</tr>
<tr>
<td>Post test counseling satisfactory</td>
<td>No</td>
<td>12</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>97</td>
<td>97</td>
</tr>
<tr>
<td>Discuss with a partner before HIV testing</td>
<td>No</td>
<td>57</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>337</td>
<td>85</td>
</tr>
<tr>
<td>Share with the partner after HIV test in case the result is positive</td>
<td>No</td>
<td>358</td>
<td>97</td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>9</td>
<td>3</td>
</tr>
<tr>
<td>Share the results in they are negative</td>
<td>No</td>
<td>332</td>
<td>90</td>
</tr>
<tr>
<td></td>
<td>Yes</td>
<td>35</td>
<td>10</td>
</tr>
</tbody>
</table>
4.4: Acceptance of routine HTC
This section presents the analysis of the acceptance of routine HTC among pregnant women in Kibera informal settlement.

4.4.1: Level of Acceptance of Routine HTC among Pregnant Women in Kibera
Figure 4-12 presents a summary of acceptance of Routine HTC among the respondents. Majority (90%) of the respondents indicated to have received Routine HTC, while only 10% had not received Routine HTC. The level of acceptance of Routine HTC is high though it has not reached the optimum of 100%.

![Figure 4-12: Acceptance of Routine HTC](image)

Table 4-8 presents the distribution of factors that influence acceptance of routine HIV testing and counseling in Kibera informal settlement.

From table 4-8, it is observed that 65% of the respondents sought healthcare from government hospitals and 35% from private hospitals. It is also observed that 57% of the respondents preferred to deliver their babies at government hospitals, 35% in private hospitals and 5% at home with help of a TBA. It is further observed that 69% of pregnant women took provider initiated HIV testing and counseling from government hospitals and 33% from private hospitals. The distribution of respondents’ preference of the source
of health care reveals a concentration in the category of those who prefer getting health care from government hospitals. This means that the underlying population in the study is dominated by women of reproductive age who prefer seeking health care from government hospitals.

Table 4-8 also shows that, 59% of the respondents thought that religious beliefs have no influence on health seeking behaviour and 41% thought that some religion beliefs had influence. The distribution of respondents’ thoughts on influence of religion on health seeking behaviour disclose a high proportion of respondents who thought religious beliefs had no influence on health seeking behaviour. This means the underlying population in the study area was dominated by youthful women whose health seeking behaviour was not influenced be religion. Table 4-8 further shows that, 90% of the respondents were in the category of those who understood the need for routine HIV testing and 10% in the category of those who didn’t know. The distribution of respondents’ understanding of the importance of routine HIV testing reveals a concentration in the category of those who understood the importance. This means the underlying population in the study is composed of young women who knew the value of routine HIV testing during pregnancy.

In addition table 4-8 shows that, 90% of the respondents thought that improving confidentiality would improve acceptance of provider initiated HIV testing and counseling and 10% thought it would have no impact. It is also observed that 96% of the respondents thought that educating pregnant women on importance of HTC would improve the utilization and 4% thought it would have no impact. Table 4-8 further
indicates that, 95% of the respondents thought that establishing government hospitals closer to the people would improve acceptance of routine HTC and 5% thought it would have no impact. The distribution of respondents’ thoughts on factors that would enhance acceptance of routine HTC revealed a concentration in the categories of those who thought improving confidentiality, educating pregnant women on importance of HTC, and building hospitals near the people would improve the utilization of provider initiated HIV counseling and testing. This means that community members in the study area preferred establishment of more government hospitals with improved quality of health care.
Table 4-8: Factors related to acceptance of routine HTC

<table>
<thead>
<tr>
<th>Factors</th>
<th>Acceptance of Routine HIV testing</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>No. %</td>
</tr>
<tr>
<td>Seek healthcare in government hospitals</td>
<td>258 65</td>
</tr>
<tr>
<td>Seek healthcare in private hospitals</td>
<td>139 35</td>
</tr>
</tbody>
</table>

**Place of delivery**

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>No.</th>
<th>%</th>
<th>No.</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>At home with help of a TBA</td>
<td>21  5</td>
<td>378 95</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>In private hospitals</td>
<td>150 38</td>
<td>249 62</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>In government hospitals</td>
<td>229 57</td>
<td>170 43</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Place where HTC is taken by pregnant women**

<table>
<thead>
<tr>
<th></th>
<th>Yes</th>
<th>No.</th>
<th>%</th>
<th>No.</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Government hospitals</td>
<td>275 69</td>
<td>123 31</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Private hospitals</td>
<td>131 33</td>
<td>267 67</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Whether most pregnant understand need for routine HIV testing</td>
<td>359 90</td>
<td>39 10</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Whether some religious beliefs influence health seeking behaviour of pregnant women</td>
<td>165 41</td>
<td>235 59</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Whether improving confidentiality would improve acceptance of routine HTC among pregnant women</td>
<td>359 90</td>
<td>39 10</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Whether educating pregnant women on importance of HTC would increase the acceptance</td>
<td>383 96</td>
<td>17 4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Whether building government hospitals closer to pregnant women residence would improve acceptance of routine HTC</td>
<td>382 95</td>
<td>18 5</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The results were further confirmed through several interviews conducted with several stakeholders as reflected in the section that follows.

“*Ignorance has lead to low acceptance of HTC among pregnant women in Kibera informal settlement. You can get a woman is avoiding PMTCT. A woman is pregnant and*
already suspects that she is positive and since this person knows that pregnant women are going to be tested she is not willing to come for clinic in order to get PMTCT care. As I said earlier Langata as whole not Kibera alone is faced with a challenge of ignorance and lack of information”, the National AIDS and STI Control Program officer incharge of Kibera, reported.

“There is low acceptance of HTC in Kibera due to traditional birth attendance, they are called TBAs. The community trust TBAs than the healthcare workers. They would rather go to traditional birth attendances whose cost is lower and are easily accessible. Number two is poor attitude of the health workers. I have a testimony where one lady confessed that she conceived one year and had a baby and she conceived again and she went to the same health facility and she was asked ‘wewe ni rabbit, yaani you know you are expecting every year, are you a rabbit?, and you have been told by a health worker like that will you go back there?’” the monitoring and evaluation officer at National AIDS Control Council reported.

We still face a challenge of TBAs, regardless of the much awareness we have tried to create here, mothers trust the TBAS so much that they still prefer to deliver under care of TBAs rather than in the health facilities”, The District AIDS and STI Coordinator incharge of Langata County, reported.

“To improve the acceptance of HTC among women in Kibera. We need to preach among people, who live there, to create awareness of HIV itself and AID itself simply because these are two different things. For example, I say that AIDS is a disease and HIV is a virus. AIDS has symptoms and signs, HIV have got no symptoms. We need to create awareness about ARV for infected people. Antiretroviral drugs have side effects, but
benefits are much greater. Create health facilities where treatment can be easily accessed. Together with other stakeholders or organizations concerned we need to organize door to door campaigns, rallies to go interior part and discuss together with the people, encourage them join groups, educate them on prevention strategies like abstinence, condom use, circumcision for men and psychologically prepare those who have undergone the test. We should go to the people and not the other way round”, the National AIDS and STI Control Program officer incharge of Kibera, reported.

“We need to increase and focus about scale up of routine HTC and encourage expectant mothers through community meeting to increase the level of utilization”, the monitoring and evaluation officer at National AIDS Control Council reported.

“One of the strategies that we want to use to improve the acceptance of routine HTC is to work with TBAs. Traditional birth attendants are unskilled labourers and we want to have some meeting and dialogue so that we can inform them the benefit of mothers delivering in health facility and once we make them our partners then we can be able to achieve this goal because they can refer to us any mother who delivers at their hands or immediately after delivery bring them to health facility before 72 hours so that we can test the mother and if she is positive we can put the new born child on prophylactic treatment and the mother on full treatment. We are also doing mobilization at the community level on importance of delivering under care of a skilled health care professional”, The District AIDS and STI Coordinator incharge of Langata County, reported.
4.5: Socio-demographic Characteristics influencing acceptance of routine HTC

4.5.1: Age
Table 4-9 presents the analysis between age and acceptance of routine HTC. The tendency to accept routine HTC was near equal among the respondents who have attained a post primary education (90.9%) and those who have attained only primary education (90.7%). The relationship did not attain statistically significant level ($\chi^2 = 2.182; \text{df}= 1, P= 0.140$).

Table 4-9: Influence of Age on the acceptance of Routine HTC

<table>
<thead>
<tr>
<th>Age</th>
<th>Acceptance of Routine HTC</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No</td>
<td>%</td>
</tr>
<tr>
<td>Young</td>
<td>32</td>
<td>9.1</td>
</tr>
<tr>
<td>Old</td>
<td>7</td>
<td>9.3</td>
</tr>
<tr>
<td>Total</td>
<td>39</td>
<td>9.9</td>
</tr>
</tbody>
</table>

$\chi^2 = 2.182; \text{df}= 1, P= 0.140$

4.5.2: Marital Status
Table 4-10 presents the analysis between marital status and acceptance of Routine HTC among the pregnant women. The tendency to accept the Routine HTC was highest amongst married pregnant women (92.6%) as compared to unmarried pregnant women (80.2%). There was significant association between marital status and acceptance of Routine HTC ($\chi^2 = 5.6, \text{df}= 1, P= 0.018$).

Table 4-10: Influence of Marital Status on acceptance routine HTC

<table>
<thead>
<tr>
<th>Marital status</th>
<th>Acceptance of Routine HTC</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No</td>
<td>%</td>
</tr>
<tr>
<td>Single/widowed</td>
<td>16</td>
<td>19.8%</td>
</tr>
<tr>
<td>Married</td>
<td>23</td>
<td>7.4%</td>
</tr>
<tr>
<td>Total</td>
<td>39</td>
<td>9.9%</td>
</tr>
</tbody>
</table>

$\chi^2 = 5.6; \text{df}= 1, P= 0.018$
4.5.3: Level of Education

Table 4-11 presents the analysis between level of education and acceptance of routine HTC. The tendency to accept routine HTC was near equal among the respondents who have attained a post primary education (92.6%) and those who have attained only primary education (90.0%). The relationship did not attain statistically significant level ($\chi^2 = 1.272; \text{df}=1, \text{P}=0.259$).

<table>
<thead>
<tr>
<th>Level of education</th>
<th>Acceptance of routine HTC</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No</td>
<td>%</td>
</tr>
<tr>
<td>Primary</td>
<td>26</td>
<td>10.0</td>
</tr>
<tr>
<td>Post Primary</td>
<td>11</td>
<td>7.4%</td>
</tr>
<tr>
<td>Total</td>
<td>39</td>
<td>9.9%</td>
</tr>
</tbody>
</table>

$\chi^2 = 1.272; \text{df}=1, \text{P}=0.259$

4.5.4: Number of antenatal visits

Table 4-12 presents the analysis between the number of ANC visits and acceptance of Routine HTC among the pregnant women. The tendency to accept the Routine HTC was highest amongst respondents who had visited ANC more than once (96.5%) as compared to the respondents who had visited ANC only once (3.5%). There was significant association between the number of ANC visits and acceptance of routine HTC ($\chi^2 = 5.06$, df = 1, P = 0.024).

<table>
<thead>
<tr>
<th>Number of ANC visits</th>
<th>Acceptance of routine HTC</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No</td>
<td>%</td>
</tr>
<tr>
<td>Attended ANC once</td>
<td>29</td>
<td>22.1</td>
</tr>
<tr>
<td>Attended ANC more than once</td>
<td>9</td>
<td>3.5</td>
</tr>
<tr>
<td>Total</td>
<td>38</td>
<td>9.9</td>
</tr>
</tbody>
</table>

$\chi^2 = 5.06, \text{df}=1, \text{P}=0.024$
4.5.5: Trimester of the current pregnancy

Table 4-13 presents the analysis between the trimester of the current pregnancy and acceptance of Routine HTC among the pregnant women. The tendency to accept the routine HTC was highest amongst respondents who were in their third trimester (96.5%) as compared to the respondents who were in their first and second trimester (5.0%). There was significant association between the trimester of the current pregnancy and acceptance of routine HTC ($\chi^2 = 7.26$, df= 1, $P = 0.007$).

**Table 4-13: Trimester of current pregnancy and acceptance of routine HTC**

<table>
<thead>
<tr>
<th>Trimester of current pregnancy</th>
<th>Acceptance of Routine HTC</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>%</td>
</tr>
<tr>
<td>First and second</td>
<td>31</td>
<td>12.3</td>
</tr>
<tr>
<td>Third</td>
<td>7</td>
<td>5.0</td>
</tr>
<tr>
<td>Total</td>
<td>38</td>
<td>9.9</td>
</tr>
</tbody>
</table>

$\chi^2 = 7.26$, df= 1, $P = 0.007$

4.6: Institutional Characteristics influencing acceptance of routine HTC

4.6.1: Satisfaction with Pretest Counseling

Table 4-14 presents the analysis between the satisfaction with pretest counseling and acceptance of routine HTC among the pregnant women. The tendency to accept the routine HTC was highest amongst respondents who were satisfied with pretest counselling (91.4%) as compared to the respondents who were not satisfied with pretest counselling (33.3%). There was significant association between the knowledge of availability routine HTC and acceptance of routine HTC ($\chi^2 = 33.417$, df= 1, $P = 0.000$).
Table 4-14: Satisfaction with Pretest counseling and acceptance of routine HTC

<table>
<thead>
<tr>
<th>Satisfaction with Pretest counseling</th>
<th>Acceptance of routine HTC</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No</td>
<td>%</td>
</tr>
<tr>
<td>Not satisfied</td>
<td>6</td>
<td>66.6</td>
</tr>
<tr>
<td>Satisfied</td>
<td>32</td>
<td>8.5</td>
</tr>
<tr>
<td>Total</td>
<td>38</td>
<td>9.9</td>
</tr>
</tbody>
</table>

$\chi^2 = 33.417$, df = 1, $P = 0.000$

4.6.2: Default from ANC

Table 4-15 presents the analysis between the default from ANC and acceptance of routine HTC among the pregnant women. The tendency to accept the routine HTC was highest amongst respondents who did not default from ANC (95.9%) as compared to the respondents who default from ANC (4.1%). There was significant association between default from ANC and acceptance of routine HTC ($\chi^2 = 5.081$, df = 1, $P = 0.024$).

Table 4-15: Default from ANC and acceptance of routine HTC

<table>
<thead>
<tr>
<th>Default from ANC</th>
<th>Acceptance of routine HTC</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No</td>
<td>%</td>
</tr>
<tr>
<td>No</td>
<td>12</td>
<td>4.1</td>
</tr>
<tr>
<td>Yes</td>
<td>6</td>
<td>11.8</td>
</tr>
<tr>
<td>Total</td>
<td>18</td>
<td>5.3</td>
</tr>
</tbody>
</table>

$\chi^2 = 5.081$, df = 1, $P = 0.024$

4.7: Knowledge factors influencing acceptance of routine HTC

4.7.1: Cure for HIV/ AIDS

Table 4-16 presents the analysis between availability of cure for HIV/AIDS and acceptance of Routine HTC among the pregnant women. The tendency to accept the routine HTC was highest amongst respondents who knew there is no cure for HIV/ AIDS (91.6%) as compared to the respondents who thought there is a cure for HIV/AIDS.
There was significant association between the knowledge of availability of cure and acceptance of routine HTC ($\chi^2 = 5.312$, df = 1, P = 0.021).

### Table 4-16: Availability of HIV/AIDS cure and acceptance of routine HTC

<table>
<thead>
<tr>
<th>Cure for HIV/AIDS</th>
<th>Acceptance of Routine HTC</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>%</td>
</tr>
<tr>
<td>No</td>
<td>28</td>
<td>8.4</td>
</tr>
<tr>
<td>Yes</td>
<td>11</td>
<td>18.0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>38</td>
<td>9.7</td>
</tr>
</tbody>
</table>

$\chi^2 = 5.312$, df = 1, P = 0.021

### 4.7.2 Knowledge of routine HTC

Table 4-17 presents the analysis between knowledge of availability of routine HTC and acceptance of Routine HTC among the pregnant women. The tendency to accept the routine HTC was highest amongst respondents who knew there is availability of routine HTC (91.3%) as compared to the respondents who thought there was no routine HTC (57.2%). There was significant association between the knowledge of availability routine HTC and acceptance of routine HTC ($\chi^2 = 17.848$, df = 1, P = 0.000).

### Table 4-17: Knowledge of routine HTC and acceptance of routine HTC

<table>
<thead>
<tr>
<th>Knowledge of routine HTC</th>
<th>Acceptance of Routine HTC</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>%</td>
</tr>
<tr>
<td>No</td>
<td>6</td>
<td>42.8</td>
</tr>
<tr>
<td>Yes</td>
<td>33</td>
<td>8.7</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>39</td>
<td>9.9</td>
</tr>
</tbody>
</table>

$\chi^2 = 17.848$, df = 1, P = 0.000$
4.8: Practice factors

4.8.1: Pretest Counseling

Table 4-18 presents the analysis between the pretest counseling and acceptance of routine HTC among the pregnant women. The tendency to accept the routine HTC was highest amongst respondents who were counselled before testing (91.3%) as compared to the respondents who were not counselled before testing (61.5%). There was significant association between the knowledge of availability routine HTC and acceptance of routine HTC ($\chi^2 = 12.661$, df= 1, P = 0.000).

<table>
<thead>
<tr>
<th>Knowledge of routine HTC</th>
<th>Acceptance of routine HTC</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No</td>
<td>%</td>
</tr>
<tr>
<td>No</td>
<td>5</td>
<td>38.5</td>
</tr>
<tr>
<td>Yes</td>
<td>33</td>
<td>8.7</td>
</tr>
<tr>
<td>Total</td>
<td>39</td>
<td>9.9</td>
</tr>
</tbody>
</table>

$\chi^2 = 12.661$, df= 1, P = 0.000
4.9: Discussion

Demographic characteristics such as age and number of pregnancies including the current one were not associated with acceptance of routine HTC among pregnant women. Level of education was found to be associated with low acceptance of HTC. It was observed from key informant interviews that low education levels contributed to low acceptance of HTC. Marital status was found to be associated with acceptance of HTC where unmarried pregnant women were observed to be more likely to accept HTC. This agrees with findings of a study by Ibou et al. (2008) and Matovu et al. (2009) that unmarried women were more likely to accept of HTC than married or cohabiting women. It was also found that the number of antenatal visits during the current pregnancy was associated with acceptance of HTC where pregnant women who had made at least one antenatal visit were observed to be more likely to accept HTC.

Trimester of the current pregnancy was found to be associated with the utilization of PIHCT where pregnant women in their second and third trimester of their pregnancy were observed to be more likely to utilize provider initiated HIV counselling and testing. Socio-economic factors such as employment status/occupation, family monthly income were found to be associated with acceptance of HTC in this study. Key informant interviews revealed that poverty was a factor in low acceptance of HTC services. This was indicated by the fact that respondents would opt to go to the TBAs where they could afford the cost. Religion was also found not to be associated with acceptance of HTC.
It was found that respondents were aware that HIV can be transmitted through sexual intercourse, transfusion of infected blood, sharing of contaminated sharps, injection with contaminated needles and through mother to child transmission during pregnancy, child birth and during breast feeding. Respondents also demonstrated knowledge that prevention of mother to child transmission of HIV is possible through use of antiretroviral therapy and total avoidance of breast feeding. In this study, knowledge that HIV can be transmitted through transfusion of infected blood was found to be associated with acceptance of HTC. Key informant interviews showed that despite respondents knowing that HIV is transmitted through sexual intercourse, they still did not consistently use condom. Thus making it so difficult to promote safe sex in this community.

Pregnant women who were aware that blood transfusion with HIV infected blood can transmit HIV were observed to be more likely to utilize provider initiated HIV testing and counselling. Knowledge that injection using unsterilized needle stik can transmit HIV was also found to be associated with utilization of provider initiated HIV counselling and testing. Pregnant women who were aware that injection using contaminated needle can transmit HIV were observed to be more likely to utilize provider initiated HIV counselling and testing. Knowledge that ARV can be used to prevent MTCT was found to be associated with acceptance of HTC. Respondents who knew that ARV can be used to prevent mother to child transmission of HIV were more willing to utilize provider initiated HIV counselling and testing. In this study it was also found that knowledge that complete avoidance of breast feeding for a HIV positive mother can prevent MTCT of HIV was associated with acceptance of HTC. Pregnant women who were aware that
avoidance of breast feeding can prevent mother to child transmission of HIV were found to be more likely to accept of HTC. This was attributed to respondents believe that knowledge of HIV serostatus is beneficial to both mother and children and also provider endorsement of importance of routine HTC. These findings were supported by the findings of a study by Fernandez et al. (2007) that provider endorsement and perceived benefit of knowing HIV sero status to both the mother and child.

From the findings of this study, awareness of routine HIV testing and counseling was associated with its acceptance. Respondents who were aware of routine HIV testing and counseling were found to be more likely to accept HTC. Risk perception was found to be associated with acceptance of HTC. Pregnant women who perceived themselves at low risk of HIV were observed to be more likely to accept routine HIV testing and counseling. This finding was supported by findings of a study by Ibou et al. (2008), that high risk perception hindered acceptance of routine HTC. In addition belief that, HIV tests is important in protecting the family increased acceptance of routine HTC. Pregnant women who believed that undertaking HIV test is important in protecting the family were observed to be more likely to accept HTC. Defaulting ANC leads to low acceptance of routine HIV testing and counseling. Pregnant women who consistently followed ANC were observed to be more likely to accept HTC.

Assurance of confidentiality of HIV test enhanced acceptance of HTC. This finding concur with the findings of the studies by Cartoux (2008), Stanhope (2009) and MoH (2010) that, fear that, results will not remain confidential and possibility of healthcare
providers declining to assist during birth if they know their HIV status were impediments of acceptance of HTC.

In this study, it was found that provision of quality health care in government hospitals would be one major factor that could enhance acceptance of provider initiated HIV testing and counseling. According to the findings of this study, building more government hospitals near the people, and employing health personnel who could sensitize the community on the importance of routine HIV testing and counseling. This finding agrees with the findings of a studies by Ibou et al. (2007), Gibier et al. (2008), Matovu et al. (2008), and MOHSS (2009) that quality of counseling contributes to acceptance of HTC.

In summary, the literature reviewed showed that acceptance of routine HTC among pregnant women was influenced by many factors which are related to the client or the provider. This study therefore established that the findings of the literature reviewed were applicable in Kibera and they influenced acceptance of routine HTC among the pregnant women.

Factors that were significantly associated with acceptance of provider initiated HIV testing and counseling were being married, attending ANC at least once, being in second or third trimester of pregnancy, knowing that contaminated blood can transmit HIV, knowing that injection with contaminated needle can transmit HIV, knowing that ARV can be used for PMTCT, knowing that avoiding breast feeding for HIV positive mothers can be used for PMTCT, low risk perception for HIV infection, preference to confidential linked HIV test, taking HIV test to protect the family and consistent
attendance to ANC. Key informant interviews showed that low education level, ignorance and poverty contributed to low acceptance of routine HTC.

From the findings of this study, it was concluded that marital status, low education level, lack of knowledge of risk factors for HIV infection and not attending ANC contribute to low acceptance of HTC. In addition, lack of access to government hospitals and awareness of routine HTC are major impediments of acceptance of routine HTC.
5.0 Conclusions and Recommendations

5.1 Introduction
This chapter covers the conclusions, recommendations and suggestion for further research.

5.2 Conclusions
Based on the findings of this study it was concluded that

i. As the age of the mother increased the acceptance of HTC also increased

ii. The underlying population in the study area was aware that HIV can be transmitted through coming into contact with infected blood, injection with unsterilized needle and or sharing of sharps and through mother to child during child birth and breast feeding. However, knowledge that use ARV and avoiding breast feeding can prevent mother to child transmission of HIV was low.

iii. Being married, attending ANC atleast once, seeking ANC in second and third trimester, knowledge of means of HIV transmission and prevention, awareness of importance of HTC, preference of confidential HIV testing, low risk perception and consistence in seeking ANC enhaces acceptance of HTC.

iv. Lack of access to government hospitals and awareness on provider initiated HIV testing and counseling were impediments to acceptance of HTC.

5.3 Recommendations
To improve utilization of provider initiated HIV testing and counseling the study recommends to the government to
i. Design integrated HIV and reproductive health programme targeting the both married and single youths in low income settlements in urban areas.

ii. Promote health through intensified campaign to enhance awareness on HIV transmission and prevention methods.

iii. Develop more government hospitals with adequate and qualified personnel since vast majority of the population in low income settlements in urban areas prefer to seek health care in public health facilities.

5.4 Suggestion for further research
Since this was a community based survey further research can be done on factors influencing acceptance of routine HTC in health care settings. Research can further be conducted as a comparative experimental study on factors influencing acceptance of HCT.
REFERENCES


Campbell T.; Bernhardt S. (2008). Factors that contribute to women declining antenatal HIV testing: In health care for women international volume 24, number 6, pp. 544-551(8): Routledge, Part of the part of the Taylor & Francis group, Switzerland


Communicable Disease Surveillance Centre (2009). AIDS and HIV in the United Kingdom, in CDR Weekly. UK


UNAIDS (2010). Counseling and voluntary HIV testing for pregnant women in high HIV prevalence countries.


APPENDIX I: INTERVIEW CONSENT FORM

My name is ______________________________ and I am a student at Kenyatta University. I am undertaking a research on **Factors influencing acceptance of routine HIV Counseling and Testing among pregnant in Kibera informal settlement.** I am going to ask you some question about provider initiated HIV counseling and testing, your responses are completely confidential; your name or any other personal identifiers will not be written on the questionnaire and will never be used in connection with any of the information you provide. You don’t have to answer any question you don’t want to answer, however your honest answers to these questions will help us to understand factors influencing acceptance of HIV counseling and testing.

We would like to thank you in advance for your help.
[Research assistant’s signature certifying that informed consent has been given verbally.]

Research assistants name ______________________ Signatu re_____________________

Date of interview__________________________

Household number of the respondent___________________
APPENDIX II: INTERVIEW GUIDE (ENGLISH)

My name is ______________________________and I am a student at Kenyatta University. I am undertaking a research on. I am going to ask you some question about provider initiated HIV counseling and testing, your resp Factors influencing acceptance of HIV Counseling and Testing among pregnant in Kibera informal settlement. Responses are completely confidential; your name or any other personal identifiers will not be written on the questionnaire and will never be used in connection with any of the information you provide. You don’t have to answer any question you don’t want to answer, however your honest answers to these questions will help us to understand factors influencing acceptance of routine HIV counseling and testing.

We would like to thank you in advance for your help.

Do you consent to be interviewed?
(If the respondent consents, the research assistant signs the consent form to show that consent has been given verbally. If the respondent refuses to participate the research assistant politely thanks the respondent and discontinues the interview).

Research assistants name ______________________ Signature_____________________

Date of interview__________________________

Household number of the respondent__________________

This questionnaire has been divided into four sections addressing the following issues: Background information, knowledge and attitude towards HIV, MTCT and personal risk perception.

Socio-demographic Characteristics

1:01. How old are you?
Below 18 years ☐ 1
19-30 years ☐ 2
31- 40 years ☐ 3
41 years & above ☐ 4

1:02. Highest level of education

Primary ☐ 1
Secondary ☐ 2
College/University ☐ 3
Other(specify) ☐ 4
1:03. What is your occupation?  
- White collar job  
- Jobless  
- Unskilled labour  
- Other (specify)  

1:04. What is your family income per month? (Kenya shillings)  
- < 2400  
- Above 2400  

1:05. Marital status  
- Single  
- Married  
- Widowed  
- Other (Specify)  

1:06. If married are you currently living with your partner?  
- Yes  
- No  

1:07. Number of pregnancy including the current one  
- One  
- Two  
- Three  
- Four and above  

1:08. The number of antenatal care visit attended in the current pregnancy  
- One  
- Two  
- Three  
- Four and above  

1:09. Which trimester is your pregnancy now?  
- One  
- Two  
- Three
Knowledge, attitudes, beliefs and practices about HIV, MTCT, and PMTCT

2:01. Have you ever heard of HIV or disease called AIDS?
Yes □ 1
No □ 2

2:02. Do you know how HIV is transmitted?
Yes □ 1
No □ 2

2:03. If the answer is yes to question number 2:02 mention the route of transmission?
Sexual intercourse □ 1
Infected blood □ 2
By sharing sharps □ 3
Mother to child □ 4
Injection by unsterile needle □ 5
Other (specify) □ 6

2:04. Can HIV/AIDS be cured?
Yes □ 1
No □ 2

2:05. Can a pregnant woman with HIV or AIDS transmit the virus to her unborn baby?
Yes □ 1
No □ 2
I don’t know □ 88

2:06. When do you think an HIV positive pregnant woman transmit the virus to her baby?
(Circle more than one answer)
During pregnancy □ 1
At child birth □ 2
During breastfeeding □ 3
I don’t know □ 88

2:07. Can a woman with HIV or AIDS transmit the virus to her new born child through breast feeding?
Yes □ 1
No □ 2

2:08. If a woman is infected with the AIDS virus, is there any way to avoid transmission to the baby?
2:09. Do you know the existence of intervention which reduce mother to child transmission of HIV virus?

<table>
<thead>
<tr>
<th>Options</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I don’t know</td>
<td>88</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2:10. What can a woman do to reduce transmission of the HIV virus?

<table>
<thead>
<tr>
<th>Options</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use anti retroviral drugs</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Avoid breast feeding</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other (specify)</td>
<td>3</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2:11. Do you think you can get the virus?

<table>
<thead>
<tr>
<th>Options</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>2</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2:12. What are your chances of getting infected with HIV?

<table>
<thead>
<tr>
<th>Options</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>88</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Moderate</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I don’t know</td>
<td>88</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2:13. If the answer is moderate or high, what are the reasons?

<table>
<thead>
<tr>
<th>Reasons</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>I had multiple sexual partners</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I had sexual contact without condom</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I had injection with unsterile needle</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I had sexual contact with HIV positive person</td>
<td>4</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other specify HIV positive person</td>
<td>5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2:14 If you response is NO to question number (3:01), what are the reasons?

<table>
<thead>
<tr>
<th>Reasons</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>88</th>
</tr>
</thead>
<tbody>
<tr>
<td>I trust my sexual partner</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I had injection with unsterile needle</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I always use condom</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other (specify)</td>
<td>88</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2:15. Have you ever heard of provider initiated HIV counseling and testing?

<table>
<thead>
<tr>
<th>Options</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>88</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>


2:16. What is the source of information, if the answer is yes?
Mass media (Radio, TV, etc) □ 1
Health work or Institution □ 2
Friends □ 3
Neighbors □ 4
Other (specify) □ 5

2:17 Have you ever been told about the benefit of HIV testing by anyone?
Yes □ 1
No □ 2

**Acceptance of routine HTC services**
3:01. Do you think provider initiated HIV counseling and testing is important for pregnant women?
Yes □ 1
No □ 2
I don’t know □ 88

2:02. I don’t want to know the result, but have you ever had an HIV test?
Yes □ 1
No □ 2

3:03. When did you have your most recent HIV test?
Within the past one year □ 1
Between one and two year □ 2
Between two and four year □ 3
Five years and more □ 4

3:04. What is the reason for testing? If the answer to question number (4:05) is yes.
Marriage □ 1
To protect the child □ 2
To protect partner □ 3
To know my status □ 4
Other (specify) □ 5

3:05. Do you attend ANC during your current pregnancy?
Yes □ 1
No □ 2
3:06. If the answer to Question 3:05 is NO, why?

<table>
<thead>
<tr>
<th>Reason</th>
<th>□</th>
</tr>
</thead>
<tbody>
<tr>
<td>It is not important</td>
<td>1</td>
</tr>
<tr>
<td>I did not attend ANC in previous pregnancies</td>
<td>2</td>
</tr>
<tr>
<td>I fear hospitals</td>
<td>3</td>
</tr>
<tr>
<td>I prefer a traditional birth attendant</td>
<td>4</td>
</tr>
<tr>
<td>Other (specify)</td>
<td>5</td>
</tr>
</tbody>
</table>

3:07. If your answer to question 3:05 is YES have you ever defaulted ANC?

<table>
<thead>
<tr>
<th>Answer</th>
<th>□</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>1</td>
</tr>
<tr>
<td>No</td>
<td>2</td>
</tr>
</tbody>
</table>

3:08. If the answer to question 3:07 is YES, why did you default?

<table>
<thead>
<tr>
<th>Reason</th>
<th>□</th>
</tr>
</thead>
<tbody>
<tr>
<td>Waiting for long queuing to see doctor</td>
<td>1</td>
</tr>
<tr>
<td>The health centre is far</td>
<td>2</td>
</tr>
<tr>
<td>I was busy</td>
<td>3</td>
</tr>
<tr>
<td>I will still go again</td>
<td>4</td>
</tr>
<tr>
<td>Other (specify)</td>
<td>5</td>
</tr>
</tbody>
</table>

3:09. Did you voluntarily undergo the HIV test or were you requested to have the test?

<table>
<thead>
<tr>
<th>Choice</th>
<th>□</th>
</tr>
</thead>
<tbody>
<tr>
<td>Voluntarily</td>
<td>1</td>
</tr>
<tr>
<td>Requested</td>
<td>2</td>
</tr>
<tr>
<td>Other (specify)</td>
<td>3</td>
</tr>
</tbody>
</table>

3:10. Did you accept to be routinely tested for HIV during this pregnancy?

<table>
<thead>
<tr>
<th>Answer</th>
<th>□</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>1</td>
</tr>
<tr>
<td>No</td>
<td>2</td>
</tr>
</tbody>
</table>

If your answer QN 3:10 is YES, what are the reasons which you think make you to accept the routine test for in pregnancy?

<table>
<thead>
<tr>
<th>Reason</th>
<th>□</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inability to deal with stress of being positive</td>
<td>1</td>
</tr>
<tr>
<td>Fear of rejection by the community</td>
<td>2</td>
</tr>
<tr>
<td>Uncertainty about husband’s reaction</td>
<td>3</td>
</tr>
<tr>
<td>Non respect of confidentiality</td>
<td>4</td>
</tr>
<tr>
<td>Other (specify)</td>
<td>5</td>
</tr>
</tbody>
</table>

3:11. If your answer QN 3:10 is NO, what are some of the reasons you think would make you to refuse to routine test for HIV in pregnancy?
<table>
<thead>
<tr>
<th>Question</th>
<th>Choice Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inability to deal with stress of being positive</td>
<td>□ 1</td>
</tr>
<tr>
<td>Fear of rejection by the community</td>
<td>□ 2</td>
</tr>
<tr>
<td>Uncertainty about husband’s reaction</td>
<td>□ 3</td>
</tr>
<tr>
<td>Non respect of confidentiality</td>
<td>□ 4</td>
</tr>
<tr>
<td>Other (specify)</td>
<td>□ 5</td>
</tr>
<tr>
<td>3:12. Do you receive counseling before testing?</td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>□ 1</td>
</tr>
<tr>
<td>No</td>
<td>□ 2</td>
</tr>
<tr>
<td>3:13. Were you satisfied with HIV counseling you received?</td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>□ 1</td>
</tr>
<tr>
<td>No</td>
<td>□ 2</td>
</tr>
<tr>
<td>3:14. Don’t tell me the result; do you know the result of your test?</td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>□ 1</td>
</tr>
<tr>
<td>No</td>
<td>□ 2</td>
</tr>
<tr>
<td>3:15. Do you know someone who had been tested for HIV virus?</td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>□ 1</td>
</tr>
<tr>
<td>No</td>
<td>□ 2</td>
</tr>
<tr>
<td>3:16. To whom do you think that the test is of benefit during pregnancy?</td>
<td></td>
</tr>
<tr>
<td>Mother alone</td>
<td>□ 1</td>
</tr>
<tr>
<td>Baby alone</td>
<td>□ 2</td>
</tr>
<tr>
<td>Mother and baby</td>
<td>□ 3</td>
</tr>
<tr>
<td>Health workers</td>
<td>□ 4</td>
</tr>
<tr>
<td>Other (specify)</td>
<td>□ 5</td>
</tr>
<tr>
<td>3:17. Which method of testing do you prefer?</td>
<td></td>
</tr>
<tr>
<td>Confidential linked testing</td>
<td>□ 1</td>
</tr>
<tr>
<td>Anonymous</td>
<td>□ 2</td>
</tr>
<tr>
<td>Other (specify)</td>
<td>□ 3</td>
</tr>
<tr>
<td>I don’t know</td>
<td>□ 88</td>
</tr>
<tr>
<td>3:18. Which way do you prefer to obtain HIV test result?</td>
<td></td>
</tr>
<tr>
<td>Face to face (verbally)</td>
<td>□ 1</td>
</tr>
<tr>
<td>Written on the maternity card</td>
<td>□ 2</td>
</tr>
</tbody>
</table>
Through relative or partner □3
Telephone □4
Other specify □5

3:19. Did you receive counseling after getting your result?
Yes □1
No □2

3:20. Was the post test counseling you got satisfactory?
Yes □1
No □2

3:21. Would you talk your partner before having HIV test?
Yes □1
No □2

3:22. Would you tell your partner the test result of an HIV /AIDS test?
Yes □1
No □2

3:23. If your answer to question 4:20 is YES, why would you disclose your results to your partner?
In case the result is positive □1
In case the result is negative □2
I trust my partner □3
I don’t fear the consequences □4
Other (specify) □5

3:24. If your answer to question 4:20 is NO, why would you NOT disclose your results to your partner?
In case the result is positive □1
In case the result is negative □2
I don’t trust my partner □3
I fear the consequences □4
Other (specify) □5

3:25. Are you comfortable to share with me the results of your most recent HIV test result?
Yes □1
No □2

3:26 If your answer to question 3:25 is yes what was the result of the most recent HIV test?
I have the HIV virus □1
I don’t have the HIV virus □2
Institutional characteristics

4:01. Do most pregnant women seek health care in Kibera?

Government hospitals □ 1
Private hospitals □ 2
Traditional medicine men □ 3
Others (specify) □ 4

4:02. Where do you think most pregnant women deliver their babies?

At home with traditional birth attendants □ 1
In private hospitals □ 2
In government hospitals □ 3
Others (specify) □ 4

4:03. Do you think many pregnant women undergo routine HTC in Kibera?

Yes □ 1
No □ 2

4:04. Where do pregnant women seek routine HTC?

Government Hospitals □ 1
Private hospitals □ 2
Traditional birth attendants □ 3
Others (specify) □ 4

4:05. Do you think most pregnant women understand that they should undergo routine HIV test?

Yes □ 1
No □ 2

4:06. Do you think religion contributes to health seeking behaviors among pregnant women in Kibera?

Yes □ 1
No □ 2
4:07. Do you think some pregnant women have religious beliefs which would hinder them undergoing routine HTC?

Yes □ 1
No □ 2

4:08. Do you think improving confidentiality would improve acceptance of routine HTC among pregnant women?

Yes □ 1
No □ 2

4:09. If the pregnant women were more educated on the benefits of routine HTC do you think this would increase the acceptance?

Yes □ 1
No □ 2

4:10. If the hospitals were located where most pregnant women would easily access them do you think this would improve their acceptance of routine HTC?

Yes □ 1
No □ 2

THANK YOU
APPENDIX III: FOMU YA KUKUBALI KUHOJIWA [CONSENT FORM]

Jina langu ni ..............na mimi ni mwanafunzi katika chuo kikuuu cha Kenyatta. Ninafanya utafiti juu ya mambo ambayo yanafanya akina mama waja wazito mtaani Kibera kuhusika ama kutohusika na kupimwa ugonjwa wa ukimwi katika vituo vya afya.


Ningependa kukushukuru mbeleni kwa kukubali kushiriki.

Sahihi ya anayeuiliza maswali kuonyesha anayeojiwa amekubali kuhojiwa

Jina a Anayeuiliza maswali________________________ Sahihi________________________

Tarehe __________________________

Namba ya nyumba ya anayehojiwa________________
APPENDIX IV: KIDADISI (KISWAHILI)

Jina langu ni ……………na mimi ni mwanafunzi katika chuo kikuuu cha Kenyatta. Ninafanya utafiti juu ya mambo ambayo yanafanya akina mama waja wazito mtaani Kibera kuhusika ama kutohusika na kupimwa ugonjwa wa ukimwi katika vituo vya afya.


(Kama mshiriki amekubali kushiriki anayeuliza maswali akeke sahii kuonyesha kuwa mshiriki amekubali kwa hiari na akapeana ruhusa kwa kuongea kuwa atashiriki. Kama amekataa anayeuliza maswali amshukuru nshiriki kwa heshima halafu asiendelee na maswali).

Sahihi ya anayeuliza maswali kuonyesha anayeojiwa amekubali kuhojiwa

Jina a Anayeuliza maswali______________________________ Sahihi__________________

Tarehe ____________________________

Namba ya nyumba ya anayeojiwa______________________

Maswali haya yamegawanywa kwa sehemu tatu zinazoangazia mambo yafuatayo: Habari, elimu au fikira kuhusu HIV, MTCT na fahamu ya hatari kwa kila mmoja.

Lengo la kwanza: Kuchunguza dalili ya kuonyesha hali ya akina mama wajawazito katika mtaa wa Kibera.

1:01. Una umri gani?
Chini ya miaka 18 □ 1
Miaka -29 □ 2
Miaka 30-39 □ 3
Miaka 40 au zaidi □ 4

1:02. Ni kiwango gani cha elimu ulichoweza kuhitimu?
Shule ya misingi □ 1
Shule ya upili □ 2
Chuo Kikuu □ 3
Nyingine (fafanua) □ 4
1:03. Una fanya kazi gani?
Nimeajiriwa □ 1
Sina kazi □ 2
Mwanafunzi □ 3
Nyingine (fafanua) □ 4

1:04. Una kiwango gani cha mapato katika familia hii? (Shillingi ya Kenya)
<3000 □ 1
3001-4000 □ 2
4001- 5000 □ 3
Zaidi ya 5000 □ 4

1:05. Hali yako ya ndoa
Sijaolewa □ 1
Nimeolewa □ 2
Mimi ni mjane □ 3
Nyigine (Fafanua) □ 4

1:06. Ikiwa umeolewa je unaishi na mpenzi wako?
Ndiyo □ 1
La □ 2

1:07. Idadi ya mimba umewahi pata ikiwa pamoja na yenye unayo kwa wakati huu.
Moja □ 1
Mbili □ 2
tatu □ 3
nne au zaidi □ 4

1:08. Umeenda katika Kliniki ya akina mama wajawazito au umewahi pata ushauri katika kliniki juu ya mimba ulionayo kwa wakati huu mara gapi?

Moja □ 1
Mbili □ 2
Tatu □ 3
Nne au zaidi □ 4

1:09. Mimba ulionayo iko katika kipindi gani?(Kipindi kimoja kina miezi mitatu)
Cha kwanza □ 1
Cha pili □ 2
Cha tatu □ 3
Lengo la pili: Kuchambua elimu kuhusu HIV, MTCT na PMTCT kwa akina mama wajawazito katika mtaa wa Kibera.

2:01. Je, umewahi pata habari au kusikia kuhusu HIV au ugonjwa uitwao UKIMWI?
   Ndiyo ☐ 1
   La ☐ 2

2:02. Je unaelewa jinsi HIV inavyoambukizwa?
   Ndiyo ☐ 1
   La ☐ 2

2:03. Ikiwa jibu lako ni ndiyo kwa nambari 2:02, taja njia za kuambukizwa
   Kushiriki ngono ☐ 1
   Damu inayoambukizwa ☐ 2
   Utumiaji pamoja wa vitu vyenye ncha kali ☐ 3
   Mama kwa mtoto tumboni ☐ 4
   Kudungwa na sindano isiyosafi ☐ 5
   Nyingine (Fafanua) ☐ 6

2:04. Je, ugonjwa wa UKIMWI unaweza kutibika?
   Ndiyo ☐ 1
   La ☐ 2

2:05. Je, mwanamke mja mzito ambaye ameambukizwa HIV au UKIMWI anaweza kuambukiza mtoto tumboni?
   Ndiyo ☐ 1
   La ☐ 2
   Sina habari ☐ 88

2:06. Je, unafikiri ni wakati gani mwanamke mja mzito aliye na HIV anaweza kuambukiza mtoto tumboni?
   (Unaweza chagua zaidi ya jibu moja)
   Mtoto akiwa tumboni ☐ 1
   Mtoto anapoziwa ☐ 2
   Mtoto anaponyonyeshwa ☐ 3
   Sina habari ☐ 88

2:07. Je, mwanamke mja mzito aliye na HIV au UKIMWI anaweza ambukiza mwanawe kwa kumnyonyesha?
   Ndiyo ☐ 1
   La ☐ 2
2:08. Je, ikiwa mwanamke ana virusi vya UKIMWI kuna njia za kuepuka kuambukiza mtoto tumboni mwake?
Ndiyo ☐ 1
La ☐ 2
Sina habari ☐ 88

2:09. Je, unajua jinsi ya kupunguza uambukizaji wa virusi vya UKIMWI kutoka kwa mama hadi kwa mtoto aliye tumboni mwake?
Ndiyo ☐ 1
La ☐ 2

2:10. Mwanamke anaweza kufanya nini ili apunguze uambukizaji wa virusi vya HIV?

Kutumia madawa ya UKIMWI (ARVs) ☐ 1
Kuacha kunyonyesha mtoto ☐ 2
Nyingine (Fafanua) ☐ 3

2:11. Je, unafikiri unaweza kuambukizwa virusi vya HIV?
Ndiyo ☐ 1
La ☐ 2

2:12. Ukifikiria, unaweza sema nafasi yako au uwezekano wako wa kuambukizwa virusi vya HIV uko aje?

Kiwango cha chini ☐ 1
Kiwango cha kati ☐ 2
Kiwango cha juu ☐ 2
Sijui ☐ 88

2:13. Ikiwa jibu lako ni kawaida au juu, una sababu gani?
Nimekuwa na wapenzi wengi ☐ 1
Nilishiriki ngono bila kutumia mpira ☐ 2
Nilidungwa na sindano isiyosafi ☐ 3
Nilishiriki ngono na mtu aliye na virusi vya HIV ☐ 4
Nyingine (Fafanua)__________________________ ☐ 5

2:14. Ikiwa jibu lako ni La kwa nambari 2:11, una sababu gani?

Ninamuamini mpenzi wangu ☐ 1
Sijawahi dungwa na sindano isiyo safi ☐ 2
Mimi hutumia mpira wakati wa ngono ☐ 3
Nyingine (Fafanua) ☐ 88
2:15. Je, umewahi pata habari au kusikia kuhusu ROUTINE HTC yaani kushauriwa na kupimwa HIV katika kituo cha afya?  
Ndiyo ☐ 1  
La ☐ 2

2:16. Ikiwa jibu lako ni ndiyo kwa nambari 2:15 ulipata wapi habari hio?  
Vyombo vya habari (Radio, TV) ☐ 1  
Vituo vya afya ☐ 2  
Marafiki ☐ 3  
Majirani ☐ 4  
Nyingine (Fafanua) ☐ 5

2:17. Je, umewahi kuambiwa kuhusu umuhimu au manufaa ya kupimwa HIV?  
Ndiyo ☐ 1  
La ☐ 2

Lengo la tatu: Kukadiria mambo ambayo yanahusika na utumiaji wa huduma za kushauriwa na kupimwa HIV katika kituo cha afya kwa akina mama wajawazito katika mtaa wa Kibera.

3:01. Je, unafikiri kuna manufaa au umuhimu wa ushauri na kupimwa HIV kwa akina mama wajawazito katika kituo cha afya?  
Ndiyo ☐ 1  
La ☐ 2  
Nyingine (Fafanua) ☐ 88

3:02. Sina nia ya kujua hali yako, lakini umewahi pimwa HIV?  
Ndiyo ☐ 1  
La ☐ 2

3:03. Je, ni lini ulipimwa HIV mara ya mwisho?

Kwa muda wa mwaka moja uliopita ☐ 1  
Kati ya mwaka moja na miwili ☐ 2  
Kati ya miaka miwili na minne ☐ 3  
Miaka mitano au zaidi ☐ 4

3:04. Ikiwa jibu lako ni ndiyo kwa nambari (2:05), ni nini ilikuwa sababu ya kupimwa?

Kulinda ndoa ☐ 1  
Kulinda mtoto wangu ☐ 2  
Kulinda mpenzi wangu ☐ 3  
Kujua hali yangu ☐ 4  
Nyingine (Fafanua) ☐ 5
3:05. Je, una hudhuria kliniki kwa wakati huu?
Ndiyo □ 1
La □ 2

3:06. Ikiwa jibu lako ni La kwa nambari 3:05, kwa nini?
Haina umuhimu □ 1
Siku hudhuria kliniki nyakati za mimba iliotangulia □ 2
Naogopa kuenda hospitali □ 3
Napenda kuenda kwa wakunga □ 4
Nyingine (Fafanua) □ 5

3:07. Ikiwa jibu lako ni Ndiyo kwa nambari 3:05 je, umewahi kosa kuhudhuria kliniki?
Ndiyo □ 1
La □ 2

3:08. Ikiwa jibu lako ni Ndiyo kwa nambari 3:07 je, ulikosa kuhudhuria kliniki kwa sababu gani?
Kungojea katika foleni ndefu kabla ya kuona daktari □ 1
Kituo cha afya kinapatikana mbali □ 2
Nilikuwa na shughuli nyingi □ 3
Nitaenda wakati mwingine □ 4
Nyingine (Fafanua) □ 5

3:09. Je, uliamua kupimwa HIV kwa hiari yako au uliombwa kufanya hivyo?
Kwa hiari yako □ 1
Uliombwa □ 2
Nyingine (Fafanua) □ 3

3:10. Je, umekubali kupimwa kila wakati kama ulivyoshauriwa kliniki kwa ajili ya na mimba hii?
Ndiyo □ 1
La □ 2

3:11. Je, unafikiri ni sababu gani zinazoweza kukufanya ukatae kupimwa HIV?
Kutoweza kustahimili mawazo ya kuwa na virusi vya HIV □ 1
Kuogopa kukataliwa na jamii □ 2
Sina uhakika ikiwa mume wangu atafurahia □ 3
Kutokuwepo na siri □ 4
Nyingine (Fafanua) □ 5
3:12. Je, wewe hupata ushauri kabla ya kupimwa?
Ndiyo □ 1
La □ 2

3:13. Je, uliridhishwa au kutosheka na ushauri wa HIV uliopata?
Ndiyo □ 1
La □ 2

3:14. Usiniambie matokeo kwa sasa , lakini je, unajua matokeo ya kipimo cha HIV ulichopata?
Ndiyo □ 1
La □ 2

3:15. Je, unajua mtu mwingine yeyote ambaye amewahi kupimwa virusi vya HIV?
Ndiyo □ 1
La □ 2

3:16. Je, unafikiria ni nani hupata manufaa ya kupimwa HIV unapokuwa na mimba?
Mama pekee □ 1
Mtoto pekee □ 2
Mama na mtoto □ 3
Wauguzi □ 4
Nyingine (Fafanua) □ 5

3:17. Kati ya njia zifuatazo , ni gani unayoipenda zaidi wakati wa kupimwa HIV?
Kuwepo kwa siri unapopimwa □ 1
Bila kujulikana majina □ 2
Nyingine (Fafanua) □ 3
Sina habari □ 88

3:18. Ni njia gani unayopendelea kupata matokeo ya kupimwa HIV?
Kuambwa papo hapo na mhudumu □ 1
Kuandikiwa kwa kadi ya kliniki □ 2
Kuambwa na mtu kutoka kwa jamii au mpenzi □ 3
Kuambwa kwa simu □ 4
Nyingine (Fafanua) □ 5

3:19. Je, ulipata ushauri baada ya kupata matokeo?
Ndiyo □ 1
La □ 2
3:20. Je, uliridishwa na ushauri wa mwisho uliopata baada ya kupata matokeo?  
Ndiyo ☐ 1  
La ☐ 2

3:21. Je, ungependa kuongea na mpenzi wako kabla ya kupimwa HIV?  
Ndiyo ☐ 1  
La ☐ 2

3:22. Baada ya kupimwa HIV, ungependa kumuambia mpenzi wako matokeo?  
Ndiyo ☐ 1  
La ☐ 2

3:23. Ikiwa jibu lako ni Ndiyo kwa nambari 3:22, ni sababu gani inayoweza kufanya umuambie mpenzi wako matokeo?  
Ikiwa matokeo yaonyesha nina virusi ☐ 1  
Ikiwa matokeo yaonyesha sina virusi ☐ 2  
Namuamini mpenzi wangu ☐ 3  
Siogopi matokeo yoyote ☐ 4  
Nyingine (Fafanua) ☐ 5

3:24. Ikiwa jibu lako ni La kwa nambari 3:22, ni sababu gani inayoweza kufanya usimuambie mpenzi wako matokeo?  
Ikiwa matokeo yaonyesha nina virusi ☐ 1  
Ikiwa matokeo yaonyesha sina virusi ☐ 2  
Siamuamini mpenzi wangu ☐ 3  
Naogopa matokeo ☐ 4  
Nyingine (Fafanua) ☐ 5

3:25. Je unaweza kuwa huru kuniambia matokeo ya kipimo cha HIV kilichofanywa hivi punde?  
Ndiyo ☐ 1  
La ☐ 2

Mimi nina Virusi vya HIV ☐ 1  
Mimi sina virusi vya HIV ☐ 2
Lengo la 4: Kukadiriia mambo ambayo yangeimarisha utumiaji wa huduma za kushauriwa na kupimwa HIV katika kituo cha afya kwa akina mama wajawazito katika mtaa wa Kibera.

4:01. Je akina mama wajawazito hutafuta huduma za afya mtaani Kibera?

Hospitali za serkali □ 1
Hospitali za kibinafsi □ 2
Waauguzi wa kienyeji □ 3
Nyingine (fafanua) □ 4

4:02. Je unadhania akina mama wajawazito huzalia watoto wao wapi?

Nyumbani na wauguzi wa kienyeji □ 1
Katika hospitali za kibinafsi □ 2
Katika hospitali za serkali □ 3
Nyingine (fafanua). □ 4

4:03. Je unadhani akina mama wajawazito hupata huduma za kushauriwa na kupimwa virusi vya ukimwi katika vituo vya afya mtaani Kibera

Ndio □ 1
La □ 2

4:04. Je akina mama wajawazito hupata wapi huduma za kuhauriwa na kupimwa ugonjwa wa ukimwi katika vituo vya afya mtaani Kibera

Hospitali za serkali □ 1
Hospitali za kibinafsi □ 2
Waauguzi wa kienyeji □ 3
Nyingine (fafanua) □ 4

4:05. Je unadhani kuwa akina mama wanaelewa kuwa wanapaswa kupata ushauri na kupimwa virusi vya HIV kama mojawapo ya vipimo vya kawaida wakiwa wajawazito

Ndio □ 1
La □ 2

4:06. Je unadhani mambo ya kidini yanaweza kumfanya mama mjanzito kupata huduma za kiafya mataani Kibera?

Ndio □ 1
La □ 2
4:07. Je unadhani kuna akina mama ambao dini yao inaweza inaweza kuwuzuia kupata kipimo cha virusi vya ukimwi?

Ndio □ 1
La □ 2

4:08. Je unadhani kuimarisha kuweka siri wakati wa kupimwa kwa akina mama wajawazito kungeimarisha matumishi ya kupimwa virusi vya ukimwi?

Ndio □ 1
La □ 2

4:09. Unadhani Kama akina mama wajawazito wangeelimishwa kuhusu umuhimu wa kupimwa virusi vya ukimwi wakiwa wajawazito kungeongeza idadi ya akina mama wale wangepimwa?

Ndio □ 1
La □ 2

4:10. Unadhani kujenga mahosiptali mahali akina mama wajawazito wana weza kufika kwa urahisi kungeongeza idadi ya akina mama wale wangepimwa?

Ndio □ 1
La □ 2

ASANTE
APPENDIX V: KEY INFORMANT INTERVIEW GUIDE

1. What is the extent of use of ROUTINE HTC in this area

2. Despite concerted efforts to reduce HIV/AIDS, the prevalence still seems to be high in Kibera. What do you think contributes to this situation?

3. How can attending Ante Natal Care during pregnancy be useful in Prevention of Mother to Child Transmission of HIV/AIDS?

4. Which factors do you think lead to low utilization of ROUTINE HTC among pregnant women in the Kibera informal settlement?

5. What do you think can be done to improve the acceptance of ROUTINE HTC among pregnant women in Kibera?

6. How can ROUTINE HTC services be improved to ensure efficiency?

7. Any other comments?
APPENDIX VI: MASWALI YA WAHUSIKA MUHIMU

1. Je ni kiwango gani cha utumizi wa kupimwa na kushauriwa kuhusu UKIMWI kwa akina mama wajawazito katika eneo la Kibera?

2. Licha ya kuwa na juhudi za kupunguza HIV au UKIMWI, kuenea kwa ugonjwa huo bado kuko juu Katika mtaa wa Kibera. Mnafikiri ni nini inachangia hali hii?

3. Ni vipi kuhudhuria kliniki wakati mwanamke ana mimba kunaweza kuwa muhimu kumzuia kumuambukiza mtoto tumboni?

4. Je, mnafikiri ni sababu gani zinazofanya idadi ya akina mama wajawazito wanaohudhuria mashauri na kupimwa HIV ni ndogo katika mtaa wa Kibera?

5. Je, mnafikiri ni nini inaweza fanywa kuimarisha utumiaji wa huduma za ushauri na kupimwa HIV kwa akina mama wajawazito katika mtaa wa Kibera?

6. Ni vipi huduma za ushauri na kupimwa HIV zinaweza kuimarisha ili ziwe na ufanisi?

7. Je kuna jambo lingine ambalo ungetaka kuongezea au kufanana zaidi?