Home, Antenatal Clinic or VCT: Preferences of Pregnant Women and Their Partners for Male HIV Testing

Alfred Osoti[1,2], Grace John-Stewart[3], James Kairie[2], John Kinuthia[2,4], Barbra Richardson[5], Daisy Krakowiak[1], Carey Farquhar[6]

[1]Epidemiology, University of Washington, Seattle, WA, United States,[2]Obstetrics and Gynecology, University of Nairobi, Nairobi, Kenya,
[3]Epidemiology, Pediatrics, Medicine, Global Health, University of Washington, Seattle, WA, United States,[4]Research, Kenyatta National Hospital, Nairobi, Kenya,
[5]Global Health, University of Washington, Seattle, WA, United States,[6]Epidemiology, Medicine, Global Health, University of Washington, Seattle, WA, United States

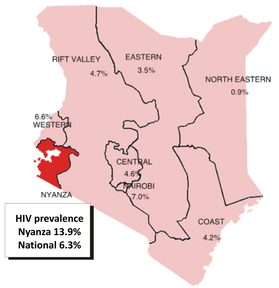
Background

- Male partner HIV testing and counseling (HTC) enhances prevention of mother to child HIV transmission (PMTCT) [1-2]
- However male partner HTC especially during pregnancy remains low[3]
- Identifying male HTC models might improve male partner uptake of HIV testing and involvement in maternal and child health
- Study conducted in Nyanza which has the highest HIV prevalence (more than twice national prevalence) and HV serodiscordance

Methodology

- Study population comprised pregnant women and their male partners participating in a randomized trial of home-based versus clinic-based male partner HTC to improve male partner testing during pregnancy in Nyando, Nyanza, Kenya
- A cross sectional study nested within the randomized trial in which participants were asked their preferred models of male partner testing among home-based, voluntary counseling and testing center (VCT) or antenatal care (ANC) clinic based
- Proportions of women and male partners who preferred each testing model were determined at baseline and then compared 6 weeks later to evaluatechanges in model preferences using McNemar's tests
- Data collection was conducted using ACASI (Audio computer assisted self-interviews) on an open data kit (ODK) platform

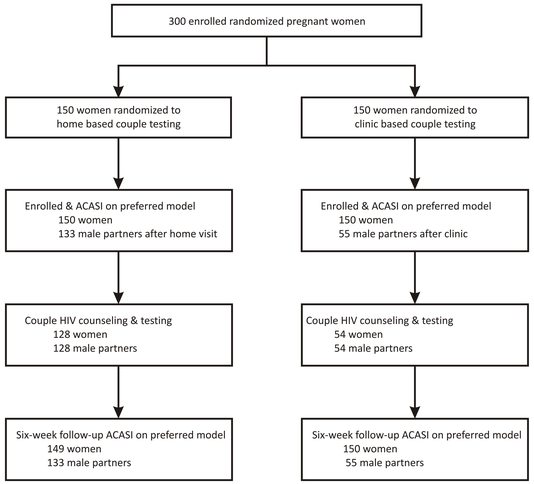
Figure 1: Study Setting





ODK on a smartphone

Figure 2: Study Participants



ACASI: Audio computer assisted self-interview

Table 1: Baseline characteristics

a) Enrolled women (n=300)

Characteristic		Home visit (N=150) Number (%) or	Clinic visit (N=150) Median (IQR)
Age (years)		22 (20,25)	22 (20,26)
Highest education level	Primary or lower	103 (69%)	99 (66%)
Marital status	Monogamous	131 (87%)	131 (87%)
Economic status	Daily household income <2$	111 (74%)	113 (75%)
HIV prevalence		21 (14%)	27 (18%)

(b) Enrolled male partners (n=188)

Characteristic		Number (%) or Median (IQR)
Age (years)		29 (25,35)
Highest education level	Primary or lower	109 (58.0)
Marital status	Monogamous	165 (87.8)
Economic status	Daily household income ≥2$	113 (60.1)
HIV prevalence		30 (16.0)

Table 2: Female partner preferences on model of male partner HIV testing during pregnancy

Model	Baseline Number	(%)	Follow up Number	(%)	OR	95%CI	P Value
Home	162	(54.0)	196	(65.3)	1.90	1.26-2.89	0.001*
Clinic	102	(34.0)	76	(25.3)	0.56	0.35-0.87	0.007*
VCT	36	(12.0)	28	(9.3)	0.72	0.39-1.31	0.258

Table 3 Male preferences on model of male HIV testing

a) Male partners who underwent home-based couple HTC

Model	Baseline Number	(%)	Follow up Number	(%)	OR	95%CI	P Value
Home	95	(71.1)	116	(87.2)	3.33	1.54-7.98	<0.001*
Clinic	19	(14.3)	9	(6.8)	2.30	1.02-5.18	0.041*
VCT	19	(14.3)	8	(6.0)	2.60	1.12-6.05	0.035*

b) Male partners who underwent ANC clinic based HTC

Model	Baseline Number	(%)	Follow up Number	(%)	OR	95%CI	P Value
Home	33	(60.0)	36	(65.5)	1.27	0.54-3.10	0.548
Clinic	17	(30.9)	13	(23.6)	0.69	0.30-1.59	0.394
VCT	5	(9.0)	6	(10.9)	1.22	0. 37-4.04	0.706

** Statistically significant*

Discussion

- Pregnant women and their male partners were more likely to prefer home based compared to the recommended ANC clinic or widely available VCT center based testing. The greatest impact on male partner testing is likely to be achieved through a home based model
- Women and men were less likely to recommend ANC based testing, the main model of male partner testing
- Men were less likely than women to prefer ANC clinic based testing
- The proportion of women and male participants who preferred home partner male testing increased at follow-up

Conclusions

- Home-based male partner testing was preferred over VCT based or ANC clinic based testing by both pregnant women and their male partners
- Home-based male partner HTC during pregnancy may increase the number of male partners who undergo HTC, and identify HIV negative women in HIV discordant relationships who are at high risk of HIV acquisition and mother-to-child HIV transmission

References

1. Aluisio A, Richardson BA, Bosire R, John-Stewart G, Mbori-Ngacha D, Farquhar C. Male antenatal attendance and HIV testing are associated with decreased infant HIV infection and increased HIV-free survival. *J Acquir Immune Defic Syndr* 2011,**56**:76-82
2. Farquhar C, Kiarie JN, Richardson BA, Kabura MN, John FN, Nduati RW, *et al.* Antenatal couple counseling increases uptake of interventions to prevent HIV-1 transmission. *J Acquir Immune Defic Syndr* 2004,**37**:1620-1626
3. Auvinen J, Suominen T, Välimäki M. Male participation and prevention of human immunodeficiency virus (HIV) mother-to-child transmission in Africa. *Psychol Health Med* 2010,**15**:288-313

Acknowledgments

- NIH, Fogarty International Centre grant #D43 Tw000007
- Department of Obstetrics and Gynecology, University of Nairobi
- Department of Obstetrics and Gynecology, AIC Kijabe Hospital