Multisite qualitative evaluation of Microbicide/PrEP Acceptability among Mothers and Male Partners in Africa: the MTN-041 (MAMMA) Study



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Background

- Pregnant and breastfeeding (P/BF) women in sub-Saharan Africa are at high risk of acquiring HIV for biological and behavioral reasons^{1, 2}, yet they are typically excluded from microbicide/PrEP trials.
- In preparation for phase 3b trials in P/BF women, we explored attitudes about use of a microbicidal vaginal ring (VR) or daily oral PrEP, and perceptions of HIV risk among recently or currently P/BF women and male partners (MP) of P/BF women in sub-Saharan Africa.

Methods



- We conducted 16 single-sex focus group discussions (FGDs) with HIV-uninfected women currently/recently P/BF and men with currently/recently P/BF partners.
- Participants were recruited from various settings including antenatal and postnatal clinics (women); construction sites and general community locations (men).
- Participants completed a background questionnaire, viewed a 4-min educational video (http://bit.ly/HIVprevmethods) and handled prototype placebo products.

Analysis

- Site representatives and analysis team met for workshops in-person and by phone to discuss initial themes emerging from the transcripts and to inform codebook development.
- The codebook was iteratively developed using the RTA and insights from the workshops, and followed a socio-ecological framework.
- English transcripts were coded in Dedoose by an analysis team of 4 who met weekly to discuss interesting findings and review the coding process in order to maintain high intercoder reliability.
- Questionnaire responses on decision making (Q), key influencers (Q), and HIV prevention methods (Q+d) were summarized with counts and frequencies.



- FGDs were conducted in local languages using semi-structured guides and were summarized in reports for rapid thematic analysis (RTA).
- Interview guides covered HIV risk perceptions during P/BF, decision making, key influencers and interest in prevention method use while P/BF.

MTN-041 (MAMMA) Study (N=128) and Sites

🖈 Kampala, Uganda (MU-JHU): N=37 Blantyre, Malawi

(JHU-CTU): N=31

★ Chitungwiza, Zimbabwe (UZCHS-CTRC): N=33 ☆ Johannesburg, South Africa (Wits RHI): N=27



Results

Demographics of Participants

Socio Ecological Spheres of Influence on Future Use: Facilitators 🗸 & Barriers 🗶

Variable	Women	Men	
			Dyad's HIV
Total	N=65	N=63	Protection
	07.4	00.0	
Mean age (range), years	27.1	30.6	
	(19-40)	(19-54)	<u></u>
Secondary education completed	51%	56%	Effica
Christian religion	97%	84%	
Married or living with partner	77%	81%	Future Use
Food scarcity*	32%	25%	
"Agree" that partner might be having sex with someone else	40%	5%	Safety
Currently pregnant/Partner pregnant	50%	32%	
Median number of live births/Number of children fathered (range)	2 (0-6)	1 (0-8)	E S B
Ever breastfed (among parous women N=53)	91%	NA	

Institutional

Social-Structural

*Worried about not having enough food 3+ times in the past 4 weeks



(ey Influencers during Pregnancy and Breastfeeding (♀)				
	Pregnancy			
62%63%	Breastfeeding			

Baby: term; healthy, normal growth

Pregnancy: no complication, easy delivery

Lactation: tasty & enough milk production

Mother: no reproductive health impact; no

harm to relationship

	Family/Social		
MP	/Father		
Dyad: Baby & Mom P vs. BF preference (✓ or *) Choice & dosage form personal preference (✓ or *)	 Joint decision making Partner support Main source of HIV risk (or *) Relationship disruption Mistrust 	 Understanding and approval Disclosure Enforcement of beliefs & traditional values Rumors; ARV-stigma Privacy needs for product storage 	

Endorsement by traditional and biomedical healthcare providers (HCP) O Opinions of religious & other leaders (✓ or ×) O Practices & prescriptions (✓ or ≍)

HIV & sexual stigma **×**Fear of conspiration × Patriarchy O P/BF related beliefs (✓ or ≯) Unfamiliarity

Perceived Benefits </br> **& Concerns With Products during P/BF**

Product	Vaginal Ring	Oral PrEP
General	 Protection from philandering MP/husband Long acting (ease of use) Discreet, private Vaginal administration unfamiliar Unhygienic May cause cervical cancer, infections Interference with sex 	 Protection from philandering MP/husband Familiarity with oral pills Protection from multiple sexual routes "Tested and approved" Daily dosing (forgetfulness) HIV stigma (from ARV taking) Pills are for sick people Requires disclosure/Elicits questioning
Pregnancy and delivery period	 Simpler to use early in pregnancy Vaginal products proscribed (taboos) Vagina "too busy", enlarged, fragile Baby entangled/injured during delivery Clinician unaware of ring at delivery Ability to insert/remove ring when heavily pregnant Exacerbates physical discomfort of pregnancy Misperceived as abortion tool 	 High potency of bitter drugs – Wits RHI / Poor health effects of bitter drugs – Blantyre // Oral meds proscribed (taboos) Exacerbate nausea & other symptoms Risk of miscarriages during1st trimester Potent drug may disable baby Compatibility with traditional herbs & meds Drug interaction with hormones Increases appetite
Breastfeeding period	 Local drug exposure (no effect on baby) May dry out milk 	 Exposure of the baby to HIV protective drug Breastmilk contamination or tasting bitter Dries out milk production

0%	20%	40%	60%	80%	10
 Both	equall	y ∎H	er I	Him	N/

Decision Making during Breastfeeding (\bigcirc)						
Her use of traditional medicines	10% 19%					
Her diet and nutrition	27%	58%				
Having sex	67%	8%				
Where baby goes for well baby visits	50%	42%	•			
Postnatal care and HIV testing	50%	46%				
Her medication and vitamin use	35%	56%				
0% 20% 40% 60% 80% 100% ■ Both equally ■ Her ■ Him ■ N/A						

	16%1070	13% 8%	10%11%
The father of your baby	Your mother	Your doctor	Other

16%19%

Awareness (A) and Ever Use (U) of **HIV Prevention Methods among** Women and Men



* $\stackrel{\circ}{\supset}$ N=3 (WRHI $\stackrel{\circ}{\swarrow}$); $\stackrel{\circ}{\subseteq}$ N=2 (MU-JHU=1 $\stackrel{\circ}{\swarrow}$; Zengeza=1 $\stackrel{\circ}{\bigstar}$)

References

- 1. Gray RH, Li X, Kigozi G, et al. Increased risk of incident HIV during pregnancy in Rakai, Uganda: a prospective study. Lancet 2005;366:1182-8.
- 2. Thomson KA, Hughes J, Baeten JM, et al. Increased Risk of Female HIV-1 Acquisition Throughout Pregnancy and Postpartum: A Prospective Per-coital Act Analysis Among Women with HIV-1 Infected Partners. J Infect Dis 2018.

Conclusions

- Both women and men perceived P/BF as times of high HIV risk. Male partners were identified as the main source of risk and their philandering was a primary motivator for product use.
- Emphasis was placed on the dyad's health, the mom (as a person) and as a family, with particular concern for the safety of the fetus during pregnancy.
- Benefits and concerns for both products were raised and there was a general recognition that product choice is a matter of personal preference.
 - There were more perceived concerns than benefits, given the novelty of the indication and mode of delivery (especially for ring).
- Product endorsement by HCP was deemed necessary for product use. Shared decision making and support from male partners were also seen as critical for product use.
- Participants recommended involving men and providers in sensitization efforts for future trials.

The Microbicide Trials Network is funded by the National Institute of Allergy and Infectious Diseases (UM1AI068633, UM1AI068615, UM1AI06707), with co-funding from the Eunice Kennedy Shriver National Institute of Child Health and Human Development and the National Institute of Mental Health, all components of the U.S. National Institutes of Health. The content is solely the responsibility of the authors and does not necessarily represent the official views of the National Institutes of Health.

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