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CONTRACEPTIVE USE AMONG HIV INFECTED WOMEN ATTENDING COMPREHENSIVE CARE CENTRE

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ABSTRACT

Objective: **To determine contraceptive use among HIV infected women attending Comprehensive Care Centre at Kenyatta National Hospital.**

Design: **Hospital based cross-sectional descriptive study.**

Setting: **Comprehensive Care Centre (CCC), Kenyatta National Hospital.**

Subjects: **The study group was non-pregnant HIV positive women on follow up at the CCC. A total of 94 HIV infected women were interviewed between May 2006 and August 2006 through a pre-tested interviewer administered questionnaire. Consecutive women willing to participate in the study were interviewed.**

Main outcome measures: **Current contraceptive use, contraceptive methods, source of contraception, reproductive intention and unmet need of family planning.**

Results: **The mean age of the respondents was 34 years, 47.9% were married, all had formal education and 74.6% were employed. Eighty six percent of the respondents did not have reproduction intentions in the next two years; however, only 44.2% of the respondents were using contraception. Condoms were the most popular (81.5%) contraceptive method. Female condom was used by 10.5% of the respondents. Norplant was the only long term contraceptive method and was used by only 2.6%. Dual method of contraception was practiced by 13.5% of the respondents. Majority of the respondents obtained contraceptives from private sector (42.9%) with less than 10% getting them from CCC. The unmet need for family planning among the study group was 30%. Marital status and regular sexual partner were significantly associated with contraceptive use.**

Conclusion: **Although majority of respondents did not have reproduction intentions in the next two years, use of contraception was low with only 44% being on a method. Use of long term contraceptive methods was low among respondents. Majority of the respondents obtained contraceptives away from CCC.The unmet need for family planning was high at 30%.**

INTRODUCTION

HIV/AIDS is a serious public health problem in Kenya as well as other sub-Saharan countries. According to the Ministry of Health, Kenya, about two million Kenyans are infected with HIV virus (1). Data from the 2003 Kenya Demographic Health Survey (KDHS), one of the first sub-Saharan population based HIV prevalence surveys suggests a national HIV prevalence rate of 7% ranging from 10% in urban areas to 6% in rural areas (2).

Globally, United Nations Programme on HIV/AIDS [UNAIDS] estimates that 530,000 children were infected in 2006, almost all through mother to child transmission. Of these, 90% live in sub-Saharan Africa (3). The Ministry of health, Kenya estimates that 50,000 – 60,000 infants are infected with HIV annually due to Mother to Child Transmission (MTCT) (4).

Various interventions have been adapted for Prevention of Mother to Child transmission (PMTCT). These interventions include use of antiretroviral drugs, modified vaginal delivery procedures, elective Caesarean section and use of replacement feeding. MTCT has fallen to as low as 2–5% of births among HIV infected mothers in developed countries due to these interventions. However in Africa where these interventions have not generally been available transmission is 25–40% (4).

The most effective way to prevent vertical transmission of HIV from the mother to the newborn is to ensure that the mother does not become infected in the first place. For those infected, prevention of unwanted pregnancy is a core PMTCT strategy (5). Family planning has been adopted by WHO as an important strategy for preventing childhood HIV infection and has recently been added to the World Health Organisation (WHO) "Four prong approach" to the prevention of MTCT (5).

A recent study in 14 countries with high HIV prevalence demonstrated that adding voluntary family planning to services for prevention of mother to child transmission of HIV can prevent 155,000 unintended pregnancies among HIV infected women and avert the birth of 32,000 children born infected with HIV (6). A cost effectiveness analysis by Family Health International demonstrated that any level of expenditure for provision of family planning as part of PMTCT would be more effective than providing nevirapine alone in reducing mother to child transmission (7).

Most methods of contraception can be appropriate choices for HIV positive women. They can use hormonal methods, barrier methods, surgical methods, intrauterine device, emergency contraceptives, lactation amenorrhea method for those exclusively breastfeeding and natural methods (1). Unfortunately no currently available method is highly effective in protecting simultaneously against pregnancy and infection. To minimise both risks one may have to use two methods of which one is a barrier method (7). Dual method use is recommended by the Ministry of Health, Kenya for HIV infected women (1). However, its use in the general population is low. In a study on dual method use among family planning clients in Kenya, Kuyoh *et al* found low level of use of dual methods. About 11% of women reported some dual method use during a month prior to interview while only 4% used dual method consistently during coitus (8).

Like male condoms, female condoms are effective in preventing both unintended pregnancy and sexually transmitted infections including HIV. Though the female condom is expensive compared to male condom, it has the advantage of being a female controlled method thus creates confidence and autonomy. Its acceptability rate is high. A study conducted in Kenya among family planning clients found acceptability rate of 70% (9). Maina (10) at Kenyatta National Hospital (KNH) found acceptability rate of 68%. However only 3% of the family planning clients were actually using the female condom (10). Other barrier methods such as diaphragm, cap are not recommended for HIV infected individuals due to the large areas of vaginal mucosa that remains exposed (11). Regarding nonoxynol-9, high dose use of the spermicide can cause vaginal and cervical irritation or abrasions, which may increase risk of HIV transmission (5).

Contraception use among HIV positive women and how it differs from general women population locally is not known. According to KDHS 2003, contraceptive prevalence rate (CPR) in Kenya is 39% with 32% being on modern methods. Injectables, pills and periodic abstinence are the most commonly used contraceptive methods used by 14, 8 and 6% of married women respectively. Female sterilisation is used by 4%, intrauterine device (IUD) by 2%, implants 2% and male condoms by 1%. However among sexually active unmarried women, male condoms are the second most commonly used method after injectables comprising 15.4% (2).

MATERIALS AND METHODS

This was a hospital based cross-sectional descriptive study conducted among HIV infected women attending Comprehensive Care Centre (CCC) at Kenyatta National Hospital, Nairobi. The sample size for the study was 94 women. Consecutive sampling was used till the desired sample size was attained.

A pretested structured questionnaire was used to collect data. The questionnaire covered social demographic characteristics, contraception use and the unmet needs for family planning. Contraception use was assessed by asking the respondents the various methods they were using at the time of the study. Respondents who are at risk of pregnancy and they did not want any more children or would want to wait two or more years before having another child

but were not using contraception were considered to have unmet need of family planning.

The principal investigator conducted the interviews with the assistance of a nurse trained on the administration of the questionnaire. Patients who were pregnant were excluded. Informed consent was obtained from those willing to participate. After the interview the client proceeded for her usual follow up in the Comprehensive Care Centre.

After collection, all data were checked for errors and omissions while filling out the questionnaires. It was precoded and entered into computer using SPSS data base. Statistical analysis was done using SPSS program.Univariate statistical analysis was done to assess association between the outcome measures. Descriptive statistics of study population was done.

The study was approved by the Kenyatta National Hospital Research and Ethics Committee. Participation in the study was voluntary.

RESULTS

A total of ninety four HIV positive women were interviewed. The mean age of the respondents was 34 years with their ages ranging from 21- 49 years. Majority of the respondents (55.3%) were in the age group 30-39 years. Forty eight percent of the respondents were married while 24.4% were single. Ninety nine percent of the respondents were Christians. Among the Christians, protestants were the majority comprising 71.3%. All the respondents had attained some formal education with half of them having had secondary education. Eighty two percent (81.9%) of the respondents lived in Nairobi province. Thirty five percent (35.1%) of the respondents were unemployed.

While Majority of the respondents (91.5%) were not intending to have a child in the next two years only 44.2% were on contraception. Most of the

Table 1

Social demographic characteristics of the respondents (n=94)

Characteristic	No.	(%)
Age distribution in years		
20-29	27	28.7
30-39	52	55.3
40-49	15	16.0
Education		
Primary	31	33.0
Secondary	47	50.0
College	16	17.0
Marital status		
Married	45	48.0
Single	23	24.4
Widowed	15	16.0
Separated	10	10.5
Divorced	1	1.1
Residence		
Nairobi	77	81.9
Out of Nairobi	17	18.1
Occupation		
Employed	61	64.9
Unemployed	23	35.1
Religion		
Protestant	67	71.2
Catholic	26	27.7
Muslim	1	1.1

respondents (71%) on contraception were using male condom as their family planning method. None of the respondents was on IUCD, pills, sterilisation or traditional methods.

Thirty four percent of the respondents obtained their contraceptive methods from private clinics, 22.9% from Government health centres and 14.6% from the family planning clinic at KNH. Only 9.7% obtained their contraceptive method from the Comprehensive Care Centre.

Only 29.2% of current non-users of family planning intent to use contraceptives in future. This constitutes the unmet need among the respondents.

Table 2

Fertility intention, contraceptive use and source of contraceptives among the respondents

Characteristic	No.	(%)
Desire to have a child within the next two years (n = 94)		
Yes	8	8.5
No	86	91.5
Currently on family planning (n=86)		
Yes	38	44.2
No	48	55.8
Method of contraception use (n=38)		
Male condom	27	71.0
Female condom	4	10.5
Dual method use	5	13.5
Injectables	1	2.6
Norplant	1	2.6
Sources of contraception (n=38)		
Private	14	34.1
Public health centres	8	19.5
KNH FP clinic	6	14.6
CCC	4	9.7
Work place	2	4.9
Unknown	7	17.2
Source of regular supply (n=38)		
Private	15	42.9
Public health centres	8	22.9
KNH FP clinic	6	17.1
CCC	3	8.6
Don't know	3	8.6
Intention to use FP in future among non users(n=48)		
Yes	14	29.2
No	34	70.8
Preferred FP method for future use (n=48)		
Condoms	6	42.9
Injectables	3	21.4
Norplant	2	14.3
Dual method use	2	14.3
Pills	1	7.1
Family planning counselling at CCC among non users(n=48)		
Yes	2	4.2
No	46	95.8

Table 3

Correlates of contraceptive use among current users of family planning

Characteristic	Yes		No		X^2	P-value
	No.	(%)	No.	(%)		
Marital status						
Married	30	34.9	9	10.5	26.63	<0.001
Unmarried	8	9.30	39	45.3		
Religion						
Protestant	23	26.7	37	43	3.51	0.17
Catholic	14	16.3	11	12.8		
Education						
Primary	14	16.3	17	19.8	0.02	0.89
Post primary	24	27.9	13	36		
ARV use						
Yes	30	34.9	37	43	0.04	0.84
No	8	9.3	11	12.8		
Regular sexual partner						
Yes	36	41.9	12	14	39.04	<0.001
No	2	2.3	36	41.9		
Parity						
>2	28	32.6	32	37.2	0.50	0.48
0-1	10	11.6	16	18.6		

The most preferred method was condoms (42.9%) followed by injectables (21.4%). None of the respondents intended to use intrauterine device or permanent surgical methods.

Only two respondents (4.2%) not currently using family planning methods were offered family planning counselling at the Comprehensive Care Centre.

Married women were more likely to be using a contraceptive compared to those who were not married 34.9% versus 9.3%, P<0.001. Respondents with regular sexual partners were more likely to be on contraceptives than those without 41.9% versus 2.3%, P<0.001. Level of education, use of antiretroviral therapy (ARV), Christian sub-group and parity did not seem to influence current contraceptive use.

DISCUSSION

This was a cross sectional study in which ninety four HIV positive women were interviewed. Majority of the respondents (84%) were below 40 years of age. This compares well with KDHS findings of 2003 where 86% of HIV infections were found in women less than 40 years old (2). Fertility is higher among women under 40 years compared to those who are older (12) hence need for effective contraception unless they desire to conceive.

Fifty six respondents (59.6%) reported having regular sexual partners. These women are at risk of conception unless they are on effective contraception while their sexual partners are at high risk of HIV acquisition (13). A study in Abidjan showed that 50% of pregnancies among HIV infected women were unplanned (14). These unplanned pregnancies could be prevented by use of effective contraceptives. Contraceptive use in this study was 44% compared to 57% in a cohort of Irish HIV positive women (15) and 39% in another cohort in Burkina Faso (16). Contraceptive use is higher compared to contraceptive prevalence of 39% among all women in Kenya as per 2003 KDHS (2).

World Health Organisation recommend that HIV infected women can use all methods of contraception except IUD in clients with AIDS not on antiretroviral therapy because of higher risk of uterine infection (5). Specific contraceptive method use patterns among respondents were different from those of the general public as reported in KDHS 2003. In this study condoms were the most popular method used by 81.5% of all respondents. Condom use among our study group is

much higher than the rate of 2% reported in the 2003 KDHS among all sexually active women (2). The high level of condom use in this study may be explained by the fact that condoms are promoted more often for protection against HIV and other sexually transmitted infections than for contraception.

Women seem to be particularly at risk of HIV infection in Africa comprising fifty seven percent of people living with HIV/AIDS in sub-Saharan Africa (3). In Kenya HIV prevalence among women is 9% compared to 5% among men (2). One possible intervention to reduce HIV infection among women is the promotion and use of female controlled methods such as the female condom. In this study the female condom use level of 10.5% was found, which is higher than the 3% rate reported by Maina (10) among family planning clients at Kenyatta National Hospital in 2004. Although female condom use in our study was low, local studies have shown high acceptability rates with one study in KNH among family planning clients reporting a rate of 68% (10). Since the female condom is a woman controlled method and acceptability rates locally are high, it should be actively promoted especially in the setting of HIV infection.

Other contraceptive methods used by respondents in this study were injectables and norplant. Injectable contraceptive which was the most preferred method (10.5%) among all women in the 2003 KDHS (2) was used by only 2.6% of the current contraceptive users. In this study only 2.6% of current contraceptive users used norplant compared to 1.2% of all women in the 2003 KDHS (2). None of the respondents reported to be using IUCD or any permanent method. There has been a decline in the utilisation of the long term and permanent methods in the general population as reported in the 2003 KDHS (2). Failure to use this long term methods among our respondents may be a reflection of the national trend. There is need to promote the long term family planning methods countrywide and especially among HIV positive women who do not desire to have more children.

Dual method use which is the simultaneous use of two methods of which one must be a condom is the ideal method recommended in HIV positive couples to ensure high protection against pregnancy should the barrier method fail (1). Though condoms provide a high degree of protection against sexually transmitted infections the contraceptive failure following typical use is at least 12% (11) hence not a very effective contraceptive method. Other contraceptive methods such as hormonal contraception, IUD and sterilisation are very effective contraceptive methods with a failure rate of less than 0.6%. However, they do not protect against STIs (17). Dual method use among the respondents was low at 13.5%. This rate is slightly higher than 11% reported by Kuyoh *et al* in a study on dual method use (8).

Married women and those with regular sexual partners were more likely to use contraception in this study. Marital status has been found to influence contraceptive use in other studies (4,14). High level of use of contraception among respondents with regular sexual partners could be a reflection of the perceived risk of pregnancy in such relationships.

There are special considerations in provision of contraceptives to HIV infected women. These considerations include safety of different methods, appropriateness of specific methods and potential interactions of contraceptives with antiretroviral therapy and other treatments for opportunistic infections (11). As majority of the respondents obtained their supplies away from the Comprehensive Care Centre, mainly from private sources (34%) there is a possibility that providers in these service points may not be competent to address the critical issues regarding contraception in HIV positive women (18). Furthermore these HIV infected women may not be willing to reveal their HIV status to the providers in those places where they obtain their family planning methods (18). Due to the above concerns, its imperative to establish a linkage between Comprehensive Care Centre and the family planning clinic at KNH so that the needs of clients using other contraceptives choices other than condoms can be addressed.

The unmet need of family planning refers to women of childbearing age who do not desire to get pregnant and are not using contraception. Unmet need for contraception can lead to unintendent pregnancies. It represents potential users of family planning services (2). In this study 14 out of 48 respondents who were non-users of contraceptives would want to use contraception in future giving unmet need for family planning of 29.2%. This is similar to findings from a study in Kenya among HIV positive women in a home based care project where 31% of the clients had unmet need of family planning but higher than the level of unmet need of family planning of 16% in Nairobi province as reported in the 2003 KDHS report (2).

The causes of unmet need are complex. They include fear of side effects, husband disapproval and religion prohibitions (19). The high level of unmet need in this study requires to be addressed to prevent unwanted pregnancies. Most respondents with unmet need of family planning would like to use condoms, followed by injectables.None of those with unmet need would like to use IUD or permanent methods in the future. Method preference for future use was similar to the current method use.

In conclusion, the level of contraceptive use among women not intending to have children was low (44%).Dual method use was low among the study group (13.5%).Use of long term contraceptive methods was very low among respondents (5.2%). The unmet need for family planning among the study group was high (29.2%).

Therefore following this study we recommend that the Comprehensive Care Centre should provide family planning services to all HIV infected women on treatment and follow up or establish linkage with the family planning clinic of the hospital.

Dual method use should be encouraged to ensure protection against pregnancy as well as other HIV and STI's . Long term and permanent methods contraceptive methods should be encouraged for those who have completed their desired family size.

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