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Factors associated with long-acting contraception use among HIV positive US women in an urban outpatient clinic

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An abstract of
A thesis submitted to the Faculty of the
Rollins School of Public Health of Emory University
in partial fulfillment of the requirements for the degree of
Master of Public Health
in Epidemiology
2016

Abstract

Factors associated with long-acting contraception use among HIV positive US women in an urban outpatient clinic

By Ashley N. Smoots

Introduction. Use of effective contraception among HIV-positive women not only prevents unintended pregnancy, but also Mother-to-Child Transmission of HIV (WHO Prong II of Prevention of Mother-to-Child Transmission (PMTCT)). This study sought to determine factors associated with long-acting method use among HIV-positive US women.

Methods. HIV positive women ages 18-45 completed an ACASI (Audio Computer Assisted Self Interview) questionnaire. Chi-square and multivariate logistic regression were used to evaluate factors associated with contraceptive method used. Contraceptive method knowledge and beliefs that were not found to be associated with the outcome of interest (post-hoc analysis) are described for the overall cohort of HIV-positive women using counts and percentages.

Discussion. This study found a relatively low prevalence of long-acting method use (26%) in this HIV+ cohort of primarily African American women, less than half of whom who had more than a high school education. In multivariate modeling, having 3 or more children and believing that you should take a break from hormonal methods every couple of years were associated with long-acting contraceptive use, while having heard that there are birth control methods that make it harder to get pregnant in the future was protective for long-acting contraceptive use. Even though 83% of women indicated that STI/HIV prevention is important to them, 9% reported ever transmitting HIV to a partner, and 13% reported that they have transmitted to a child. Several knowledge and belief characteristics of the cohort indicate a need for improved contraceptive education. 37% of women surveyed think that a LARC can't be removed early if a woman decides to get pregnant, 42% had never previously heard of the IUD and 72% had never previously heard of the implant.

Conclusion. These results indicate that improvement is needed in the contraceptive counseling for HIV positive women so that they are able to make informed decisions about their health care.

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Introduction

It is estimated that as of 2014, 25% of people living with HIV in the United States were women [1]. Access to accurate contraceptive method information and effective options is important for HIV-positive women not only to prevent unintended pregnancy, but also to prevent vertical transmission of HIV (WHO Prong II of Prevention of Mother-to-Child Transmission (PMTCT)) [2]. Per the current WHO and CDC Medical Eligibility Criteria for Contraceptive Use (MEC 2015), there are no restrictions on the contraceptive options recommended for HIV positive women based solely on HIV positivity [3].

There are unfortunately racial disparities leading to increased HIV and unintended pregnancy among African American women compared to Hispanic and Caucasian women Most incident HIV cases among women are attributed to heterosexual sex, with African American women disproportionally affected, representing 62% of all prevalent cases [1]. In the US roughly half of all pregnancies are unintended [4], with higher proportions among African American women. Almost ¾ of HIV positive children in the US are infected perinatally, and of the children living with perinatal HIV roughly two-thirds are African American [5].

HIV positive women and economically disadvantaged African American women may not benefit from the increases in effective method uptake seen in the general population [6, 7]. An analysis of 2784 HIV positive and negative US women from the 1994-2005 Women's Interagency HIV Study (WIHS) longitudinal cohort found significant differences in uptake of barrier and hormonal methods versus no method [8]. Barrier methods were the most common forms of birth control used (30.5%-36.3%), followed by sterilization (21.8%-26.5%), and hormones

(<10%); hormonal method use was less common among HIV positive versus negative women, suggesting access issues or limitations of provider training [8].

Thus, understanding the socio-demographic and clinical factors associated with effective contraceptive method selection among HIV-positive women is an important, though relatively nascent, area of research. In the WIHS study described above, younger age, living with a partner, and higher CD4 lymphocyte count were associated with hormonal method use versus no method use among HIV positive women [8].

However, given that the typical use efficacy of hormonal methods can vary widely (from 6%-9% failure rate /year in US women [9]), factors associated with use of the most effective long-acting methods (intrauterine device (IUD), implant, and sterilization, which have typical use failure rates of 0.2%-0.8% [9] is of interest. The purpose of this study was to determine what factors are significant in a HIV-positive woman's choice to use long-acting contraception versus less effective methods in a sample of predominantly African American US women. We also aimed to describe women's contraceptive related knowledge and beliefs.

Methods

This study is an analysis of a cross-sectional study designed to understand associations between sexual behaviors and attitudes among HIV positive women and contraceptive method use. Recruitment for this study occurred at Grady Infectious Disease Center (IDP) in Atlanta, Georgia from July 2013 to November 2014. Trained research staff recruited women eligible for

the study in the clinic waiting room prior to their appointments, and screening occurred in private rooms.

To be eligible for the study, women had to: be HIV-positive, be receiving medical care at Grady IDP, be between 18 and 45 years old, self-report sexual activity within the last 6 months, and be an English speaker. The Emory Institutional Review Board (IRB) and Grady Research Oversight Committee approved this study and all eligible participants signed the IRB informed consent before enrollment.

Enrolled participants completed an approximately 30-minute, 225 question anonymous audio computer-assisted self-interview (ACASI) survey. Survey questions ascertained dual method use, sexual history, fertility preferences, contraceptive knowledge/attitudes, HIV medication use, and communication about ones serostatus. Questions regarding contraceptive history asked about both present (within the last 6 months) and ever use of methods including: intrauterine device (IUD), implant, pill, patch, medroxyprogesterone injectable, ring, withdrawal, and male and female condoms. Questions were also asked about a women's experience with each of the methods she had ever used and what factors are most important to her when choosing a method. Upon completion, participants were given a $5 gift card.

The outcome of interest in this analysis was defined the most effective contraceptive method self-reported to be used in the last 6 months. The CDC's 'Effectiveness of Family Planning Methods' were used to determine the hierarchy of most effective [10]. This was then categorized as long-acting methods (sterilization/IUD/implant) and other methods (injectable, pill, patch, ring, condom, withdrawal, none or none reported).

Covariates of interest included demographics, HIV associated clinical factors, and contraceptive knowledge and attitudes. These were described via counts and percentages for categorical variables, stratified by the outcome of interest. Pearson's chi-square tests were used to test for associations between categorical covariates and the outcome of interest. All significant ($p<0.10$) covariates identified in bivariate analyses were included in a multivariate model of contraception use. Variables missing more than 40% of responses were not included in multivariable analysis. Multi-collinearity was assessed using a collinearity macro, and decision cutoffs of VDPs >0.50 and conditional indices >30 were applied. In cases of collinearity, the variable with the strongest association based on the crude analysis was maintained in the multivariate model. Crude and adjusted prevalence odds ratios (PORs) and 95% confidence intervals (CIs) are reported. Since we had no primary exposure of interest, confounding assessment was not appropriate. All p-values are two-tailed.

Contraceptive method knowledge and beliefs that were not found to be associated with the outcome of interest (post-hoc analysis) are described for the overall cohort of HIV-positive women using counts and percentages.

Data were analyzed in SAS version 9.4 (SAS Institute Inc., Cary, NC, USA).

Results

Descriptive analyses (Table 1)

A total of 187 HIV positive women were enrolled in the study. The majority of the women were not using long acting contraception (74%). Women who have undergone sterilization represent 84% of the women in the long acting contraception group, only 8 of the 187 women (4%) surveyed reported current IUD use, and the remainder used the implant (12%). The majority of the women in the study reported condom use as their current most effective method of contraception in use (90/187, 48%).

The mean age of participants was 35 years old (range 18-47); most of the women did not complete more than a high school education (59%) and were African-American (88%). Almost half had CD4 counts greater than 200 cells/ml (47%) and half of the women in the study self-reported having an HIV negative partner (56%). The majority of the women with a current partner had been with them for longer than a year (54%). One-third of the women surveyed had a desire for a future pregnancy and twenty-four women had a partner who was not aware of their HIV status. The primary mode of transmission was heterosexual contact (77%). Most of the women had less than two children (64%) and half of the women had a history of unplanned pregnancy (53%). Twenty-two percent of women had heard that some birth control methods would make it harder to get pregnant in the future. Most women (72%) had never heard of the implant and 42% of the women had never heard about the IUD. Fifteen percent of the women who had heard of the IUD believed that a woman could not use this method if she never had a child. Only 142 women believed that condoms should be used in conjunction with other birth control methods.

A desire for future pregnancy was more likely to exist if among women not currently using long acting contraceptive methods (p=0.041). Having a partner not aware of their HIV status this differed by outcome status with non-long acting contraception users being less likely to have disclosed (p=0.090). Heterosexual contact as a mode of transmission, being more likely to have three or more children (p=0.009), and having a history of unplanned pregnancy (p = 0.079) were all more likely among users of long-acting contraception. Women who are currently using long acting contraception were also more likely to have history of an STI diagnosis (p=0.083). Knowledge of IUD was higher among women currently using long acting methods (p=0.051). Women not using long acting methods were more likely to believe a woman could not use an IUD if she never had a child (p=0.021) and that some birth control methods would make it harder to get pregnant in the future (p=0.017).

Unadjusted analyses (Table 2)

Bivariate analyses found that women aged 36-45 were more likely to use long acting methods (POR: 3.98; 95%CI: 1.13, 14.06) versus women aged 18-25. Women with three or more children were more likely to use long acting methods (POR: 2.52; 95% CI: 1.25, 5.07) versus women with two or less children. There were also differences between long-acting method use and other methods when comparing women who do and do not have a child born with HIV, women with a history of unplanned pregnancy, and women with a history of STI diagnosis. Women who have heard that there are birth control methods that make it harder to get pregnant in the future and women who believed an IUD could be used even if a woman had never had a child were less likely to use long acting methods than women who had not heard this. Women who had

previously heard about the IUD and women who believed that you should take a break from hormonal methods every couple of years were more likely to use long acting methods.

Adjusted analyses (Table 3)

The final model included 144 outcomes. In this model, there was a significant association between long acting contraceptive method use and having 3 or more children (POR: 2.46; CI: 1.13, 5.36) versus none to two children. Women who had have heard that there are birth control methods that make it harder to get pregnant in the future were less likely to be long acting method users (POR: 0.31; 95% CI: 0.10, 0.92) than women who did not hear this. Women who believed that you should take a break from hormonal methods every couple of years were more likely (POR 2.00; 95% CI: 0.89, 4.49) to use long acting methods than women who did not believe this.

Contraceptive beliefs (Table 4)

Most women thought it was 'very important' that a contraceptive method prevents STIs/HIV transmission (71%). Factors considered 'very important' or 'somewhat important' for contraceptive method choice were that their partner is okay with it (61%) and that it does not have hormones (56%).

In this cohort, 96% of the women reported not hearing that any birth control methods had a negative impact on their disease. The majority of them (72%) had not heard of the implant prior to this survey. Other important descriptors of this group include that and 19% of the women think you don't need a condom with birth control, 62% think that all hormonal methods cause

weight gain, half think it's not okay to take birth control that stops your period from coming (51%) and 29% believe an IUD moves around a women's body.

Discussion

This study found a relatively low prevalence of long-acting method use (26%) in this HIV+ cohort of primarily African American women, less than half of whom who had more than a high school education. In multivariate modeling, having 3 or more children and believing that you should take a break from hormonal methods every couple of years were associated with long-acting contraceptive use, while having heard that there are birth control methods that make it harder to get pregnant in the future was protective for long-acting contraceptive use.

Compared with reproductive aged women from the general population of the US, IUD prevalence in our cohort (2.6%) was lower than the national average of 10.3%, and implant use (1.6%) was similar than the national average of 1.3% [9]. Sterilization was used by 21.5% of our cohort, similar to rates in the general population of women aged 15-44 in the United States which is 22% [9]. Condom use was the most common method used among 48% of women in this study, but this method has only a 15.3% prevalence of US women. The pill is used by a quarter of US women (25.9%), but was represented by 12% of this cohort. It has been previously shown that the trend in increased LARC use nationally has not affected HIV positive women [6]. The lack of uptake of LARC methods in this cohort are concerning, as these women are all in care and should have access to providers trained to insert implants and IUDs. The discrepancies in method mix may also be attributable to the fact that this cohort contains primarily African American women of relatively lower education. These disparities could also

support the idea that economically disadvantaged African American women may not benefit from the increases in effective method uptake seen in the general population and face differential educational and access barriers [6, 7, 11].

Although HIV related factors were considered in analysis, none of them were significantly associated with long-acting method use. This shows that HIV related concerns, viral load, and CD4 counts may not be a primary driver in HIV-positive women's decisions on contraception. Socioeconomic factors and held misconceptions likely weigh more heavily on their decisions and are barriers to use of long-acting methods. Low knowledge of the implant and IUD is a major barrier to LARC use in this cohort.

We found a significant association between long acting contractive method use and having 3 or more children versus none to two children (aPOR 2.46; 95% CI: 1.13, 5.36, p=0.023). Women with 3 or more children are less likely to want more children [12]. These women may choose sterilization (or less often in our cohort, an IUD or implant) as the contraceptive method of choice because these are highly effective in preventing future pregnancies. A consequence of sterilization over LARC methods is that sterilization regret has been found to be prevalent among HIV positive women in monogamous relationships [13]. This cohort values partner approval of their contraceptive method, and there is also a possibility that they felt pressured from other people to undergo the procedure.

Women who have heard that there are birth control methods that make it harder to get pregnant in the future, reported by 22% of women overall, were less likely to use long-acting methods (aPOR: 0.31; 95% CI: 0.10, 0.92, p=0.034) than women who did not report hearing this. Several

knowledge and belief characteristics of the cohort indicate a need for improved contraceptive education. 37% of women surveyed think that a LARC can't be removed early if a woman decides to get pregnant, 42% had never previously heard of the IUD, 72% had never previously heard of the implant, and 29% thought IUDs can move around in a woman's body. These misconceptions likely influence a woman's choice against using more effective LARC forms of contraception. An increase in the information about these methods-including their effect on future pregnancy-that is provided to women is crucial in increasing the prevalence of long acting methods. An understanding of where women get these messages from will aide in eliminating misconceptions at all levels including providers, the media, and within communities.

Almost half of the women surveyed (45%) believe that you should take a break from hormonal contraception every couple of years and surprisingly, women who believed this were more likely (aPOR 2.00; 95% CI: 0.89, 4.49, p=0.093) to use long acting methods than women who did not. The majority of women on long-acting contraception in our cohort had undergone sterilization, and these women may be counseled less frequently regarding the effects of hormones than other women. This difference highlights a need for improved education on the long-term usage of hormonal contraception.

Despite the improved overall health among those living with HIV as HIV has shifted to a more chronic disease, stigma remains, disclosure continues to be incomplete in relationships and transmission of HIV, despite excellent prevention methods, persists. Thirteen percent of the women had sexual partners who did not know their HIV positive status. Even though 83% of women indicated that STI/HIV prevention is important to them, 9% reported ever transmitting HIV to a partner, and this is likely an underestimate since this only represents known

transmissions. Additionally, 13% reported that they have transmitted to a child. These statistics are concerning. There has been a reported lack of knowledge in reduction of mother to child transmission [14], and these women may still be undereducated in this area. Research has shown that there is a need for improved education targeted to such high-risk women [15, 16], and this study finds that need may lie particularly with those women with fewer children. As this cohort is relatively older, some of the findings may be reflective of transmission events prior to antiretroviral therapy (ART) use or the current PMTCT protocols [2].

Though dual method use to prevent both unintended pregnancy and STI transmission is a known public health message, 19% of women think you do not need to use a condom with birth control. A study on dual method use in this cohort found that conversations with health educators, most recent viral load, ever being threatened by a partner and number of partners in the last 6 months all increased the likelihood of dual method use [17]. Additionally, 71% of women report that it was very important that their method of contraception prevent STI/HIV transmission, which also has implications for dual method use promotion.

Interestingly, 42% of women reported that it was very important to them that their partner is okay with their method. Research to explore whether this belief is associated with method uptake, adherence, and switching may be informative, and educational messages that probe for this belief as a potential barrier to uptake may be warranted. Over half of this cohort (56%) expressed that it is important that their contraceptive method does not have hormones. Research to explore the origin and motivation of this sentiment is needed to determine how to best address this with women.

This study is limited by the relatively small sample size, which limited the precision of point estimates and our ability to explore interaction, and cross-sectional design. Self-reported exposures could lead to possible differential misclassification by the outcome, biasing our results in an unknown direction, though we expect the anonymous nature of the self-administered ACASI to limit social desirability bias. The sample consists of HIV positive women in care who are mostly African American women aged 26-35, all from one clinic with low levels of education, and our findings are most generalizable to this group. Finally, it is important to note that the differences in contraceptive knowledge and attitudes between users and non-users of long-acting methods may be attributable to the fact that the majority of long acting contraception are not using reversible methods, rather they have chosen to undergo sterilization.

Conclusions

This group of HIV positive women had a low prevalence of long acting contraception use, and the majority of those who used long acting methods had undergone sterilization. Having 3 or more children and believing that you should take a break from hormonal methods every couple of years were associated with long-acting contraceptive use, while having heard that there are birth control methods that make it harder to get pregnant in the future were protective for long-acting versus contraceptive use. Overall, the cohort demonstrated high risk of vertical and horizontal transmission and had a large amount of misconceptions about contraception options, which may be affecting uptake. There was low knowledge of the IUD and implant, which indicates room for improved education about contraception options. These results indicate that

improvement is needed in the contraceptive counseling for HIV positive women so that they are able to make informed decisions about their health care.

Tables

Table 1. Association between demographics, clinical factors and contraceptive knowledge with contraceptive method

	Total (N =187)		Sterilization, IUD, Implant (N =49)		Injectable, Pill, Patch, Ring, Condom, Withdrawal, None (N =138)		p-value (2-tailed)**
	N	%	N	%	N	%	
Demographics							
Age							0.065
18-25	29	16	3	6	26	19	
26-35	50	27	12	24	38	28	
36-45	108	58	34	69	74	54	
Education Level							0.592
Less than High school	31	17	6	12	25	18	
Completed High School	80	43	21	43	59	43	
More than High school	76	41	22	45	54	39	
Ethnicity							0.249
Black or African-American	165	88	41	84	124	90	
White/Caucasian/other	22	12	8	16	14	10	
Relationship Status							0.638
Married/Committed Relationship	124	67	34	69	90.00	66	
Dating/Single	62	33	15	31	47.00	34	
Current Number of Children							0.009
Zero to two	99	64	24	49	75	71	
Three or more	56	36	25	51	31	29	
Time with Current Partner							0.824
1 year or less	22	12	6	12	16	12	
More than 1 year	101	54	28	57	73	53	
No partner	64	34	15	31	49	36	
Serostatus of recent partner (N=183)							0.669
HIV negative	103	56	29	59	74	55	
HIV positive	42	23	12	24	30	22	
Unsure	38	21	8	16	30	22	
Partner aware of your HIV status							0.090
No	24	13	3	6	21	16	
Yes	159	87	46	94	113	84	

Table 1. Association between demographics, clinical factors and contraceptive knowledge with contraceptive method (cont'd)

Desire for future Pregnancy							0.041
No	119	66	38	78	81	61	
Yes	62	34	11	22	51	39	
Employment Status							0.790
Not Employed	125	67	32	65	93	67	
Employed	62	33	17	35	45	33	
Clinical Factors							
CD4 Count							0.161
CD4 Unknown/CD4 < 200	100	53	22	45	78	57	
CD4 >200	87	47	27	55	60	43	
Duration of ART use							0.341
2 years or less	30	23	6	15	24	26	
More than 2 years	94	72	30	77	64	70	
Not currently on ART	7	5	3	8	4	4	
Most recent viral load result							0.020
Detectable	39	21	14	29	25	18	
Undetectable/Unknown	148	79	35	71	113	82	
HIV infected through heterosexual transmission							0.016
Yes	144	77	44	90	100	73	
No	42	23	5	10	37	27	
Had child born with HIV? (N=107)*							0.037
No	93	87	27	77	66	92	
Yes	14	13	8	23	6	8	
Ever had an unplanned pregnancy							
No	73	47	18	37	55	52	0.079
Yes	82	53	31	63	51	48	
Ever transmitted HIV to a partner							0.192
No	158	91	46	96	112	90	
Yes	15	9	2	4	13	10	
Ever had STI							0.083
No	34	19	5	10	29	22	
Yes	147	81	43	90	104	78	

Table 1. Association between demographics, clinical factors and contraceptive knowledge with contraceptive method (cont'd)

Contraceptive Knowledge & Attitudes							
Have you heard of any birth control methods making it harder to get pregnant in the future?							0.017
No	136	78	44	90	92	73	
Yes	39	22	5	10	34	27	
Before today, had you heard about the IUD (sometimes called the Mirena or ParaGuard)?							0.051
No	74	42	15	31	59	47	
Yes	101	58	34	69	67	53	
Can a woman use an IUD even if she has never had a child? (N = 100)*							0.021
No	15	15	9	26	6	9	
Yes	85	85	25	74	60	91	
Women should take a break from hormonal birth control methods every couple of years.							0.0805
No	97	55	22	45	75	60	
Yes	78	45	27	55	51	40	

*Missing > 40% of responses

**For categorical variables, p-values from Chi-square tests (or Fisher's Exact)

Table 2. Unadjusted Prevalence Odds Ratios for all variables

	cPOR	95% CI		p-value
Demographics				
Age				
18-25	1.00			
26-35	2.74	0.70	10.66	0.147
36-45	3.98	1.13	14.06	0.032
Education Level				
Less than High school	1.00			
Completed High School	1.48	0.53	4.11	0.450
More than High school	1.70	0.61	4.70	0.309
Ethnicity				
Black or African-American	1.00			
White/Caucasian/other	1.73	0.68	4.42	0.253
Relationship Status				
Married/Committed Relationship	1.00			
Dating/Single	0.85	0.42	1.71	0.638
Current Number of Children				
Zero to two	1.00			
Three or more	2.52	1.25	5.07	0.010
Time with Current Partner				
1 year or less	0.98	0.35	2.75	0.966
More than 1 year	1.00			
No partner	0.80	0.39	1.65	0.542
Serostatus of recent partner				
HIV negative	1.00			
HIV positive	1.02	0.46	2.26	0.960
Unsure	0.68	0.28	1.66	0.397
Partner aware of your HIV status				
No	0.35	0.10	1.23	0.103
Yes	1.00			
Desire for future Pregnancy				
No	1.00			
Yes	0.46	0.22	0.98	0.044
Employment Status				
Not Employed	0.91	0.46	1.81	0.790
Employed	1.00			
Clinical Factors				
CD4 Count				
CD4 Unknown/CD4 < 200	0.63	0.33	1.21	0.163
CD4 >200	1.00			

Table 2. Unadjusted Prevalence Odds Ratios for all variables (cont'd)

Duration of ART use				
2 years or less	1.00			
More than 2 years	1.88	0.69	5.07	0.215
Not currently on ART	3.00	0.53	17.16	0.217
Most recent viral load result				
Detectable	1.00			
Undetectable/unknown	0.55	0.26	1.18	0.1246
HIV infected through heterosexual transmission				
Yes	1.00			
No	0.31	0.11	0.83	0.021
Had child born with HIV? (N=107)*				
No	1.00			
Yes	3.26	1.03	10.29	0.044
Ever had an unplanned pregnancy				
No	1.00			
Yes	1.86	0.93	3.72	0.081
Ever transmitted HIV to a partner				
No	1.00			
Yes	0.38	0.08	1.73	0.208
Ever had STI				
No	1.00			
Yes	2.40	0.87	6.61	0.091
Contraceptive Knowledge & Attitudes				
Have you heard of any birth control methods making it harder to get pregnant in the future?				
No	1.00			
Yes	0.31	0.11	0.84	0.022
Before today, had you heard about the IUD (sometimes called the Mirena or ParaGuard)?				
No	1.00			
Yes	2.00	0.99	4.02	0.053
Can a woman use an IUD even if she has never had a child? (N = 100)*				
No	1.00			
Yes	0.28	0.09	0.86	0.027
Women should take a break from hormonal birth control methods every couple of years.				
No	1.00			
Yes	1.81	0.93	3.51	0.082

cPOR: crude (unadjusted) prevalence odds ratio

CI: confidence interval

*Missing > 40% of responses

Table 3. Adjusted Prevalence Odds Ratios for variables associated with contraceptive method

	aPOR	95% CI		p-value
Exposures				
Age				
18-25	1.00			
26-35	1.04	0.21	5.11	0.967
36-45	1.23	0.28	5.39	0.784
Current Number of Children				
Zero to two	1.00			
Three or more	2.46	1.13	5.36	0.023
Desire for future Pregnancy				
No	1.00			
Yes	0.67	0.27	1.64	0.378
HIV infected through heterosexual transmission				
Yes	1.00			
No	0.63	0.19	2.13	0.457
Ever had an unplanned pregnancy				
No	1.00			
Yes	1.16	0.49	2.72	0.737
Ever had STI				
No	1.00			
Yes	1.61	0.48	5.42	0.445
Have you heard of any birth control methods making it harder to get pregnant in the future?				
No	1.00			
Yes	0.31	0.10	0.92	0.034
Before today, had you heard about the IUD (sometimes called the Mirena or ParaGuard)?				
No	1.00			
Yes	1.22	0.54	2.73	0.635
Women should take a break from hormonal birth control methods every couple of years. *				
No	1.00			
Yes	2.00	0.89	4.49	0.093

aPOR: adjusted prevalence odds ratio

CI: confidence interval

Table 4. Contraceptive Method Knowledge and Beliefs (N = 145)

	%
Effective at preventing STIs/HIV transmission	
Very Important	71
Somewhat Important	12
Not Important	17
Partner is ok with it	
Very Important	42
Somewhat Important	19
Not Important	39
Does not have hormones	
Very Important	38
Somewhat Important	18
Not Important	44
Have you heard of any birth control methods having a negative impact on your disease (worsening your HIV)?	
No	96
Yes	4
Before today - Have you heard of the implant?	
No	72
Yes	28
Long acting methods like the implant or IUD can be removed early if a woman changes her mind and wants to become pregnant	
No	37
Yes	63
If you are using a birth control method, do you think you also need to use a condom?	
No	19
Yes	81
Do all hormonal birth control methods cause weight gain?	
No	38
Yes	62
It is ok to take birth control that stops your period from coming.	
No	51
Yes	49
IUDs move around in a woman's body.	
No	71
Yes	29

*No statistical differences by outcome of interest (all p>0.1)

IUD: intrauterine device; STI: sexually transmitted infection

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