



# Perception about the 'Opt Out Strategy' for HIV Testing and Counselling among Pregnant Women attending Antenatal Clinic in Ibadan, Nigeria

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## Keywords

Pregnant women  
HIV screening  
Opt out strategy  
Antenatal

## ABSTRACT

**Background:** Opt out strategy was designed to improve uptake of HIV testing and counselling (HTC) services but only a fifth of the population utilise this service in Nigeria. This study was conducted to determine perception about the opt out strategy for HIV screening among pregnant women attending antenatal clinic in a secondary health facility in Ibadan, Nigeria where the opt out strategy was used for HIV screening.

**Methodology:** Cross sectional study was conducted and systematic random sampling was used to recruit 500 pregnant women. Data regarding sociodemographic characteristics, general knowledge about HIV transmission, assessment of HIV screening services in the hospital and attitude towards HIV screening was obtained.

**Results:** Mean age of respondents was 27.4 (SD±6.1) years, 86.8% were married and 79.2% had at least secondary school education. Overall, 69.2% had good knowledge about routes of HIV transmission. More than 90% reported that information received during the HTC session was understood. Only 41.8% reported adequate privacy during screening process while 20.4% felt they were forced to participate. Positive attitude towards HTC was seen in 72.0%. Higher education was associated with better knowledge of routes of HIV transmission (OR=3.8; 95%CI= 4.3-3.3) Being married or cohabiting with a partner (OR=3.7; 95% CI=16.8-0.8), having more than one sexual partner (OR=3.3; 95%CI=-3.7-2.97) and being HIV negative (OR=3.9; 95%CI=39.0-0.39) was associated with a positive attitude towards HIV screening.

**Conclusion:** Inadequate privacy and patient's voluntariness were major complaints about opt out strategy for HTC. Improving privacy and stressing that screening is optional may improve general uptake of HTC when using the opt out strategy.

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## INTRODUCTION

The burden of human immunodeficiency virus (HIV) in sub Saharan Africa remains very high with women constituting up to 59% of the adult population living with HIV.<sup>1</sup> At the end of 2010, 3.4 million children less than 15 years were living with HIV globally with 390,000 of them newly infected.<sup>1</sup> Out of the new infections, 350,000 were from sub Saharan Africa and almost all (>90%) of these were from mother to child transmission of HIV.<sup>2</sup> Nigeria is the most populous country in Africa with the third largest number of adults living with HIV and the highest number of children living with HIV worldwide.<sup>3</sup> There are highly effective measures which can be taken to ensure that a HIV positive mother does not transmit the infection to her baby. These measures have been used in developed countries and presently, mother to child transmission of HIV has almost been eradicated.<sup>4</sup> It

is therefore possible to reduce paediatric HIV to the minimum in Nigeria by ensuring HIV screening in pregnant women as this is the critical gateway to services for HIV prevention, treatment and prevention of mother to child transmission of the virus.<sup>5</sup>

The World Health Organization (WHO) and the joint United Nations program on HIV/AIDS (UNAIDS) revised the guidelines for HIV testing in 2007.<sup>6</sup> The current guidelines were designed to increase coverage of testing and identify patients in need of antiretroviral drugs (ARV). The traditional model for HIV testing was Voluntary Counselling and Testing (VCT) also known as 'opt in' method, in which patients take initiative in seeking the HIV test themselves.<sup>7</sup> Individual pretest counselling followed by informed consent was required before testing. With the new 'opt out' strategy also known as Physician/Provider

Initiated Testing and Counselling (PITC), individuals have to actively opt out or decline the HIV test after a pretest information session, often carried out in a group, while posttest counselling is still carried out on an individual basis for all clients. The most obvious difference between VCT and PITC strategies is the counselling component. The VCT pre test counselling is lengthy (1 to 2 hours) allowing the provider to educate the client on the need for HIV testing and prevention, get informed consent and counsel for potential test results. PITC on the other hand removes the requirement for extended pre test counselling as the counselling period is condensed to provision of education on HIV and getting informed consent (about 20 to 30 minutes). Whereas VCT showed low acceptance rate and has been described as inconvenient, PITC has proven to increase the total population of patients who know their status.<sup>8,9</sup>

The utilisation of HTC by Nigerian pregnant women is still low.<sup>10</sup> The National Health Demographic Survey of 2013 in Nigeria showed that only 35.8% of pregnant women received HIV counselling in the preceding two years and 32.7% accepted to test while only 20.0% received their test result.<sup>11</sup> The south western part of the country had the highest percentage of pregnant women accessing the HIV testing and counselling (HTC) service as 66.9% were offered the service while 55.5% accepted to test and 42.3% received the test result.<sup>11</sup> Utilisation of PMTCT services is not complete if the result of HIV screening is not received as the result will determine the direction of subsequent PMTCT services.

There has been continued improvement in the scaling up of HTC services in Africa especially in the context of Prevention of Mother to Child Transmission (PMTCT) of HIV with access to HIV testing and counselling increasing among pregnant women following the introduction of the 'opt out' strategy.<sup>9</sup> The rate of acceptance of this service has to increase at a faster pace to urgently reduce paediatric HIV incidence. The perception of pregnant women regarding HTC is therefore important as this will determine their uptake of this service where it is made available and necessary

interventions can be instituted to improve its shortcomings. The Nigerian NDHS in 2013 clearly showed the under-utilisation of HTC services in south west Nigeria despite its vital role in the success of PMTCT.<sup>11</sup> It is also important to note that while HIV prevalence has reduced among pregnant women in some part of the country, it is increasing in some others particularly in southwest Nigeria where the prevalence increased from 2.0% in 2008 to 2.9% in 2010.<sup>3</sup> This highlights the need to promote the adoption of HTC in adult population especially pregnant women who may have the added risk of transmitting HIV to their unborn children if infected.

This study was therefore carried out to determine the perception about 'opt out' strategy of HTC among the pregnant women attending Antenatal Clinic (ANC) in Adeoyo Maternity Hospital, Ibadan. The knowledge about HIV transmission and treatment, and the perception of the women about the way HTC services were rendered in the hospital and HTC in general were determined.

## METHODOLOGY

A cross sectional study was carried out at the Adeoyo Maternity Hospital among pregnant women attending the ANC of the hospital. Adeoyo Maternity Hospital is a secondary health facility located in the cosmopolitan city of Ibadan, south west Nigeria. The hospital is under the administration of Oyo state Hospital Management Board with a 198 bed capacity for patients' admission. It provides antenatal services for pregnant women and the 'opt out' strategy is used for HTC. This study site was selected because the patients constitute a good mix of socioeconomic background. About 2000 pregnant women are seen at the ANC every month.

Ethical approval was obtained from the Oyo state ethical review committee, Nigeria and the research was carried out in compliance with the Helsinki declaration. Informed consent was obtained from the study participants and those who declined were replaced accordingly. The

sample size was calculated using the Kish Leslie formula for calculating sample size for cross sectional study<sup>12</sup> and estimating that 50% of the respondents will have a good perception about HTC while adjustment was made for a non response of 20%. Five hundred respondents were selected from about 2000 pregnant women seen over a period of one month using systematic random sampling with a sampling interval of 4. Pregnant women with at least one previous ANC visit in the index pregnancy and had undergone HCT were included. Data was obtained using interviewer administered questionnaire and information regarding the women's socio-demographic characteristics, general knowledge about HIV transmission and treatment, the women's assessment of the HTC services rendered in the hospital and general attitude towards HTC were obtained. Socio-economic class was determined using the British Registrar General's classification<sup>13</sup> which is based on grouping occupations according to the levels of skill involved. Nine questions were used to obtain information about knowledge of HIV transmission and treatment and six questions were used to assess the attitude towards HTC. Pre testing of the questionnaire was conducted among women attending ANC at the University College Hospital, Ibadan Nigeria. Data was collected by research assistants who were previously trained on how to administer the questionnaire.

Data was then analysed using Statistical Package for Social Sciences (SPSS version 15.0, SPSS Inc; Chicago, IL, USA). Frequency distribution was generated for all categorical variables and checked for errors. Knowledge scores were assigned such that each correct answer was scored as 1 and each incorrect ones scored as zero. Mean were then generated and scores below the mean were classified as poor and scores at mean and above were classified as good. Attitudinal questions about HTC were scored on a Likert scale with a maximum score of 30 and minimum score of 6. Classification of attitudinal scores was same as was done for the knowledge scores. In testing for associations, cross tabulations was done and Chi-square statistics was used.

Differences in means were tested using student's t test. The Fisher's exact test was used when any cell had a value less than five. The level of significance was  $p < 0.05$ .

## RESULTS

The mean age of the 500 respondents was 27.4 (SD  $\pm 6.1$ ) years. Majority (86.8%) of the respondents were married while most (79.2%) had at least secondary school education. Other socio-demographic characteristics of are as shown in Table I.

Slightly less than half (48.25) mentioned the hospital as the first source of information about HIV, followed by the media (25%) while 14.4% and 12.4% respectively first heard about HIV from friends and neighbours.

The mother to child transmission route was identified by 478(95.6%) respondents while 435(87%) were aware of the existence of antiretroviral drugs. Overall, 69.2% of the respondents had good knowledge about HIV transmission and treatment. A significantly higher percentage of those who had a higher level of education were more knowledgeable (78.3%,

**Table I: Sociodemographic characteristics of respondents**

Characteristics	Number (n)	Percentage (%)
<b>Age group (years)</b>		
15-24	168	33.6
25-34	260	52.0
$\geq 35$	72	14.4
<b>Marital status</b>		
Single	8	1.6
Cohabiting	55	11.0
Married	434	86.8
Separated	3	0.6
<b>Education attained</b>		
No formal education	3	0.6
Primary	101	20.2
Secondary	258	51.6
Post-secondary	138	27.6
<b>Occupation type</b>		
Higher professional	6	1.2
Managerial and technical	14	2.8
Skilled non-manual	156	31.3
Skilled manual	229	45.8
Partially skilled	95	19.0

$p < 0.01$ ). Furthermore, the women in the lower socioeconomic class were more likely to have poor knowledge about HIV transmission and treatment (37.3%,  $p = 0.04$ ).

Almost all (96.8%) of the respondents had done HIV test in the index pregnancy and all of them have received the results.

The women's assessment of the HTC service rendered in the hospital is as shown in Table III.

Respondents with positive attitude to HTC (mean and above) were 360 (72.0%) while 140 (28.0%) had

**Table II: Knowledge of HIV transmission routes among pregnant women attending antenatal clinic at Adeoyo Maternity Hospital, Ibadan**

Source of HIV transmission	Yes n(%)	No n(%)	Don't know n(%)
Sharing of sharp objects eg. Needle	483(96.6)	8(1.6)	9(1.89)
Unprotected sexual intercourse	476(95.2)	12(2.4)	12(2.4)
Transfusion with unscreened blood	473(94.6)	15(3.0)	12(2.4)
Mosquito bites	212(42.4)	240(48.0)	48(9.6)
Sharing utensils with HIV patients	192(38.4)	250(50.0)	58(11.6)
Sharing the same toilet	187(37.4)	254(50.8)	59(11.8)
Handshake	75(15.0)	400(80.0)	25(5.0)

**Table III: Assessment of HTC services rendered at Adeoyo Maternity Hospital, Ibadan by women attending the antenatal clinic of the hospital**

Views	Frequency(n)	Percentage(%)
The information about HTC was well understood	483	96.6
The dedicated time for pre and post counselling was adequate	479	95.8
Questions were well answered	476	95.2
The atmosphere was relaxed	468	93.6
The nurses' approach to HTC was acceptable	464	92.8
There was enough privacy for the whole process of HTC	209	41.8
I was forced to participate in HTC	102	20.4

**Table IV: Attitudes towards HTC and selected characteristics of pregnant women attending antenatal clinic in Adeoyo Maternity Hospital, Ibadan.**

Characteristics	Attitude towards HTC		p value	OR and 95% CI
	Good n(%)	Poor n(%)		
<b>Number of sexual partners</b>				
1	155(56.0)	122(44.00)	<0.01	3.3; -3.7 to 2.97
>1	180(80.7)	43(19.3)		
<b>Marital status</b>				
Single/separated	4(57.1)	7(42.9)	0.02	3.7; 16.8 to 0.8
Cohabiting/ married	331(67.7)	158(32.7)		
<b>Age group (years)</b>				
15 - 24	106(64.9)	59(35.1)	0.74	0.8; -1.5 to -0.5
25 - 34	176(67.7)	84(32.3)		
≥35	50(69.4)	22(30.6)		
<b>Education attained</b>				
None/ primary	71(68.3)	33(31.7)	0.28	0.73; -0.9 to -0.6
Secondary	165(64.0)	93(36.0)		
Post secondary	99(71.7)	39(28.3)		
<b>HIV status</b>				
Negative	330(67.9)	156(32.1)	0.01	3.9; 39.0 to 0.39
Positive	5(35.7)	9(64.3)		

negative attitude (score below mean). Table IV shows the relationship between general attitude to HTC and some respondents' characteristics. When asked whether they will be willing to pay for HIV screening, 93.2% gave a positive response while 95.0% said they were willing to advise people to go for HIV screening. Regarding the expectation of negative reaction from their spouse to seropositive status disclosure, a significantly higher proportion of women who were HIV positive expected a supportive reaction compared with HIV negative women. (64.3% versus 35.7%,  $p = 0.02$ ).

## DISCUSSION

This study set out to determine the perception about the opt out method used for HTC while also exploring the background knowledge about HIV and its mode of transmission among pregnant women attending ANC at Adeoyo Maternity Hospital in Ibadan. Health personnel in the hospital were the main source of information about HIV in this study. This is rather disturbing as it implies that information about HIV is not readily available until contact is made with a health facility. This could affect the control of the HIV epidemic because low risk heterosexual sex is the commonest route of HIV transmission in Nigeria responsible for approximately 80% of HIV infection.<sup>4</sup> The fact that majority of these pregnant women were married is an evidence that they are at risk of HIV infection from this route. More easily accessible and readily available means of

information dissemination about HIV are required at community level if HIV is to be aggressively controlled. The media and faith based organisations could be utilised in this respect just as it has been used successfully in Ghana,<sup>14</sup> a country also in west African region. These means of public health education have also been used successfully to influence people's health decisions and habits.<sup>15,16</sup> The respondents were very knowledgeable about the routes of HIV transmission and treatment. These findings are comparable with reports from studies in other parts of Nigeria.<sup>17,18</sup> In this study, the knowledge about HIV transmission from mother to child was high compared to what was found in these earlier studies. This is likely to be as a result of the quality of counselling sessions the pregnant women had during HTC as they have all gone through the counselling process and almost all had HIV screening prior to this study. The HTC obviously had a positive impact on their knowledge of HIV transmission. However, there were still some significant misconceptions about HIV transmission and this could lead to stigmatisation of HIV patients and so more education and reorientation need to be done to correct these misconceptions.

The importance of female education is seen in the knowledge of HIV transmission and treatment which is higher among the educated women. Education has been found to be a consistent determinant of good knowledge and attitudes towards so many health issues<sup>11,19</sup> and it remains a vital factor in HIV education. Similar finding in those in the higher socioeconomic class could be explained by the fact that those in the higher socioeconomic class were the ones likely to have better education and their education empowers them to have more economic power, thus improving their social status.

Almost every pregnant woman interviewed had been screened for HIV using the 'opt out' strategy and this is quite impressive. However, it is likely that the uptake for HTC was high because of the fear of suspicion of being HIV positive should they

decline testing. It is also likely that the women thought they may be denied antenatal care if they refuse testing. This brings to question the voluntariness of the 'opt out' strategy as about a fifth of the study participants felt that they were forced to do HTC. This has been similarly reported in earlier studies.<sup>19,20</sup> Some of them may also not have been aware that HIV testing was optional as shown in a study in Kenya<sup>20</sup> in which only 17% of pregnant women interviewed knew that the testing was not compulsory and it was shown that the ability to make informed decision to decline HIV testing was associated with knowing that the test was optional. Another study from Canada revealed that pregnant women were often not told that they had the right to refuse HIV screening.<sup>21</sup> This could prevent those who suspect that they could be HIV positive from accessing HTC services and ANC in hospital settings thereby sabotaging the efforts to prevent mother to child transmission of HIV. The inadequacy of manpower may be contributory to the lack of provision of the full complement of HTC. The sessions may be hurriedly done due to the high work pressure resulting in low quality of counselling thus, resulting in inadequate understanding of the process by the women. Various studies have demonstrated that ensuring good quality service is central to making these women understand the reason for the procedure.<sup>20,21</sup>

The problem of inadequate privacy has been reported in studies in resource limited settings.<sup>19,22</sup> This can compromise the quality of HTC as the women may not feel free to ask some intimate questions<sup>23</sup> making the counselling session a waste of time eventually. Privacy is one of the strengths of VCT and this can still be incorporated in HTC to enhance its quality.

In view of the fact that the other aspects of HTC services provided by the hospital were highly rated by the respondents, improving privacy by adapting individual counselling as seen in VCT may further improve HTC services in this health facility. However, this will require more manpower in form of counsellors and more designated spaces for

counselling. This could be difficult especially in resource limited setting but can be put into consideration when planning programmes for HTC in future to ensure improved services.

The respondents' positive attitude towards HTC in this study may be related to the women's concern about their unborn babies being infected by the virus should they be HIV positive. Similar findings were reported in other studies<sup>17,18</sup> where pregnant women were willing to have HTC and will support anyone doing HCT if it would protect the unborn child from HIV. According to the Nigerian NDHS of 2008<sup>11</sup>, 87% of pregnant women in south west Nigeria had ANC received from a skilled provider reflecting a relatively good utilisation of health facilities compared with most other parts of the country. This can account also for the good attitude towards HTC in these women as they appreciate the benefits of utilising services in health care facilities. The positive attitude exhibited by those who had a history of more than one sexual partner may be as a result of their perceived higher risk of contracting HIV and so will want to protect their unborn child. The respondents who were married or cohabiting with their partners were also likely to have a higher commitment to their relationships and families and so were likely to be more willing to take steps to ensure they benefit from HTC services compared with single or separated mothers. The HIV negative mothers' good attitude towards HTC may be because they are happy to know that they are HIV negative making them to be favourably disposed to HTC.

The anticipated positive reaction to positive HIV status from a spouse by HIV negative women could be as a result of their personal experiences even though this study did not investigate this. The HIV positive ones might have responded based on the perceived stigmatisation associated with being HIV positive.

Only one urban health facility was used in this study due to time and resources constraint. A similar study involving more health facilities including primary health care centres and health

facilities in rural areas may yield different results. This can limit the generalizability of the result of this study.

The knowledge about HIV transmission and treatment is quite high among these pregnant women in Ibadan but the misconception about the routes of transmission should be addressed to prevent stigmatisation. Inadequate privacy was a major complaint about 'opt-out' strategised HTC service rendered in the hospital and this can be improved upon when planning similar services in future. Even though the uptake of HTC appears excellent, pregnant women should be made to understand at all times that the decision to test is voluntary so as to ensure the HTC process is completed and women can come freely to receive ANC without unnecessary pressure.

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