

## **STUDY TITLE**

UPTAKE OF PROVIDER INITIATED TESTING AND COUNSELLING  
AMONG ACUTE GYNAECOLOGY PATIENTS AT THE KENYATTA  
NATIONAL HOSPITAL.

*A research dissertation, submitted to the Department of Obstetrics  
and Gynaecology, University of Nairobi in partly fulfilment of the  
requirement for the award of Masters of Medicine in Obstetrics and  
Gynaecology.*

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***January 2011***

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**LIST OF ABBREVIATIONS:**

AIDS	Acquired Immune Deficiency Syndrome
ART/ ARV	Anti Retroviral Therapy
ANC	Antenatal Clinic
BSS	Behavioural Surveillance Survey
CDC	Centres for Disease Control
DCT	Diagnostic Counselling and Testing
FP	Family Planning
GOK/ MOH	Government of Kenya/ Ministry of Health
HIV	Human Immunodeficiency Virus
HBC	Home Based Care
KDHS	Kenya Demographic Health Survey
KNH	Kenyatta National Hospital
PMTCT	Prevention of Mother to Child Transmission
PEP	Post Exposure Prophylaxis
PITC	Provider Initiated Testing and Counselling
STD/STI	Sexually Transmitted Disease/ Infection
USAID	United States Agency for International Development
VCT	Voluntary Counselling and Testing

## **ABSTRACT:**

### **Study Title:**

Uptake of Provider Initiated Testing and Counselling (PITC) for HIV testing among Acute Gynaecology patients seen at the KNH.

### **Background:**

Women are at a higher risk of contracting HIV infection than men. Evidence from resource-constrained settings suggests that many HIV infected persons are not being picked early enough. PITC for HIV infection and that disclosure to spouse/ sexual partner facilitates early access to HIV-related services.

### **Objectives:**

To determine the uptake of Provider Initiated Testing and Counselling among acute gynaecology patients. The specific objectives were to determine perception of risk for HIV infection, willingness to be tested and willingness to disclosure status, determine socio-demographic, reproductive health attributes and willingness to disclose serostatus.

### **Methodology:**

The study design was a cross – sectional study carried out between July 2010 and September 2010 at the Kenyatta National Hospital. 206 participants were enrolled from the Accident and Emergency Department as well as Ward 1D (Acute Gynaecology Ward) presenting with acute gynaecology conditions. Data was collected using an interviewer administered questionnaire which was followed by HIV testing.

### **Results:**

A total of 206 study participants who met the eligibility criteria and consented to participate were enrolled into this study. The mean age of study participants was 30 years (SD=8.2), 65% were married, 37% and 35% had attained primary and secondary education respectively, 40% were unemployed. Of the 206 participants enrolled, 81% had ever been tested before for HIV, majority (72%) at VCT centres. Those had never had a HIV test were 19% and of these majority, 41%, of them did not believe to be at risk of HIV infection. Interestingly 50% of study participants had never used condoms. Despite this, the uptake of PITC for HIV testing among the study participants was 76% with a HIV prevalence of 7%. Those who were not willing to undergo PITC were 24%, 39% of these were not emotionally prepared for HIV testing and 28% needed to consult their spouses. Of those who underwent

PITC, 68% were willing to disclose their HIV status to their partner/ spouses while 32% were not willing to disclose their HIV results to their spouse/partner. Of those not willing to disclose, 76% was because they did not know their partners HIV status or wanted to undergo retesting with their partners. Study participants who had prior testing for HIV were more willing to undergo PITC, majority 72%, having been tested at VCT centres.

**Conclusion:**

There was an uptake of PITC of 76% among the study participants which is a marked improvement over the years. PITC reduces missed opportunities for HIV testing. Those who underwent PITC, 68% were willing to disclose their HIV status and of 32% who were not willing to disclose their HIV status, 76% wanted to be retested with their partners. This would encourage their partners to be tested for HIV and hence increase coverage of HIV testing.

**Recommendations:**

There should be implementation of PITC at all levels of health care as well as upscale in training on PITC for health workers. There should be integration of FP counselling in PITC and VCT seeing that majority of participants who had prior HIV testing were tested at a VCT centre (72%). Also recommended is the upscale of community based programmes to improve male involvement. From this study, 32% were not willing to disclose their HIV test results and of these 76% wanted to be retested in the presence of their partners.

## **INTRODUCTION**

HIV/AIDS infection, prevention, detection and care for the infected continues to pose a challenge worldwide despite the increased provision of care, support and treatment.

According to the UNAIDS report 2007 there were nearly 33 million people infected with the Human Immunodeficiency Virus (HIV) worldwide. Of these 67% of those infected are in Sub-Saharan Africa with women accounting for almost half of the cases (61%).<sup>1</sup>

One of challenges in the fight against HIV/ AIDS is in the area of reproductive health where women are noted to be at a higher risk than men. The Kenya AIDS Indicator Survey (2007) indicated that the prevalence in women is higher (8.7%) compared to men (5.9%).

Data from UNAIDS, 2006 Report on the Global AIDS Epidemic indicated that 80% of young women between the ages of 15-49 years in low and middle income regions could not correctly identify ways of preventing HIV transmission. This report also revealed that married women have much less power than men to control their risk of infection, yet biologically women are two to eight times more likely than men to contract HIV infection during vaginal intercourse. More than four fifth of new infections were shown to occur in marriage.

USAIDS Global AIDS Epidemic Report showed that one in three women around the world will be raped, beaten or coerced into sex. Fearing domestic violence or rejection, 58% of South African women avoided discussing condom use with their partners. Violence was noted also to be both a cause and consequence of HIV infection. Many of those who were tested for HIV infection did not disclose their test results to their partners. They also did not request their partners to accompany them for testing, to use condoms or remain faithful for fear of being beaten or abandoned by their partners.

Most HIV infected patients globally and particularly in resource-poor settings, are unaware of their HIV status and uptake of VCT services is still limited. Many patients receive their HIV diagnosis at a late stage in the disease despite multiple clinical visits and contacts with the health workers which likely represent missed opportunities for testing and counselling.

To improve the slow uptake of HIV testing and counselling in VCT centres, different alternatives have been proposed, namely Provider Initiated Counselling and Testing. WHO, CDC, USAID and GOK/MOH have turned their focus towards increasing accessibility of testing and making HIV testing a more routine part of medical care. The main justification of PITC is to increase the number of individuals tested and thus the number of HIV infected patients identified early and linked to medical care and support.

HIV testing and counselling is important because it helps increase one's awareness of their own HIV status, one becomes more sensitized towards behavioural change where one is able to make an informed choice about their sexual lifestyle considering majority of those infected acquire it through sexual transmission. When one discovers their status especially for those who are seropositive, they are able to access ARV therapy early and this improves the quality and survival of those infected. Early knowledge of HIV status in clinical settings via PITC, where health workers offer testing and counselling for HIV in those patients suspected to be infected, is now recognised as a critical component in the control and spread of HIV infection. Clients that test HIV negative for the HIV infection receive counselling on risk reducing behaviour to reduce risk of contracting HIV infection.

Disclosure of HIV status remains an important tool for the prevention of new infections, supports risk reducing behaviour and early initiation of treatment and support for HIV positive individuals' spouses/sexual partners. Early access to treatment improves survival and quality of life for both partners and their families. Failure to disclose HIV status to sexual partners decreases the effectiveness of prevention of mother to child transmission as well as subsequent care of the infants. The 2007 UNAIDS Report revealed that 90% of infected children are in Sub-Saharan Africa with majority having been acquired through mother to child transmission.<sup>1</sup>

## **LITERATURE REVIEW**

HIV/AIDS continues to pose a challenge to health strategies in Kenya and there has been an increase in the provision of inpatient, outpatient, as well as preventive and rehabilitative health services. The high prevalence of HIV/AIDS combined with the fact that Kenya has a relatively mature epidemic has resulted in high morbidity and mortality in most hospitals where HIV/AIDS patients now occupy about 60% of hospital beds.<sup>2</sup>

The Kenya AIDS Indicator Survey was conducted in 2007 to evaluate the government's progress in achieving its targets in the fight against HIV/AIDS. It was conducted on 10,000 households with an aim to determine HIV prevalence among adults between the ages of 16-64 years of age, to describe demographic and behavioural risk factors and to determine the knowledge and attitude regarding HIV/AIDS and Sexually Transmitted Diseases (STD) transmission.<sup>2</sup>

It was found that an estimated 1.4 million adults in Kenya from this survey are infected with HIV compared to 1.25 million from the KDHS in 2003 which looked at a smaller population. The prevalence now stands at 7.4% compared to 6.7% in 2003 KDHS report.<sup>2</sup>

The KAIS report also indicated that HIV testing among adults had more than doubled since the KDHS report in 2003 which stood at 15.7%. This represents a positive step towards achieving universal knowledge of HIV status among Kenyans. The survey also indicated that more Kenyans were using condoms with non marital or cohabiting partners. There was no decline in the proportion of people with multiple sex partners in the year prior to the survey. Among those sexually active, HIV infected participants (most of whom did not know their status), less than half had ever used a condom and less than 20% used a condom the last time they had sex.<sup>2</sup>

Data from antenatal clinics in Kenya has shown a downward trend in HIV infection rates from 13.9% in 1998 to 10% in 2004.<sup>4</sup> HIV testing results from the KDHS in 2003 further confirmed this lowering of HIV transmission among pregnant women to their unborn children.<sup>3</sup>

According to the Behavioural Surveillance Survey conducted in 2002, 99% of women living in the rural areas had ever heard of HIV/AIDS. Most of them knew of someone who had died of HIV/AIDS. 59% knew about prevention measures while 60% had no misconceptions about the mode of transmission. While 90% of Kenyans are aware of the existence of HIV/AIDS and its mode of transmission, only 14% of Kenyans knew their HIV status as confirmed by the KDHS report in 2003.<sup>3</sup> The report also indicated that many Kenyans had not accepted that they could be at risk of contracting HIV/AIDS.<sup>5</sup>

The KDHS 2008 Preliminary Report results revealed that majority of men and women aged between 15-49years knew that one can reduce risk of HIV infection by abstinence, by using condoms and by limiting sex to one partner.<sup>6</sup>

Part of the GOK-MOH response to the HIV/AIDS epidemic is the establishment of Voluntary Counselling and Testing (VCT) centres in the country with trained counsellors. VCT offers a principle entry point for care, treatment and support for those living with HIV/AIDS. One of the goals of VCT is to target the aspect of behaviour change. During the session, those attending VCT are also counselled on risk reducing behaviour and one is empowered to make an informed choice about their sexual lifestyle. However psychological and physical barriers such as access to testing and stigma surrounding HIV testing remain.<sup>7</sup>

A study conducted at The Kenyatta National Hospital's VCT Centre where data was collected from 2004-2007 looking at the uptake of VCT services. Variables observed were the uptake of VCT, HIV incidence and prevalence. 88.6% of those tested just wanted to know their status to plan for their future. The average seroprevalence was 12.9% with a higher prevalence among women 17%, than men 9% despite uptake of VCT services being higher among male clients (53.9%).<sup>8</sup>

Data collected by the International Centre for Reproductive Health in Mombasa to determine the characteristics of clients attending VCT showed that 31% were tested due to previous risky behaviour and 26% were tested to plan for their future. It was also noted that 63% of those tested were men but seropositivity was higher in women (29.9%).<sup>9</sup>

A community based survey conducted in Nakuru to determine the extent of utilization of VCT services. It was found that 64.2% had never been tested for HIV, 26.4% had previously done a HIV test through VCT and 9.1% had received their HIV results without counselling. It was noted that there was an increased need for community awareness on the benefits of HIV testing and diagnosis.<sup>10</sup>

A study conducted in Bushenyi District in Uganda to determine the factors that influence acceptability VCT of HIV testing with a view of suggesting measures of increasing VCT uptake. Of the 219 study participants, 17% had ever undergone HIV testing. The factors influencing VCT for HIV were consequences of a test result, influences from a sexual partner, cost of VCT, physical accessibility of VCT, awareness, risk of HIV infection, need for linking VCT with care (especially availability of ARVs) and perceived quality of care of VCT services.<sup>11</sup>

The KNH VCT Centre has included the aspect of Provider Initiated Testing and Counselling (PITC) since 2005 .PITC is provided to patients within clinical settings where counsellors test and counsel clients without any request from the clinicians. Diagnostic Counselling and Testing (DCT) on the other hand is offered on request from the clinician for patients presenting with conditions that may have an association with HIV, for example tuberculosis and cervical cancer. PITC has direct benefits from both the clinicians as well as the patients especially with regard to community care, disclosure and couple testing. There is need to strengthen PITC support and scale up services through training of more staff.

A study published by The Kenya Medical Research Institute (KEMRI) in 2004 looked at the role of HIV testing and counselling among clients suspected to have TB at the Rhodes Chest Clinic. The overall rate for those who consented for HIV testing and counselling were 26.6%, 28.3% being men versus 23.8% being women. One of the reasons given for not accepting HIV testing was fear of knowing their status.<sup>12</sup>

A study conducted in Addis Ababa looked at the uptake of PITC among outpatient clients with possible clinical signs of HIV infection and factors associated with it. The pre and post – test acceptability rates among those willing to undergo PITC were 0.98 and 0.96 respectively whereas the overall acceptability of all study participants was 0.67. Compared to those between the ages of 15- 24, those between 25-34 were more willing to undergo PICT.<sup>13</sup>

Between November 2004 and February 2006, Mbarara and Mulago hospitals in Uganda offered routine HIV testing to inpatient in medical and surgical units. The study revealed a test acceptance rate of 98% and 80% respectively of those who had not been tested previously. HIV prevalence of those tested was 25%. Among those who declined testing, 25% just did not wish to be tested, 21% said they'd get tested after getting out of their illness, 20% said they'd previously tested positive, 7% they had tested HIV – negative numerous times, 6% said testing offered no benefit and 5% wanted to consult their spouses. Other reasons for declining testing included not being emotionally prepared, fear of HIV – positive result, being confident they were not HIV infected and lack of time.<sup>14</sup>

A survey in Botswana conducted in 2006 sought to describe the knowledge and attitudes of routine PITC in the general population after the institution of a country – wide policy to offer routine PITC. A total of 81% of respondents reported being very much in favour of routine HIV testing and 89% said that the policy would decrease barriers to testing and improve the link to ARV treatment. 93% decided to be tested on their own and 98% did not regretting their decision to be tested. However, 43% believed that the policy might lead individuals to avoid their doctors for fear of testing.<sup>15</sup>

In 2007 The World Health Organization (WHO) together with UNAIDS issued new guidelines recommending PITC in countries where HIV/AIDS has been declared an epidemic .In the guidelines it is recommended that all patients attending health facilities are routinely counselled and tested for HIV infection. PITC has also generated widespread debate about whether it is the right approach in a context of HIV –related stigma and the lack of human and material resources. Key concerns in this publication were how and where informed consent would be attained and whether privacy and confidentiality would be upheld in overstretched health settings. Another challenge was whether appropriate post test counselling, treatment and support could be provided. All testing for HIV, including PITC may be done only on the following conditions; an informed consent from the client which includes the right to refuse, the availability of counselling with follow-up, and in the event of a positive test result, treatment and necessary support .

Several questions remain to be answered on PICT: How will patients react to routine offer of HIV testing? Will clinic attendance decline in order to avoid testing? Will health providers accept the added burden to conduct routine testing? Will routine PICT lead to a reduction in the number of missed opportunities to identify HIV infected patients and increase the number of those linked into care and treatment? What are the ramifications of routine PICT, for example violence? Are there ethical implications of routine PICT such as how voluntary is HIV testing in these settings? These questions require further research to refine future routine PICT programmes.

A study that was conducted in Eastern Uganda looked at the health and social predictors of disclosure. Of the 1,092 participants, 42% were currently sexually active and 69% had disclosed their serostatus to their most recent sexual partner. Disclosure was also associated with marital status, condom use and knowledge of partners serostatus. Positive outcomes included risk reducing behaviour, partner testing, increased care – seeking behaviour, anxiety relief, increased sexual communication and motivation to plan for the future.<sup>16</sup>

Another study looked at positive and negative life events after VCT for HIV and found that disclosure had been associated with multiple negative outcomes including feeling of isolation and depression, worry of confidentiality, discrimination at home or in the work place and domestic violence.<sup>17</sup> In a study in Botswana, of those who had been previously tested, only 1% indicated that their test had resulted in violence, 2% reported discrimination and 5% reported a breach of health worker confidentiality. However 10% stated that their reason for not being tested was fear of partner violence, 11% feared discrimination by health workers and 18% feared rupture of confidentiality.<sup>17</sup>

A study in Kampala, Uganda looked at factors associated with HIV status disclosure to sexual partners among women involved in a PMTCT programme. Overall 25% had disclosed their seropositivity to their sexual partners. Those with HIV positive partners or who perceived their partner willing to test were more willing to disclose their serostatus as well as those who were living with their partners for a year or more.<sup>18</sup>

In 1999 the MOH-GOK developed a Strategic Plan to reduce the national prevalence of HIV/AIDS infection by 10% by 2004 and increase the level of care and support activities for those at risk, those infected and for those affected. The achievements of this plan include:

1. Reduction in HIV prevalence from 10% to 7%. This is most probably due to the fact that HIV/AIDS related deaths have decreased.
2. Increased in-service training of health workers in VCT, DCT, ART, PMTCT and HBC.
3. Better surveillance and elimination of missed opportunities for HIV detection and management.

Various studies have been conducted that show the increased need for PITC among gynaecology patients. A case control study was conducted in Cote d' Voire to assess the impact of HIV infection among patients with a diagnosis of pelvic inflammatory disease (PID). A total of 170 women were recruited where 57 of them were seropositive and 113 were seronegative. It was found that 72% of those who were seropositive were more likely than those seronegative (58%) women to have reported having fever and vaginal discharge.

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A study published in The American Journal in 1990 assessed the prevalence of HIV infection among 110 women with PID. It also found that the severity of PID was more among those infected with HIV. Women who had more severe PID, represented by abscesses, were twice as likely to be HIV-positive.<sup>20</sup>

Another study carried out at KNH in 1993 looked at HIV infection among patients with a diagnosis of acute PID. It was found that 20.9% of women with acute pelvic infection were seropositive. Most of the women with pelvic inflammatory disease (PID) were young, sexually active, and involved with several partners. It also revealed that one's marital status did not appear to offer any protection against HIV infection. This may correlate with data from KDHS 2008 that revealed that rate of HIV infection was higher among married couples. It was found that the majority of these women had started coitus at an early age and had not used any protective measure against STDs or HIV infection.<sup>21</sup>

A need was noted to revise the then operative programs with a view to making them more effective in preventing spread of HIV infection. Hence the introduction of PITC in clinical

settings among acute gynaecology patients. Patients are counselled on risk reducing behaviour, use of condoms and access to family planning. Those who are found to be HIV infected are encouraged to disclose their status to their partners. Where possible couple counselling and testing is preferred.

The Health Sector HIV/AIDS Strategic Plan 2005-2010 has therefore been developed around 3 priority areas:

1.Prevention of new infection:-condom promotion and distribution ,management of STIs, behaviour change communication, PMTCT, blood safety, infection control through PEP and harm reduction for I/V drug users.

2.Improve Quality of life :Diagnostic Counselling and Testing (DCT) after those at risk are identified, management of opportunistic infections, ART, Home Based Care (HBC), psychological and nutritional support.

3.Mitigation of socio-economic impact and improving the productivity of those infected.

The Policy Project under UNAIDS estimates that the annual need for testing is 12-14% of the general adult population in developing countries now at the centre of the global HIV pandemic, yet less than 0.2% of adults aged 15-49 were tested by 2003. But challenges remain. Firstly, health workers are under increased pressure to provide quality health care and need support to provide clients with the ability, resources, and motivation to inform, support, refer, and treat those who are diagnosed with HIV. Secondly, a one-size-fits-all approach is unlikely to work with all patients and attentiveness to the client's personality and social history in the context of counselling and testing is necessary to identify best practices to link the patient with the necessary support.<sup>22</sup>

### **“THERE SHOULD BE NO MISSED OPPORTUNITY FOR HIV TESTING”**

In the past decade HIV/AIDS has reduced the life expectancy in Kenyans by 20yrs. The introduction of ART has been shown to prolong the survival of those living with HIV. ART is the most cost effective intervention against HIV/AIDS where putting more people on ART has reduced HIV prevalence, reduced incidence of orphaned children and contributed to

better economic performance. The National ART Strategic Plan's (2004-2008) goal was to progressively deliver ART to 50% of those eligible by 2005 and 75% by 2008. By 2003, only 2000 people living with HIV were on ART, 10,000 by 2004 and 43,000 by 2005. Some 203,400 Kenyans living with HIV/AIDS are in need of ART but by January 2006 only 65,000 were on ART. Its lifelong treatment and its success depends on treatment adherence by the patient whose failure of adherence will trigger resistance. The Zingatia Maisha Promotion on ART Support and Adherence is a project running from October 2005 to 2009. It is a project that rallies for those living with HIV/AIDSs across 38 sites country-wide to be more consciously involved with treatment, adherence and support.

## **RESEARCH QUESTION:**

What is the uptake of Provider Initiated Testing and Counselling (PITC) of HIV/AIDS among Acute Gynaecology patients at Kenyatta National Hospital?

## **RATIONALE:**

PITC and early knowledge of HIV infection are now recognized as critical components in controlling the spread of HIV infection. It is now known that individuals who are tested and counselled for HIV infection tend to reduce behaviour that promotes the spread of HIV infection. It is now recognised that PITC should be recommended to all patients as many seeking medical services for chronic conditions are more likely to be HIV infected. There is no need for personal motivation as with VCT for PITC where the patient is seen and tested within clinical setting

Majority of acute gynaecology patients seen have conditions that correlate with sexually transmitted infections, for example pelvic abscess, cervical cancer, incomplete and induced abortions among others. They have an increased risk of acquiring HIV infection due to high risk sexual behaviour and so the need for health workers to initiate testing and counselling for HIV infection when they come in contact with these women. And from studies done women have been found to be at a higher risk of HIV infection than men.

PITC involves identifying those at risk of HIV infection, offering PITC for the early detection of HIV infection, early disclosure of HIV status to partner, improve the quality of life and survival of both partners with the implementation of ARV therapy as well as reduce mother to child transmission. Those who test negative for HIV infection undergo post test counselling on risk reducing behaviour, behaviour change communication and thus reduce the spread of HIV/AIDS infection. For many who come unaccompanied by their spouses to hospital, PITC will offer them the opportunity to undergo HIV testing and counselling without partner/ spousal influence.

## **OBJECTIVES OF THE STUDY:**

### **Broad Objective:**

To determine the uptake of Provider Initiated Counselling and Testing (PICT) of HIV among acute gynaecology patients at the Kenyatta National Hospital.

### **Specific Objectives:**

1. To determine the acceptability to undergo HIV testing and counselling.
2. To determine ones understanding of risk of HIV infection with sexual behaviour.
3. To determine the willingness to disclose ones status.
4. To determine socio-demographic profile, reproductive health attributes and relate them to willingness to take HIV test and willingness to disclose HIV status.
5. To determine HIV prevalence among Gynaecology patients at the KNH.

## **STUDY METHOD AND MATERIALS:**

### **Study Design:**

A Cross – Sectional Study among Acute Gynaecology patients seen at the KNH.

### **Study Area:**

The study was carried out at Kenyatta National Hospital, Accident and Emergency Department and the Acute Gynaecology Ward 1D. This is the National referral hospital. It is situated in Nairobi, 4 kilometres, west of the Central Business District. It is also the main teaching hospital for the College of Health Sciences, University of Nairobi. The hospital caters for patients from Nairobi and its environs as well as referrals from other hospitals in the country as well as East and Central Africa.

Ward 1D, the Acute Gynaecology Ward has a bed capacity of about 40 beds but usually has a bed occupancy of about 60-80 patients with an average admission of 10-15 patients per day. It caters for all acute gynaecological cases that are admitted through the Accident and Emergency Department (Gynaecology outpatient). Cases admitted include those with

ectopic pregnancies, abortions, acute PID, pelvic abscess, cervical cancer among others. The gynaecology outpatient is located in the Accident and Emergency Unit of the hospital where an average of 100 patients are seen each day.

**Study Population:**

The study population comprised of Acute gynaecology patients seen at the Kenyatta National Hospital in Ward 1D and those seen at Casualty.

**Inclusion Criteria:**

1.Those who consented to participate in this study.

**Exclusion Criteria:**

1.Those below the age of 18 year

3.Those who already knew their HIV status.

### **Sample Size:**

A minimum sample size of 206 participants was sufficient to describe the uptake of PICT at the KNH with 95% confidence ( $\pm 5\%$ ). This sample size was arrived at by taking the VCT uptake of 15.7% taken from the KDHS 2003 report.<sup>3</sup> The sample size was calculated using the formula published by Daniel WW (1999).<sup>24</sup>

Sample size calculation:

$$N = \frac{Z^2 p (1 - p)}{D^2}$$

N = Sample size

Z = Z statistic for a level of confidence which was put at 95% which gives a value of 1.96.

P = expected proportion of the uptake of PICT services was estimated at 15.7%.

d = Precision with a 95% confidence interval which gives a margin of error of  $\pm 0.05$ .

$$N = \frac{1.96^2 \times 0.16 (1-0.16)}{0.05^2} = 206$$

**Sampling Method:**

Recruitment of study subjects with acute gynaecological conditions was carried out sequentially as they were admitted to Ward 1D or seen at Casualty.

**Data Collection Instrument:**

Data collection was carried out using an interviewer administered questionnaire to the 206 study participants seen at Casualty as well as those who were admitted to Ward 1D. The questionnaire had open-ended as well as closed-ended questions. The test results were also included in the questionnaire.

**Variables to be measured:**

The bio-data variables measured were age, marital status, religion, level of education, occupation and husbands occupation. The gynaecological factors considered were parity, condition for which patient had been admitted, previous admissions to a gynaecology ward, previous history of STDs, treatment and management and treatment of partner, age of coitarche, number of sexual partners, use of contraception and condom use, HIV testing in the past testing, HIV syndromic staging and intention of disclosure of HIV status after testing and counselling of the participants were indicated.

**Piloting of the questionnaire:**

The questionnaire was piloted by administering it to 20 gynecology patients, approximately 10% of the sample size. Piloting of the questionnaire was done by the principal investigator. 10 participants were approached at the Accident and Emergency department and the other 10 from the acute gynaecological ward, Ward 1D. Piloting of the questionnaire helped in identifying any flaws in the design of the questionnaire and questions that needed clarification.

### **Data Collection Procedure:**

Data collection was carried out between July 2010 and September 2010 after approval from the Ethics and Research Committee/ University of Nairobi in May 2010. Data was collected based on the availability of the principal investigator during the day upto 5pm as HIV testing kits were not availed. The principal investigator informed the Matron in charge of Ward 1D as well as the Casualty Team Leader of the study and explained to them how the study would be conducted. In Ward 1D the investigator checked with the records clerk at the Acute Gynaecology Wd every morning to identify patients admitted the previous day for recruitment for the study. The study participants were recruited depending on their condition while receiving treatment in the ward. Those who had undergone surgery were recruited once they were ambulant and able to consent to participate in the study. Those who had undergone Manual Vacuum Aspiration (MVA) with a diagnosis of incomplete abortion, were admitted and having recovered were recruited to participate in this study. Each participant to be recruited was taken to a private room within the ward and explained about the study. At the A &E department, all patients seen were first given routine medical care for the condition that brought her to hospital. Afterwards they were referred to another room where the principal investigator conducted the recruiting of study participants. The study participant was issued with a patient information sheet which had two parts. The first part explained to the patient what the study was about and the second part was the informed consent form for the participant to sign if she agreed to participate in the study. Those who could not read were explained for verbally about the study and given the opportunity to decide whether they'd participate in the study or not. For those who gave consent to participate, an interview took place with the principal investigator as well filling of the questionnaire. After which the study participant was referred for HIV testing and counselling which was conducted by an assistant form KNH – VCT team. The following information was provided to the participant:

- The reasons why HIV counselling and testing are recommended.
- The test will be treated confidentially.
- The patient has the right to decline the test and the fact that declining testing will not affect her access to medical services at KNH.

- In the event of a HIV positive test result, participant will be encouraged to disclose status to spouse/ partner.
- Study participant will have the opportunity to ask the investigator questions.
- Study participant will receive explanation of HIV testing and interpretation of results from the research assistant carrying out the HIV test.
- Study participant will receive HIV result immediately and interpret her result and receive post test counselling.

Testing was done using the Determine and Bioline tests along with the participant. HIV testing was done with both test kits parallel to each other. The study participant was explained the interpretation of test results, for example that the appearance of two lines on both kits meant the result was positive and if one line appeared, the result was negative. The study participant was also told that if test results from both test kits were inconclusive, another test (ELIZA) would confirm. Indeterminate results would have been confirmed using ELIZA .There were none. The results were disclosed to the patient. The patients were advised to disclose their status to their partner. Those who were found to be HIV positive were referred to relevant linkages like CCC for ART or follow up. Those who were pregnant were referred to the Antenatal Clinic for PMTCT.

Those who declined while admitted in Ward 1D continued to receive routine medical care for their conditions but were urged to think about taking a HIV test together with their spouses/partners.

For those who came to hospital with their spouses/partners were encouraged to undergo testing and counselling for HIV together. For those who underwent testing and counselling without spouses/ partners were asked if they had intention to disclose their known status to their partners.

### **Quality Control of Data:**

The data collection and cleaning was conducted by the principal investigator. Pretesting of the questionnaire was done prior to conducting the study. The two standard test kits used were Determine and Bioline to perform the HIV test. For patients who had been counselled and tested at casualty and a decision was made to admit them, a coloured sticker was applied to the patients file to avoid retesting in the ward.

### **Data Analysis**

The data was entered into a software programme for Social Science Research – Version No. 17. Descriptive statistics were used to summarise data collected.

Data analysis begun with the descriptive summaries of the demographic characteristics of the participants and displayed on categorical tables. The chi – square test was used to show associations between the outcome of testing and counselling versus the exposures for example education background, marital status, stigma as well as previous testing. Bivariate analyses and multivariate logistic regression were performed to produce odds ratios that were used to determine how the exposure variable may predict the outcome. Student t test was applied for normally distributed data and non Mann Whitney test was applied for skewed distributions.

Categorical data on sexual history such as frequency of condom use, STIs will presented on bar graphs and/or pie charts.

“p” value of <0.05 was considered statistically significant.

### **Study Limitations:**

- Lack of attendance of male companions and therefore we were not able to determine whether patient would disclose HIV status to sexual partner. Patients were encouraged in future to attend counselling and testing with spouse/sexual partner.
- A one-size-fits-all approach to counselling was not applicable as different clients had different personalities. Filling of the questionnaire, counselling and testing was done by the principal investigator for standardization of counselling as much as possible.
- Interruption during counselling and testing session. The Team Leaders in both Casualty and ward 1D were informed on the locations (private rooms) where counselling and testing sessions were conducted.
- Clients were not be followed up after being tested to. Clients were referred to appropriate linkages after they received their test results: CCC for ART, Antenatal Clinic (PMTCT), Couples Counselling Centre, Family Planning clinic.

### **ETHICAL CONSIDERATIONS:**

This research was approved by the UON /Department of Obstetrics and Gynaecology - Ethics and Research Committee - KNH. Counselling and testing of study participants was carried out under the 'Three Cs' that include informed consent, be confidential and pre and post – test counselling. Study participants were issued with a patient explanation form/informed consent form which informed the participant on the purpose of the study and its benefits then an informed consent was obtained before recruitment. Standard care was given to all patients whether they agreed or declined to participate in the study. The counselling and testing session were conducted in a private room in ward 1D as well as in casualty to ensure confidentiality and ensure there was no interruption during the session. The information obtained was treated with confidentiality by the investigator and the filled questionnaires were kept by the principle investigator. The patients name was not used in the questionnaire. The HIV test results were disclosed to the patient in private. HIV test results

were not disclosed to the partner/spouse if patient did not wish to. For those who were not tested with their partners, they were asked of their intention to disclose their HIV status to their partners. For those who were accompanied by their partners, they were encouraged to be tested together, and those tested together had their test results disclosed together.

All patients counselled and tested in the ward and at Accident and Emergency received post test counselling regardless of test results. They were encouraged to disclose HIV status to their partners/spouses and the benefits of doing so. Those who were found to be HIV infected after testing were managed according to standard protocols in the management of HIV/AIDS infection and referred to appropriate linkages. Those admitted in the ward 1D had their CD4 count levels determined and counselled on further follow up as well as adherence counselling for those who needed to start ART. Those discharged from the ward were referred to the Comprehensive Care Centre for follow up. Those in casualty were given a consultation referral to the Comprehensive Care Clinic at KNH for follow up. All patients were also advised on and referred to the gynaecology outpatient clinic for Pap smear screening. Those who opted to disclose their test results to their partners/spouses were referred to the KNH Couples Counselling Centre. Those who tested positive received counselling on Family Planning as well as PMTCT services if found to be pregnant. Those with gynaecological cancers were referred to the Oncology clinic or Radiotherapy Unit for further treatment. Adolescent girls were referred to the Adolescent Clinic within KNH where they undergo further counselling on risk reducing behaviour.

## **RESULTS:**

### **DATA ANALYSIS TABLES**

**Table 1: Patient socio - demographic characteristics (n=206)**

		No. of participants (n,%)
<b>Age categories</b>		
	<b>&lt;20 years</b>	13 (6%)
	<b>21-30 years</b>	112 (54%)
	<b>31-40 years</b>	54(26%)
	<b>41-50 years</b>	20 (10%)
	<b>&gt;50 years</b>	7 (3%)
<b>Marital status</b>		
	<b>Single</b>	48(23%)
	<b>Married</b>	134(65%)
	<b>Separated</b>	13(6%)
	<b>Divorced</b>	3(1%)
	<b>Widowed</b>	8 (4%)
<b>Education level</b>		
	<b>None</b>	7(3%)
	<b>Primary</b>	77(37%)
	<b>Secondary</b>	73(35%)
	<b>Tertiary</b>	49(24%)
<b>Religion</b>		
	<b>Catholic</b>	53 (26%)
	<b>Protestant</b>	144(72%)
	<b>Muslim</b>	5(2%)
	<b>Other</b>	4(2%)
<b>Occupation</b>		
	<b>Unemployed</b>	80(40%)
	<b>Formal employment</b>	38(18%)
	<b>Casual worker</b>	32(16%)
	<b>Self employed</b>	39(20%)
	<b>Student</b>	17(8%)
<b>Husbands occupation</b>		
	<b>Unemployed</b>	8(6%)
	<b>Formal employment</b>	56(42%)
	<b>Casual worker</b>	37(28%)
	<b>Self employed</b>	33(25%)

Table 1: This table illustrates the Demographic characteristics of the study participants. A total of 206 women were enrolled into the study. The mean age of the study participants was 30.3 (SD = 8.2). From this table 54% of participants were between the ages of 21-30 years, 65% were married, 37% had attained primary school education but 80% were found to be unemployed.

**FIGURE 1: Perception of risk of HIV infection in last sexual encounter.**

Figure 1 below illustrates that most of the participants recruited believed they were at risk of HIV infection in their last sexual encounter.

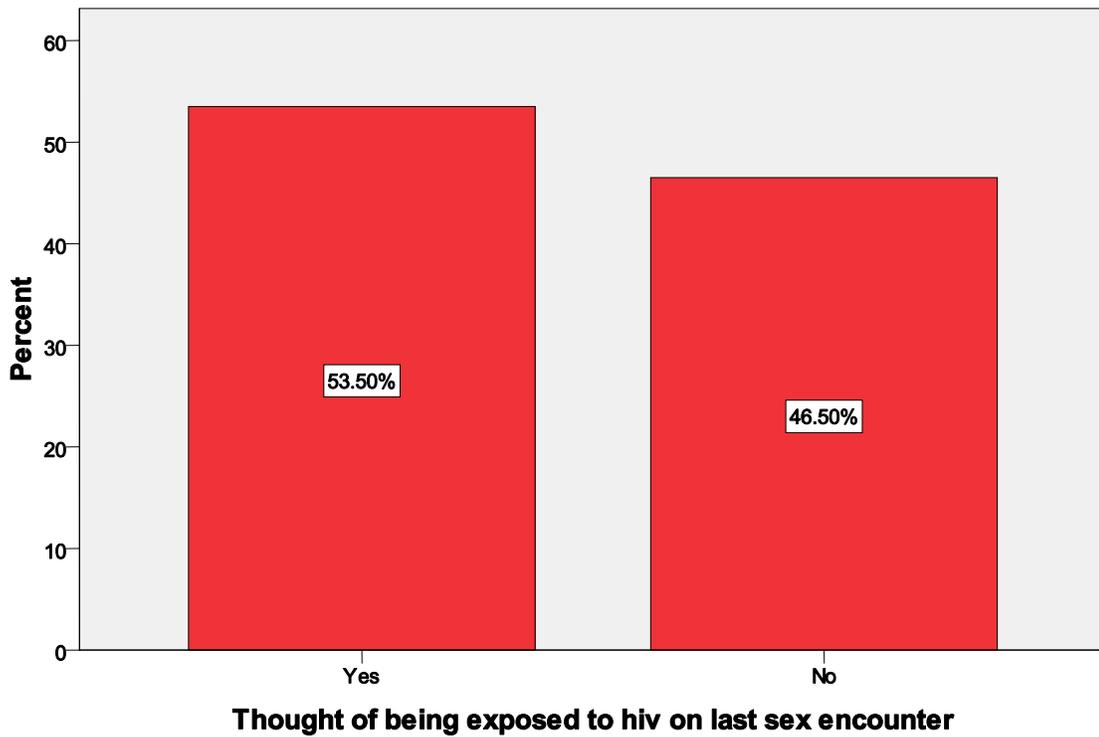


Figure 1 above illustrates that most of the participants recruited believed they were at risk of HIV infection in their last sexual encounter

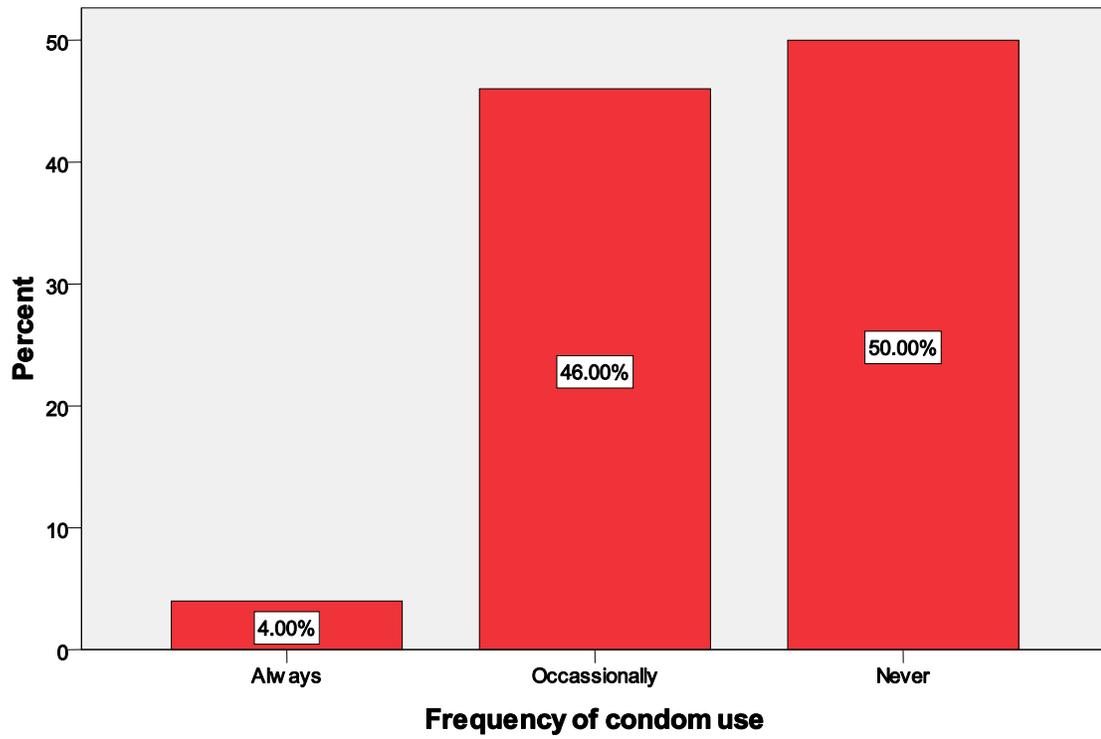
**TABLE 2:** This table illustrates the association between sexual habits and the willingness to be tested. Most of the women were willing to take a HIV test, this differences were however not statistically significant.

<b>Table 2: Association between willingness to take HIV test and sexual behaviour</b>			
	Willingness to take HIV test [n (%)]	Not willing to take HIV test [n (%)]	p- value‡
<b>Frequency of Condom use:</b>			0.916
<b>Always</b>	7 (75)	3(25)	
<b>Occasionally</b>	73 (78)	21(22)	
<b>Never</b>	77 (76)	25(24)	
<b>History of having STI</b>			0.375
<b>Yes</b>	24(81)	7(18)	
<b>No</b>	133(77)	42(24)	
<b>Was your partner treated for STI</b>			0.538
<b>Yes</b>	12(78)	4(22)	
<b>No</b>	12(85)	3(15)	
<b>Counselling on STI prevention</b>			0.447
<b>Yes</b>	9(89)	2(11)	
<b>No</b>	15(78)	5(22)	
<b>Partner's prior HIV testing:</b>			0.352
<b>Yes</b>	60(81)	14(19)	
<b>No</b>	94(76)	35(24)	
<b>Age of coitarche (Mean)</b>	19.2 (3,6)	19.7 (4,2)	0.390
<b>Sexual partners</b>	2 (1, 15)	2(1,6)	0.699

**Table 2:** This table illustrates the association between sexual habits and the willingness to be tested.

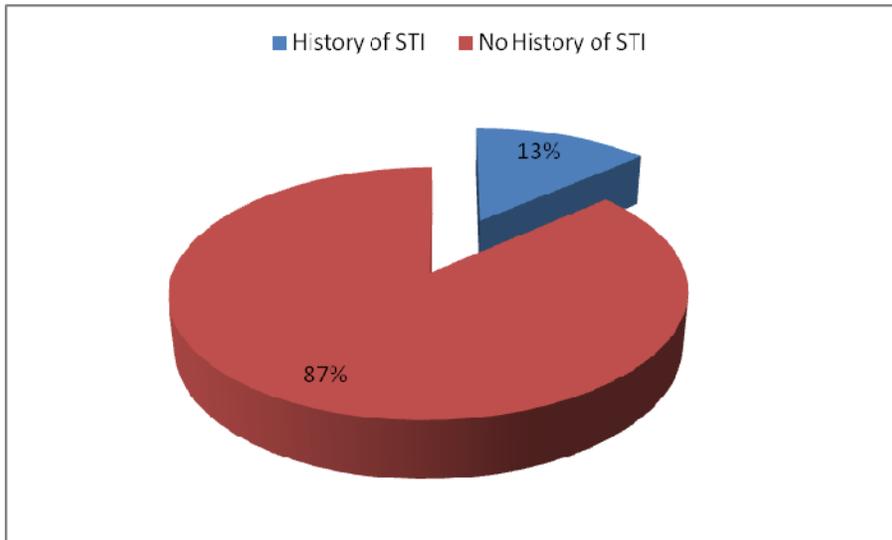
76% of the study participants were found willing to take a HIV test. From the table above, there was no association between those willing and those not willing to undergo HIV testing in relation to their sexual habits. It would be expected that there would be an association especially among those who did not use condoms and those who had history of STI to be less willing to undergo HIV testing for fear of their test results. The average age of coitarche was 19 and the average number of sexual partners among the study participants was 2.

**FIGURE 2: Frequency of condom use.**



This graph illustrates the frequency of condom use. As illustrated in figure 2, most of the women who were enrolled into the study never used condoms (50%).

**FIGURE 3: History of STI.**



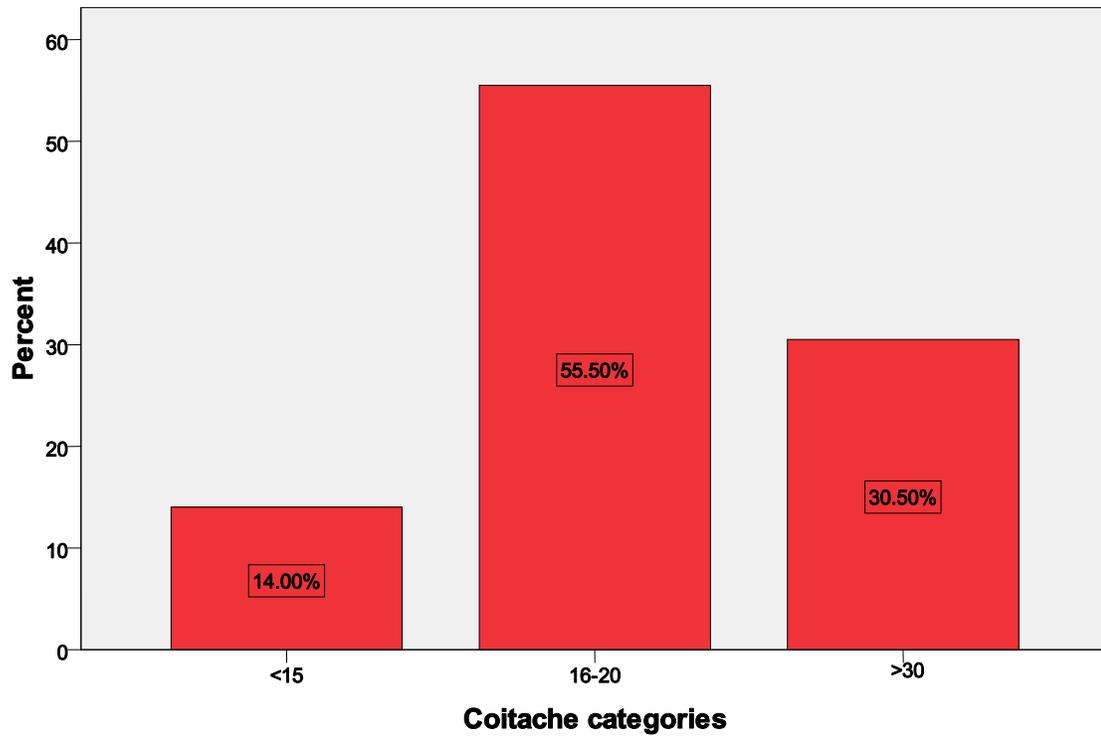
This pie chart illustrates that 87% of study participants had no history of ever having an STI, 13% had got an STI.

**TABLE 3.**

	Willing to take HIV test (n,%)	Not willing to take HIV test (n, %)	p value
<b>Prior HIV testing</b>	136(81)	31(19)	0.001
<b>No Prior HIV testing</b>	22(55)	17(45)	
<b>Age (mean SD)</b>	30.5(8.3)	28.5 (7.5)	0.108

This table illustrates that women who had a previous HIV test were more willing to take a HIV test ( $p=0.001$ ) compared to those who had not had a previous test. The table also illustrates that women willing to disclose their HIV status were slightly older than those not willing to disclose. This association was not statistically significant.

**FIGURE 4:** Age categories of sexual debut.



Majority of the women recruited into this study had their first sexual encounter between the age of 16 and 20 years (55.5%) as shown in figure 4.

**TABLE 4:**

<b>Table 4 : Association between willingness to disclose HIV status to the partners and sexual habits and parity.</b>			
	Willing to disclose HIV status [n (%)]	Not willing to disclose HIV status [n (%)]	p- value
<b>Age at Coiyarche</b>			0.210
<15 years	12(66)	6(34)	
16-20 years	59(82)	13(18)	
>20 years	37(86)	6(14)	
<b>Condom use:</b>			>0.999‡
Always	5(83)	1(17)	
Occasionally	47(81)	11(19)	
Never	56(81)	13(19)	
<b>History of having STI</b>			0.020
Yes	13(62)	8(38)	
No	95(85)	17(15)	
<b>Counseling on STI prevention</b>			0.40‡
Yes	6(75)	2(25)	
No	7(54)	8(46)	
<b>Partner HIV testing:</b>			0.01
Yes	52(91)	5(9)	
No	56(74)	20(26)	
<b>No. of Sexual Partners (median range)</b>	2 (1,5)	2 (1,5)	0.436
<b>Number of children</b>	1 (0, 8)	2 (0,5)	0.240

\_Participants who had a history of STI , those whose partners had prior testing for HIV were found to be more willing to disclose their HIV status to the their partners (p=0.02). With regard to parity and number of sexual partners there was no association with ones willingness to disclose HIV status.

**TABLE 5 :****Table 5 : Distribution of socio – demographic profile and relate them to willingness to disclose their HIV status with their partners**

<b>Socio- demographic profile</b>	<b>Total (n)</b>	<b>Willingness to disclose HIV status n(%)</b>	<b>Not willing to disclose HIV status n (%)</b>	<b>p – value</b>
<b>Marital status:</b>				<b>0.015</b>
<b>Single</b>		20(74)	7(26)	
<b>Married</b>		88(85)	16(15)	
<b>Separated</b>		0	2(100)	
<b>Divorced</b>				
<b>Widowed</b>				
<b>Educational level:</b>				<b>0.032</b>
<b>None</b>		3(100)	0	
<b>Primary</b>		34(68)	16(32)	
<b>Secondary</b>		43(88)	6(12)	
<b>Tertiary</b>		28(90)	3(10)	
<b>Occupation:</b>				<b>0.01</b>
<b>Unemployed</b>		45(82)	10(18)	
<b>Formal employment</b>		26(100)	0	
<b>Casual worker</b>		11(64)	6(36)	
<b>Self employed</b>		21(75)	7(25)	
<b>Student</b>		5(71)	2(29)	

**Table 5 :** Association between sociodemographic profiles and relate them to willingness to disclose HIV status to partner/ spouse. More married women were willing to disclose their HIV status to their partners compared to the single women ( $p=0.015$ ). Differences in educational level and occupation of the women were shown to be associated with willingness to disclose their HIV status to their partners,  $p = 0.035$  and  $0.011$ , respectively. These significant  $p$  values should however be interpreted with caution.

**Table 6: Prevalence of HIV.**

<b>HIV TEST RESULT</b>	<b>N=157</b>	<b>%</b>
<b>HIV test Positive</b>	11	7 %
<b>HIV test Negative</b>	146	93%

HIV prevalence among study participants was 7%.

**Table 7 :**

<b>Table 7 : PITC HIV test result and willingness to disclose their HIV test result to sexual partner/spouse</b>			
	Willing to disclose HIV status (n,%)	Not willing to disclose HIV status (n,%)	P value
<b>Positive</b>	4(36)	7(64)	0.001
<b>Negative</b>	108(81)	18(19)	
<b>Pearson Chi square test applied</b>			

This table illustrates that women who tested positive for HIV infection were the least willing to disclose to their partners about their status (p=0.001).

**TABLE 8:**

<b>Table 8: Distribution of socio – demographic profile and relate them to willingness to take HIV test.</b>				
Socio- demographic profile	Total (n)	Willingness to take HIV test [n(%)]	Not willing to take HIV test [n (%) ]	‡p – value
<b>Marital status:</b>				0.417
<b>Single</b>		32(69)	14(31)	
<b>Married</b>		104(78)	2(18)‡	
<b>Separated</b>		1(100)	0	
<b>Divorced</b>		8 (100)	0	
<b>Widowed</b>				
<b>Educational level:</b>				0.349
<b>None</b>		4(80)	1(20)	
<b>Primary</b>		63(82)	14(18)	
<b>Secondary</b>		55(77)	16(23)	
<b>Tertiary</b>		32(68)	15(32)	
<b>Occupation:</b>				0.106
<b>Unemployed</b>		61(76)	19(24)	
<b>Formal employment</b>		27(75)	9(25)	
<b>Casual worker</b>		27(90)	3(10)	
<b>Self employed</b>		31(80)	8(20)	
<b>Student</b>		8(53)	7(47)	

Distribution of sociodemographic profile and relate them to willingness to take HIV test. None of the demographic characteristics was found to be associated with the willingness to take a HIV test.

**FIGURE 5: Reasons for not ever having been tested for HIV.**

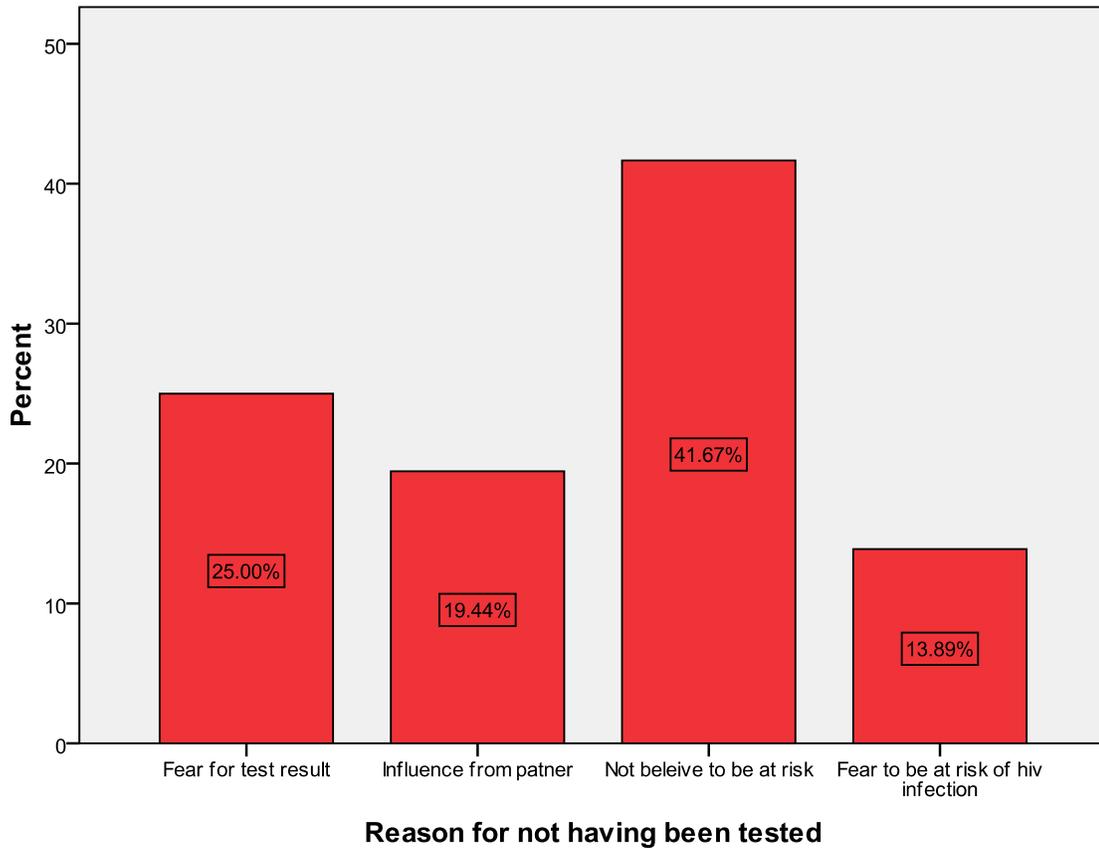


FIGURE 5: The graph above shows that majority of the study participants who had never been tested for HIV infection, 41.67%, did not believe to be at risk of contracting HIV infection.



**FIGURE 6: Reasons for not willing to be tested for HIV.**

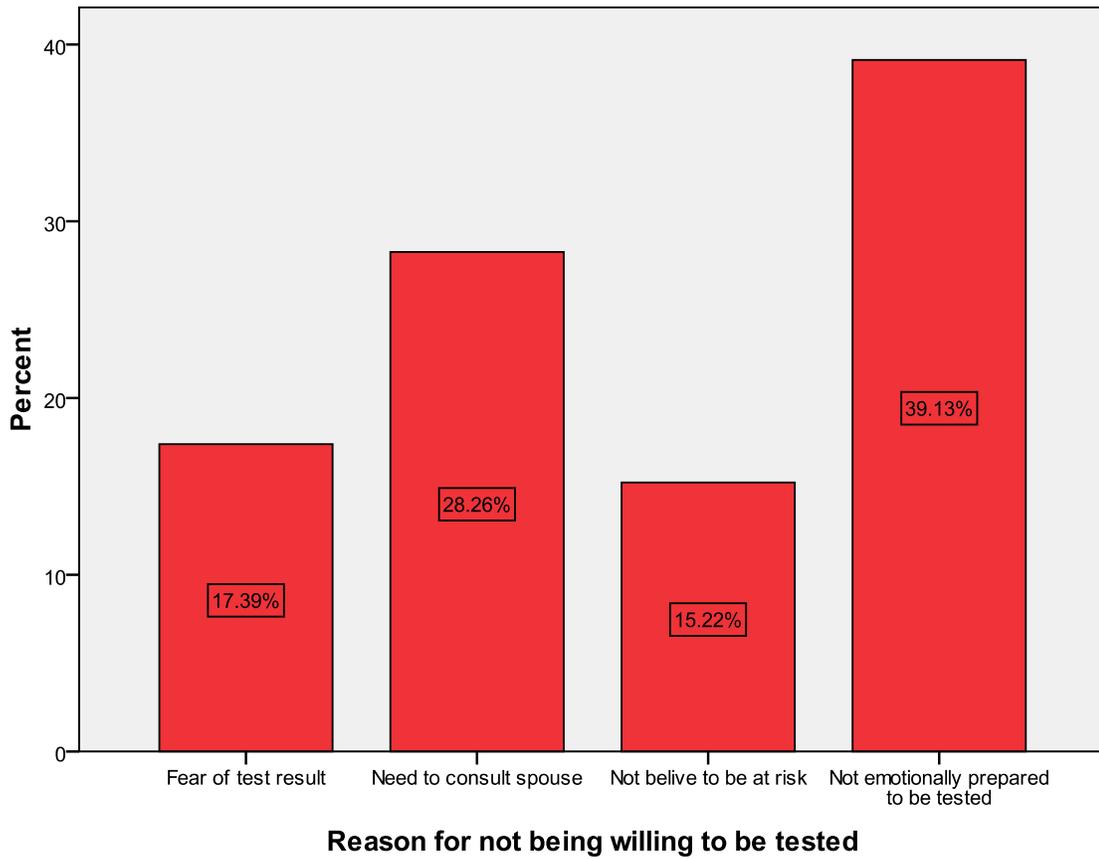


FIGURE 6: Among those not willing to be tested for HIV ,39.13% were not emotionally prepared despite being counselled and offered the opportunity to be tested. 28.26% needed to consult their spouses illustrating a need for spousal attendance of hospital visits with their partners and increase HIV testing coverage and increase couple awareness of risk of HIV infection.

**FIGURE 7: Reasons for not disclosing HIV status to partner/ spouse.**

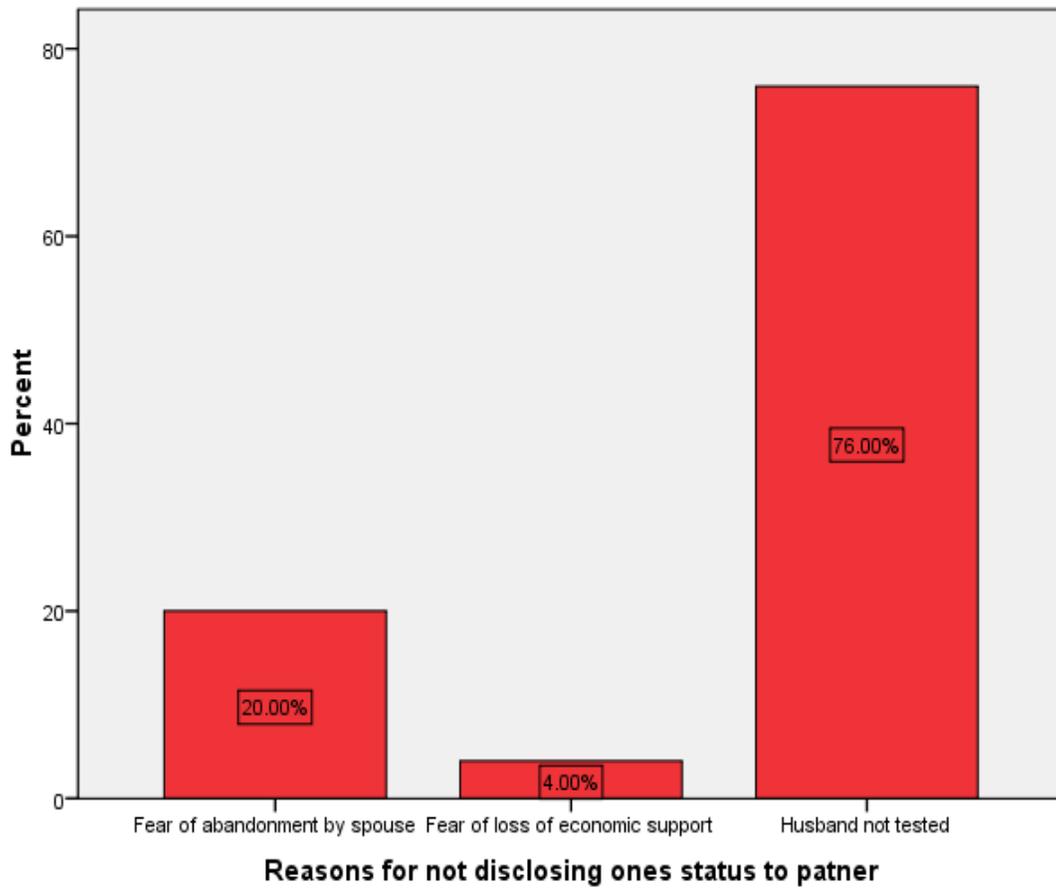
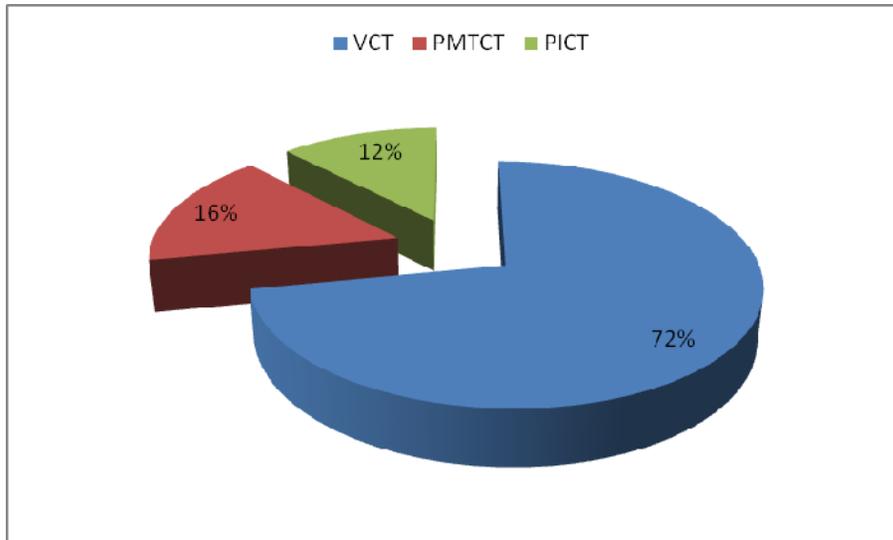


FIGURE 7: Of those not willing to disclose their HIV test results to their partners, 76% said their partners had not been tested and were not willing to disclose their HIV test result to them. The rest expressed fear of abandonment or loss of economic support.

**FIGURE 8: Location for prior HIV test.**



The pie chart above illustrates that majority (72%) of study participants who had been tested prior for HIV were tested at VCT centres.

## **DISCUSSION:**

The study population in this study was made up of 206 patients attending the Accident and Emergency and Ward 1D who were acute gynaecology patients at the Kenyatta Hospital. In this study we looked at the Uptake of Provider Initiated Testing and Counselling of HIV infection among acute gynaecology patients.

The uptake of PITC was 76%. From the KAIS 2007 survey there was an increase in HIV testing rates in Kenya and more so amongst women (45.5%) compared to 14% from the KDHS report in 2003. The HIV prevalence among study participants in this study was 7%. Which is comparable with the HIV prevalence obtained in the Kenya AIDS Indicator Survey 2007 where the HIV prevalence was 7.4% with a higher prevalence of HIV among women than men of 8.4%. A study conducted in Addis Ababa revealed an acceptance rate of 67% while one done in Uganda revealed an acceptance rate of 80% with a HIV prevalence of 25%.<sup>13, 14</sup>

A study conducted in an urban STD clinic in South Africa revealed an uptake of PITC of 43.5% with a seroprevalence of 1.2% among those who had never been tested for HIV. Total seroprevalence among clinic attendants was 56%. Of those who were not willing to undergo PITC, 61.8% said they had been tested severally, 32% were not prepared and 0.9% needed to consult their partners.<sup>25</sup>

81% of study participants had ever taken a HIV test, while 19% had never taken a HIV test. Of these 41% believed they were not at risk of contracting HIV infection either because they trusted in their partner/spouse's fidelity or because they had never fallen ill, 25% were afraid of their test results, 19% due to influence from their partners/spouses and 13.8% feared to be already HIV infected. The KDHS 2009 report revealed that 53% had never taken a HIV test. From the KAIS 2007 it was reported that of those who were tested and turned out to be HIV positive, 56% had never been tested for HIV, 26% believed they were not at risk because of their last HIV test being negative.<sup>2</sup> Majority of study participants who had prior HIV testing done had undergone HIV testing at a VCT centre (76%), 16% were tested during their pregnancies and 8% had undergone DCT in a health facility. Those who had prior HIV testing done were more willing to undergo PITC.

Looking at the study participants perception of HIV infection in correlation to their sexual behaviour, 53% did not believe they were at risk of HIV infection from their last sexual encounter compared to 47% who believed they were at risk either because they thought their partners/spouses were unfaithful, had multiple sexual partners or they had not used a condom in their last sexual encounter. The mean age of sexual debut was 19 years and the mean number of sexual partners was 2. Of the study participants, 50% had never used condoms in their sexual encounters, this is close in association with 53% who did not believe they were not at risk of HIV infection in their last sexual encounter. The KAIS 2007 report indicated that consistent condom use was still low at 5.3% among women and 13.5% among men. KDHS 2009 report indicated that 75% of women interviewed knew that risk of HIV infection could be reduced with the use of condoms but 32% had used condoms in their last sexual encounter. More emphasis needs to be laid on counselling women on condom use.

The mean number of sexual partners in this study was 2 which is similar to the KDHS 2009 report which indicated that the average number of sexual partners among the women interviewed was 2.1. The report also showed that there was a drop in multiple sexual partners among women by 2% from the KDHS 2003 report. This could be attributed to the increased uptake of HIV counselling and testing among women especially when seen in Antenatal Clinics.

13% of study participants reported to have been diagnosed with STI, of these 50% had received treatment together with their partners/spouses and 35% had received counselling on ways of further prevention of STIs, HIV as well as pregnancy. This is still a far cry from what is expected in STI clinics where patients should be counselled on STI/ HIV prevention.

There was no association between age of coitarche, number of sexual partners, frequency of condom use, history of STIs, partner testing among those who were willing to undergo PITC and those who were not willing. Among those not willing to take HIV test (24%) , 40% were not emotionally prepared to be tested, 15% did not believe to be at risk of HIV infection from previous test result which was negative, 28% wanted to consult their spouses and 17% feared the outcome of their test results. Those who had undergone prior HIV testing with or without their partners/spouses (35%) were more willing to undergo PICT. The KDHS 2009 report indicated that those in extremes of age were less willing to undergo

HIV testing. The study conducted in Addis Ababa revealed that older women, those between 25 – 34 were more willing to disclose their HIV status compared to younger women who were between 15 – 24 years of age.<sup>13</sup> The results also indicated that comprehensive knowledge of HIV infection was lower among the youngest and oldest in the survey. One of the challenges faced in this study was that majority of women seen did not come to hospital with their partners/spouses to facilitate testing and counselling for both. This is in view of the fact that many women will not go for HIV testing and counselling to VCT centres probably due to partner/spousal influence. One of the objectives of the study was to determine ones intention and willingness to disclose ones HIV status. One of the limitations of this study since most participants were unaccompanied was not being able to establish if the study participant would actually disclose their HIV status.

Among those who underwent PITC, 68% expressed their intention to disclose their HIV status to their partners/spouses. Those tested HIV positive were 7% and were less willing to disclose their status to their partners, reason being they wanted the test repeated in the presence of their partners/spouses. Those not willing to disclose were 32%, of these 76% wanted to be retested again with their partners/spouses as they did not know their partners HIV status, 4% feared losing economic support and 20% feared abandonment by their spouses/partners. A study in Eastern Uganda revealed that 69% of women attending an Antenatal Clinic disclosed their HIV status to their partners. Those married or living with partners for more than two years, condom use and knowledge of partners status were more willing to disclose their status.<sup>16</sup> Another study looked at positive and negative effects of disclosure. It revealed that there were multiple negative effects of disclosure like violence, depression, fear of loss of confidentiality and discrimination.<sup>17</sup> In this study there was no association between those willing and those not willing to disclose their HIV status with regard to sexual behaviour, age of sexual debut, frequency of condom use, number of sexual partners. But there was an association among those had STI and those who had undergone prior HIV testing with their partners. This can be obviously explained by the fact that it would be easier to disclose ones status if they had been tested to HIV test prior with their partners. Majority of those who came to hospital with their spouses were tested and counselled together. For those with history of STI, they were more willing to disclose their

status. The possible reason for this would be that they had received prior counselling on STI/HIV prevention.

Among the study participants, majority (54%) were between the ages of 21 to 30 years of age, majority (65%) were married, 37% and 35% had attained primary and secondary education respectively and majority (40%) of the study participants were unemployed. There was no association between those willing and those not willing to undergo PITC with regard to their age, marital status, education level and occupation. Which shows a difference between study participants in the study in Addis Ababa where older women were more willing to undergo PITC than younger women.<sup>13</sup> There was an association among those who were willing to disclose their HIV status and those not willing to disclose their HIV status in regard to the socio – demographic profiles of the study participants. Since 93% of study participants who underwent PICT were found to be HIV negative, this may explain the difference between the willingness to take HIV test and the willingness to disclose their HIV test results. Another finding that could explain the difference in association between willingness to accept HIV testing and willingness to disclose HIV test result would be that majority of participants had not had prior HIV testing along with their spouses and 76% of those who were not willing to disclose wanted to be retested with their partners.

## **Conclusion:**

PICT has given women an opportunity to be counselled and tested for HIV compared to VCT which requires one to have personal motivation to be counselled and tested for HIV and some women are influenced by their partners not to undergo HIV counselling and testing at VCT centres. From this study the uptake of PITC was 76% which is an improvement in the uptake of HIV testing from 14% from the KDHS 2003 report. Failure to implement PITC is a missed opportunity for patients to benefit from testing, counselling, prevention and referral to care and treatment for HIV infection. This high acceptance rate of PITC is promising in the wider application towards strengthened prevention and control of HIV/ AIDS. Majority of study participants, 81%, had had prior HIV testing, 76% having been tested in VCT centres.

The HIV prevalence from this study was 7% and PITC offered them opportunity to benefit to access early diagnosis and treatment. Those willing to disclose their HIV test result were 68% of those who underwent counselling and testing and 32% were not willing to disclose their HIV test results to their partners. PITC is a successful strategy in addressing concerns regarding timely access to diagnosis and treatment.

## **Recommendations:**

- There should be implementation of PITC at all levels of health care country wide and reduce the rate of missed opportunities for HIV testing, counselling, diagnosis, treatment and support.
- There should be implementation of PITC in Family Planning clinics and encouragement of partner attendance to reduce these missed chances to have couples tested together. Family Planning counselling should also be introduced in PITC as well as VCT to offer wholistic care for clients especially in prevention unwanted pregnancy.
- There should be an upscale in training health workers in PITC at all levels of health care to increase coverage of HIV testing, targeting
- Women attending FP and ANC should be encouraged to attend with their partners. There should be an upscale in community based forums to address the importance of male involvement in FP and ANC to increase uptake of HIV testing.

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## **APPENDICES:**

### **APPENDIX 1:**

#### **INFORMED CONSENT FORM FOR “UPTAKE OF PROVIDER INITIATED COUNSELLING AND TESTING AMONG ACUTE GYNAECOLOGY PATIENTS AT THE KENYATTA NATIONAL HOSPITAL”**

This Informed Consent Form has two parts:

1. Information Sheet (to share information about the research with you)
2. Certificate of Consent (for signatures if you agree to take part)

You will be given a copy of the full Informed Consent Form

#### **PART I: Information Sheet**

##### **Introduction**

My name is Dr. Tonia Kakuti. I am a doctor who is studying to specialize in the field of Obstetrics and Gynecology. I'm currently conducting research that is titled **“Uptake of provider initiated counselling and testing among acute gynaecology patients at the Kenyatta National Hospital.”** I'm conducting a study to understand how women who come to Kenyatta National Hospital accept counselling services.

I am going to give you information and invite you to be a participant of this research. There may be some words that you do not understand. Please ask me to stop as we go through the information and I will explain.

##### **Type of Research**

In this study I will be inviting women attending Casualty and those who are admitted to the ward. We want to find out how many women are willing to accept HIV testing. I will collect information from the women who accept to join this research by interviewing them and filling a questionnaire. All the women who will be invited into this study will be counselled and tested for HIV infection using the standard testing kit. Those whose results are not clear will have their sample tested using a more advanced test called ELISA so as to confirm them. All patients will be offered post-test counselling and encouraged to disclose their status to their spouses or sexual partners. In total 384 women will be invited into this research.

##### **Voluntary Participation /Right to Refuse or Withdraw**

It is your choice whether to participate or not. Whether you choose to participate or not, all the services you receive at this clinic will continue and nothing will change. If you choose not to participate in this research project, you will be offered the treatment that is routinely offered in this clinic/hospital for your condition. You have a right to refuse or withdraw your participation in this study at any point.

### **Procedures and Protocol**

You will be taken into a private room with the investigator within the ward or at Casualty for the counselling and testing session. I will ask you some questions and fill a questionnaire, then I will counsel you before testing you. I will prick your finger with a small blade to get the blood sample for testing. We will sit together waiting for the result and in that time you are free to ask me any questions regarding the study or your condition. The results will then be disclosed to you. You shall receive the exact same services whether or not you part of this research.

### **Side Effects and Risks**

There are no side effects expected in this process.

### **Benefits**

You will get to know your HIV status and this will help you plan for the future and if found to be seropositive you will receive post – test counseling and referred to HIV related services to receive the care, treatment and support you need.

You will not receive any direct benefits from participating in this study. Your participation will be very helpful in making government policy in HIV testing.

### **Confidentiality**

The information obtained will be treated with confidentiality and only available to the principal investigator and those within the ward should you be admitted. Your name will not be used. Any information about you will have a number on it instead of your name. It will not be shared with or given to anyone. We will not be sharing the identity of those participating in the research.

### **Sharing the Results**

The knowledge that we get from doing this research will be shared with the policy makers in the Ministry of Medical Services, Ministry of Public health Services and doctors through publication and conferences. Confidential information will not be shared

### **Who to Contact**

If you wish to ask questions later, you may contact any of the following: Dr. M.Kakuti, Phone No: 0723747012

**This proposal has been reviewed and approved by UON- Department of Obstetrics/Gynaecology - Kenyatta National Hospital Ethics Committee, which is a committee whose task it is to make sure that research participants are protected from harm.**

**PART II: Certificate of Consent**

I have read the above information, or it has been read to me. I have had the opportunity to ask questions about it and any questions that I have asked have been answered to my satisfaction. I consent voluntarily to participate as a participant in this research.

Print Name of Participant \_\_\_\_\_

Signature of Participant \_\_\_\_\_

Date \_\_\_\_\_

If Non -literate

I have witnessed the accurate reading of the consent form to the potential participant, and the individual has had the opportunity to ask questions. I confirm that the individual has given consent freely.

Print name of witness \_\_\_\_\_

Signature of witness \_\_\_\_\_

Date \_\_\_\_\_

Thumb print of participants.



**Statement by the researcher/person taking consent**

I have accurately read out the information sheet to the potential participant, and to the best of my ability made sure that the participant understands that an interview will be conducted to collect information. I confirm that the participant was given an opportunity to ask questions about the study, and all the questions asked by the participant have been answered to the best of my ability. I confirm that the individual has not been coerced into giving consent, and the consent has been given freely and voluntarily.

Name of Researcher: \_\_\_\_\_

Signature of Researcher /person taking the consent \_\_\_\_\_

Date \_\_\_\_\_

**APPENDIX 2:**

**QUESTIONNAIRE:**

**Date :**

**Serial no :**

**Patient diagnosis :**

1. Age \_\_ \_\_

2. Marital Status

a.Married

b.Single

c.Separated

d.Divorced

e.Widowed

Reason for husbands demise

3.Education level:

a.None

b.Primary:

c.Secondary:

d.Tertiary:

4.Religion:

a.Protestant

b.Catholic

c.Muslim

d.Others

5.Occupation:

a.Unemployed

b.Formal Employment

c.Casual Worker

d.Self Employed

6.Husbands Occupation

- a.Unemployed
- b.Formal Employment
- c.Casual Worker
- d.Self Employed

7.Reproductive History

- a. Parity?                      Last delivery?
- b. Are you on any method of FP at the moment?
- Yes:                              Which one?
- No:

8.Those with diagnosis of incomplete abortion:

- a. Was this an unwanted pregnancy?
- b. Was this an induced abortion?

9.Sexual History:

- a. Age of coitarche ?
- b. No. of sexual partners to date?
- c. Have you use condoms?
- Yes:
- No:
- d. Frequency of condom use:

- i. Always:
- ii. Occassionally:
- iii. Never:

10. History of STI

- a. Have you ever had a STI?
- b. Were you treated for the STI?
- c. Were you compliant with your treatment?
- d. Was your partner/s treated?
- e. Were you counselled on prevention of STIs and condom usage?
- f.Were you counselled on pregnancy prevention?

11.Do you think you have been exposed to HIV – infection in your last sexual encounter?

- a.YES:

Why?

b.NO:

Why?

12. Have you ever been tested for HIV infection prior to this interview?

Where? VCT: PMTCT: PICT:

Why?

NO:

Why?

i. Fear of test result

ii. Influence from partner

iii. Lack of awareness

iv. Not believe to be at risk

v. Fear to be at risk of HIV infection

13. Has your spouse/partner been tested for HIV?

14. Do you know your partner's HIV status?

15. Are you willing to be tested for HIV - infection?

YES:

NO:

If NO why?

a. Fear of test result

b. Need to consult spouse/partner

c. Fear of stigma/discrimination from others

d. Not believe to be at risk

e. Not emotionally prepared to be tested

16. Provider Initiated Counselling and Testing:

a. HIV test: Positive Negative

b. If HIV test is positive, syndromic staging:

17. Whichever the result of your HIV test, are you willing to disclose your status to your spouse/partner?

a. YES:

Why?

b. NO:

i. Fear of abandonment by spouse

ii. Violence from spouse/partner

iii. Fear of discrimination

iv. Fear of loss of economic support

v. Other.....