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# Perspectives of Women on Strategies to Improve the Number of Male Partners Testing for HIV at the Antenatal Clinic in Western Kenya, 2015.

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**Abstract-** Mother to child transmission of HIV (MTCT) remains a significant public health problem in Western Kenya. Male partner testing at the antenatal clinic (ANC) has been cited as a key strategy to reduce MTCT. The Western Kenya region has a high MTCT rate of 15% but low rate of testing for men at the ANC. We sought to describe the strategies for improving this low level of male partner testing. We conducted a facility-based cross sectional study in four health centres between February and April 2015. We interviewed women who were aged  $\geq 18$  years and had a living child aged  $\leq 12$  months, who were attending immunization clinic at the four health centers. A pre-tested standardized questionnaire was used to retrospectively collect information on strategies to improve male partner HIV testing at the ANC. Data was analyzed using Epi Info7. We performed descriptive statistics and further calculated prevalence odds ratios (PORs) and their 95% confidence intervals (CI) and factors with p-values  $\leq 0.05$  were considered statistically significant. We interviewed 216 participants, whose mean age was 26.1 years ( $\pm 5.5$  years). There were 119 (55%) who had attained post primary education, 32 (15%) were employed, 189 (87.5%) were married and 204 (94.4%) had attended public health facilities for ANC services. There were 31 (14%) women whose male partners had accompanied them to the ANC and undertook a HIV test. Formal invitation of the men to attend ANC (POR 3.1, CI=1.1-8.3) was associated with male partner HIV testing. Few men tested for HIV at the ANC. Formal invitation of the men to attend ANC should be implemented as a strategy to improve male partner HIV testing at the ANC.

**Index Terms-** Male involvement, ANC, MTCT, Kenya

## I. INTRODUCTION

Human immunodeficiency virus (HIV) transmission remains a significant public health problem in sub-Saharan Africa (1), a region which has continued to account for up to 90% of the HIV burden globally. A key challenge that has accompanied this high burden is the increased transmission of the virus from the mother to the child (MTCT) during pregnancy or after delivery. The testing of pregnant women for HIV during antenatal clinic (ANC) visits is crucial to reduce the high rate of MTCT, and male partner testing at the ANC has been identified as a key strategy to reduce MTCT. Kenya has a HIV prevalence of 5.6%

and Nyanza region in western Kenya has a HIV prevalence of 15.1% with a high MTCT rate of 15% (2). In Kenya, only 10-16% of pregnant women are accompanied by their male partners to the ANC for couple testing (3,4). This figure is even lower in the Western part of the country where only 8% of men have been reported to visit the ANC for couple testing (5).

Some of the socio-demographic reasons cited for this low involvement include women who get into relationships or marriage at young age, lack basic education, are unemployed with little income or are in marriage or relationship with men who lack basic education and have no employment (6,7,8,9). Health system related factors have also been reported including male unfriendly ANC staff who are predominantly female and who treat the few men visiting ANC in an unpleasant manner and the fact that men are invited to attend the ANC verbally by their partners, a process that most men do not take seriously (8,10,11). Long waiting time at the ANC (12) and scheduling of ANC visits during the week days when men are busy at their work places also discourages their attendance (13,14,15). Cultural ideologies have been reported to discourage men from attending the ANC. Many men fear attending ANC to avoid being labelled as weak or dominated by the partner (8,10,14) and they would prefer testing at alternative sites (4,16). Other men believe their role is simply to provide financial support to the woman to enable her attend ANC (14), while others believe the woman's status will be similar to theirs so there would be no additional benefit in them testing for HIV at the ANC (17,18). Since MTCT is still a significant public health problem in Western Kenya, we conducted a study with an aim to describe the strategies for improving male partner HIV testing.

## II. METHODS

### Study Settings

The study was conducted in Kisumu County in western Kenya. We purposively selected four health centers in Kisumu East sub-county for the interviews.

### Study Design and Population

We conducted a facility-based cross sectional study in four health centres between February and April 2015. The study population was women aged  $\geq 18$  years who had delivered and had a living child aged  $\leq 12$  months, and were attending mother-child health clinics (MCH), for child immunization services at

the four health centers. Further eligibility criteria required the woman to have been in a relationship or marriage with an adult male during pregnancy; she should have made at least one ANC visit during pregnancy and should have been a resident of the sub-county for the entire period of pregnancy and delivery of the child.

**Sampling Procedures**

The total sample size was calculated using Cochran’s formula for representative sample size for proportions (19). We made the assumptions that: prevalence of male partner involvement in EMTCT was 15% (20) with 5% precision of the study and 95% confidence level. After adjusting for 10% non-response rate, we obtained a sample size of 216 participants. Systematic random sampling was used to select participants for interview from the daily entries in the MCH register and exit interviews were conducted.

**Data Management and Analysis**

A pre-tested standardized questionnaire was used to collect information on the strategies to improve male partner HIV testing at the ANC. Data was entered and cleaned in Microsoft Excel 2010 and analyzed using Epi Info7. We calculated proportions for categorical variables while means and medians were calculated for continuous variables. Using male partner testing at during the ANC period as the outcome variable, we further calculated prevalence odds ratios (ORs) and their 95% confidence intervals (CI) for the suggested strategies to improve male partner HIV testing at the ANC and reported factors with p-values ≤ 0.05 which were considered to be statistically significant.

**Ethical Approvals and Considerations**

Ethical clearance for this study was obtained from Jaramogi Oginga Odinga Teaching and Referral Hospital Ethical Review Committee. Additional permission was granted by the Kisumu

County Health Management Team to conduct the study in the selected health facilities. This study had minimal risk to the participants and we obtained written, informed consent from all participants.

**III. RESULTS**

We recruited 216 participants. They had a mean age of 26.1 years (±5.5 years). There were 189 (87.5%) who were married, with a mean age at time of marriage of 20.9 years (±3.8 years). Majority of the women (94.4%) had attended ANC in public health facilities. There were 134 (62%) women who were Protestants and 50 (23%) were Roman Catholics. There were 31 (14%) women whose male partners had accompanied them to the ANC and agreed to undergo HIV testing

The women reported the following as the reasons for the low male partner HIV testing during the ANC: Fear of HIV test among the men was reported by 60(28%) women while 49 (23%) felt that men don’t attend ANC because they believe it is the woman’s responsibility and 31 (14%) reported that men were unable to visit ANC due to busy work schedule. Fifteen (7%) women reported that some staff in the clinics were unfriendly, inconsiderate and sometimes harsh to the men while fear of a positive status among men who have multiple sexual partners was reported by 16 (7%) of the women. Eleven (5%) women reported that men see no benefit of testing for HIV at the ANC because they believe the woman’s status will be similar to theirs, while 2 (1%) women felt that women need to inform the men and remind them on the need for them to test for HIV at the ANC. There were 32 (15%) women who reported that men don’t test at the ANC because they were ignorant.

**Table 1: Suggested reasons for low male Partner HIV Testing in Western Kenya, 2015**

Reason	Frequency	Percent
Men fear undergoing HIV test	60	28
Men believe it is the woman’s responsibility to attend ANC and get tested	49	23
Men are ignorant on need for them to test at the ANC	32	15
Busy work schedule discourages men from visiting ANC	31	14
Men with multiple sexual partners fear they will be found out	16	7
The ANC is not male friendly	15	7
Men believe woman’s status is a proxy of their ( man) own status	11	5
Some women don’t remind the men to attend ANC	2	1

The following strategies were suggested by the women to improve male partner testing at the ANC. There were 78 (36%) who suggested that health promotion targeting men should be provided by community health volunteers so as to improve awareness among the men and inform them of the need for them to visit the ANC with the women and undergo a HIV test. Twenty four women (11%) suggested that couple testing at the ANC should be promoted and women who are accompanied by the man should be attended to first, while 23 (11%) felt that men

should be formally invited to the ANC using an invitation card. There were 17 (8%) women who suggested that more male staff should be deployed to the ANC to make it male friendly and 12 (6%) suggested that ANC visits should be scheduled during the evenings or weekends when men are not busy at their work places. The remaining 62 (29%) women gave no suggestion. On bivariate analysis, formal invitation of men using a card (POR 3.1, CI=1.1-8.3) was statistically significant.

**Table 2: Bivariate analysis of strategies to improve male partner HIV testing at the ANC in Western Kenya, 2015**

Suggested Strategy	POR (95% CI)	p-value
Male partner health education	1.3 (0.9-2.9)	0.47
Mandatory couple testing	2.2 (0.8-6.1)	0.11
Formal invitation	3.1 (1.1-8.3)	0.02
Male friendly ANC	1.5 (0.4-5.8)	0.52
Weekend clinics	1.2 (0.3-5.8)	0.81

#### IV. DISCUSSION

In this study, our aim was to describe the strategies for improving male partner participation in HIV testing at the ANC. We found that formal invitation of the men to the ANC using a card can improve their participation in HIV testing at the ANC. This validates findings from past studies in Malawi and Tanzania, in which males found the formal invitation card to be a respectful way of asking them to visit the ANC (11,15). Another possible reason could be that the men feel they are part of the health care system when they receive a formal invitation directly from the health facilities and not verbally from the women. Although not statistically significant in this study, the suggestion that men be provided with health education has been reported in past studies, so as to address false beliefs, for example that the woman's HIV status is a proxy of the man's (17,18), considering that some men could have other sexual partners. Health education would also reduce the fear of undergoing a HIV test and promote other prevention measures like consistent use of condoms. While some of the participants suggested that couple counseling and testing be mandatory, this strategy has not been reported in other studies and would be difficult to implement, especially during instances when the man is not available at the time of the scheduled ANC visit. Making the ANC male friendly has been reported in past studies. Health workers' lack of consideration and engagement with men who visit the ANC is a barrier to male involvement and the clinics need to have more male staff and have flexibility in timing of the visits (13,14,15). Women who are accompanied should also be given priority in terms of services provision to avoid long waiting times at the ANC.

This study considered the perception of the women concerning male partner HIV testing. While recall bias could have been a limitation, it was minimized by interviewing only women who had children  $\leq 12$  months of age. We conclude that male partner HIV testing at the ANC was low and formally inviting the men to accompany their pregnant partners to the ANC using a card or a notification slip can be an effective strategy. We recommend that this strategy be adopted so as to improve the rate of male partner HIV testing at the ANC. We also recommend that health promotion activities that educate men on the importance of testing at the ANC be implemented

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