



Increasing male engagement in Prevention of Mother-to-Child Transmission of HIV: What works in sub-Saharan Africa?

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11 The Editor, BMJ

November 22, 2018

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13 Dear Editor,

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16 **Re: Increasing male engagement in Prevention of Mother-to-Child Transmission of HIV: What**
17 **works in sub-Saharan Africa?**
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20 The South African Medical Research Council and BMJ have agreed, following discussions with Joe Freer,
21 Paul Simpson and Geetha Balasubramaniam, to compile a series on ***“Scaling up the impact of PMTCT***
22 ***programmes whilst improving maternal and child health in Sub-Saharan Africa: complexities,***
23 ***measurements and issues to consider”***. This series will be a collection of reflective, analytical papers
24 developed from country-level experiences of monitoring programmes that prevent MTCT in the context of
25 maternal and child health.
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28 This paper is being submitted as part of this series.

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30 In this analysis piece, we argue that suboptimal performance of PMTCT programs in sub-Saharan Africa is
31 partly attributable to inadequate male involvement in antenatal and postnatal care, and the elimination of
32 mother-to-child transmission of HIV will require innovation beyond that now integrated into African
33 programs.
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36 We look forward to hearing from you soon.

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38 Yours sincerely,

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41 Muktar Aliyu, MBBS, DrPH, MPH, on behalf of the co-authors
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3 **TITLE: Increasing male engagement in Prevention of Mother-to-Child Transmission**
4 **of HIV: What works in sub-Saharan Africa?**
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6 *Muktar Aliyu and colleagues describe implementation challenges to scaling up male partner*
7 *engagement in programs for prevention of mother-to-child HIV transmission in sub-Saharan*
8 *Africa*
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42 Council (SAMRC); CA is assistant professor in the Vanderbilt Institute of Global Health; SV is dean of
43 the Yale School of Public Health. MA, NS, CA and AG conceptualized the study. SS, TR and SV
44 contributed to study methodology and data interpretation, all authors contributed to methodology,
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Summary

Suboptimal performance of prevention of mother-to-child HIV transmission (PMTCT) programs in Africa is partly attributable to inadequate male involvement in antenatal/postnatal care. Though interventions to increase male engagement with PMTCT may need adaptation to local sociocultural circumstances, effective interventions should incorporate three key elements: (1) community PMTCT knowledge and norms regarding male participation in antenatal/postnatal care; (2) community-based counseling of male partners to encourage antenatal clinic attendance and provide support during pregnancy; and (3) the availability of private space and professional couples-based counseling and testing services within health facilities. Male engagement can help improve pregnancy and HIV outcomes for women and children.

Introduction

Elimination of mother-to-child transmission (EMTCT) of HIV in sub-Saharan Africa (SSA) will require innovation beyond that now integrated into African programs. There is compelling evidence that male partner involvement in prevention of mother-to-child transmission (PMTCT) programs is precisely such an innovation, yielding beneficial health outcomes for mothers, infants, and the men themselves. Supportive male partner involvement in PMTCT encourages HIV testing uptake in pregnancy, increases maternal antiretroviral therapy (ART) initiation and adherence, improves HIV communication and prevention among couples, and decreases new infant HIV infections, with attendant increase in HIV-free infant survival.^{1,2}

Stagnation in the reduction of MTCT in parts of SSA,² coupled with greater numbers of persons living with HIV and advances in ART, increase the urgency of the accelerated scale-up of effective strategies.

Despite the prioritization of active male partner engagement in many parts of SSA, explicit implementation guidelines are largely absent in national policy documents.³ The variability in strategies to increase male partner involvement, coupled with differences in socio-cultural contexts, complicates the process of translating research to policy and practice. We provide a brief narrative synthesis of successful male partner involvement/engagement interventions for PMTCT in SSA, highlight implementation challenges and solutions, and propose recommendations to scale up successful strategies.

Challenges in studying male partner involvement in PMTCT

Low background levels of male involvement in antenatal care

The first step in the PMTCT cascade of care involves maternal HIV testing and counseling in antenatal care clinics (ANC). Many countries in SSA continue to have low levels of maternal and male ANC attendance.

For example, in Nigeria only 51% of women meet the World Health Organization (WHO) recommendation of ≥ 4 ANC visits,⁴ and in South Sudan only 17% of pregnancies attended at least four ANC visits in 2009.⁴

Male ANC attendance data often are not collected and/or reported; measures are typically based on the number of men making ≥ 1 ANC visit(s) among men with pregnant female partners. Until recently, partner

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3 accompaniment rates were low in certain parts of SSA. For example, in rural Mozambique, women were
4 accompanied by male partners to their ANC visits <1% of the time in 2012.⁵ Barriers to male ANC/PMTCT
5 attendance and involvement operate at multiple levels: community (e.g., expected gender roles in
6 reproductive health, HIV-related stigma), health system (e.g., female-only oriented services, negative
7 provider attitudes), interpersonal (e.g., couple mistrust, disclosure issues, fear of violence, age disparities),
8 and individual (e.g., poor maternal-child health knowledge; fear of HIV-related stigma).⁵⁻⁸
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18 ***Varied socio-cultural contexts, including gender roles and power dynamics***

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20 Differences in cultural norms within and between countries highlight the difficulty of generalizing the
21 effectiveness of a specific approach to improving male involvement in SSA. These variations include
22 gender roles and expectations in marriage and reproduction, family structures (including polygamy),
23 traditions and practices surrounding pregnancy, delivery, and breastfeeding, and the role of the extended
24 family in reproductive decision-making.⁹ Issues surrounding gender roles and power are especially relevant
25 where male involvement is concerned and serve as barriers to both male and female participation in
26 maternal health services. Socio-culturally entrenched expectations typically feminize participation in
27 antenatal services and masculinize decision-making.^{8,9} Hence, men often avoid participating and women
28 may defer independent decision-making in fear or respect of perceived male prerogatives and/or authority.
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30 Gender/intimate partner violence may be part of a dysfunctional dynamic, leading women to decline HIV
31 testing and/or use of needed ART. Yet accountability for service uptake and/or adverse outcomes is
32 shouldered by pregnant/postpartum women.⁹
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47 ***Measurement challenges, including varying definitions for male partner involvement***

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49 Many definitions for male partner involvement in ANC and PMTCT services have been presented in the
50 published literature. The term denotes men having adequate knowledge of, and participation in, maternal
51 health-related activities as supportive partners in decision-making for improved maternal-child outcomes.⁶
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53 Measurement definitions include HIV testing for men in the antenatal period, couples' HIV counseling and
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3 testing, and male attendance at ANC, deliveries, and/or postpartum visits.^{1,2,6,10} Some investigators have
4 adopted a composite index for male partner involvement based on an ‘involvement index’ of several factors,
5 including male ANC attendance, HIV testing, maternal economic support, knowledge/awareness of ANC
6 services and participation in contraception decision-making.^{6,11} The ideal “level” of male partner
7 engagement has yet to be defined and will likely vary widely. The logical follow-up question therefore
8 arises - what level of male engagement are policy-makers striving to achieve to reach EMTCT?
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18 ***Male partner involvement strategies as a component of bundled interventions***

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20 The success of bundled interventions on PMTCT outcomes is increasing the adoption of male partner
21 engagement activities.¹⁰ It is however, difficult to apportion the separate impact of the male partner
22 involvement strategy on the selected outcomes of interest. For example, a cluster RCT in Nigeria
23 comprising male involvement, task shifting, point-of-care CD4+ cell testing, and postpartum maternal-child
24 care integration demonstrated positive impact on ART uptake, mother-child retention in care and HIV-free
25 infant survival, but the specific contribution of male partner engagement on these outcomes is unknown.¹²
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27 A multisite study in Mozambique included community-based theater to de-stigmatize male partner support,
28 traditional birth attendant patronage, community-based male counselors, and private rooms for couples-
29 based HIV counseling and testing.⁵ Whereas the intervention led to increased male partner engagement, it
30 was not possible to identify which intervention components were most successful.⁵ Bundled interventions
31 can also be inefficient, as not all participants may need the same intensity of the interventions, and some
32 individuals may receive services that they do not need. At the same time, unitary interventions that
33 exclusively deploy male engagement are unrealistic; contextual and cultural factors will inevitably drive
34 the appropriate package to improve uptake and adherence of prevention services.
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51 ***Unintended effects***

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53 Women should be the final arbiters of their preferred level of male partner engagement. Some women may
54 be most comfortable managing their care independently, while others benefit from partner support. Male
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3 involvement strategies should also be designed to identify potential negative effects of encouraging male
4 partner engagement. Such negative effects could include decreased exclusive breastfeeding or stopping
5 breastfeeding early, or intimate partner violence and/or male partner pressure to alter a woman's preferred
6 choice of clinical services.¹³ These effects could have unintended consequences on female uptake of care,
7 and on maternal and child health. In extreme cases, denying ANC services to women who present without
8 male partners (whether by protocol or by overzealous practitioners) can discourage uptake and hinder
9 access and early initiation of maternal care.^{9,13,14}

20 **Available evidence from individual studies**

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22 Several approaches demonstrated effectiveness in research settings:

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24 ***Bundled interventions that integrate male partner involvement*** as comprehensive approaches to
25 improving PMTCT outcomes demonstrated effectiveness in a 2017 meta-analysis.¹⁰ In Nigeria, a cluster
26 RCT of bundled interventions (male involvement, task shifting, point-of-care CD4 testing and postpartum
27 integrated maternal-child health services) increased ART uptake, maternal-infant retention in care and HIV-
28 free infant survival.¹² In rural Mozambique, a partnership that trained male-to-male and traditional birth
29 attendant-to-pregnant woman counselors significantly increased uptake of provider-initiated counseling
30 and testing and of ART among pregnant women.⁵ Akama et al. reported on a bundled intervention focused
31 on demand creation (e.g., community mobilization), use of technology (e.g., text reminders to male
32 partners), and service delivery innovations (e.g., invitation letters) in Kenya. The intervention improved
33 linkage to HIV care, decreased time-to-ART initiation and improved facility-based delivery among
34 pregnant women.²

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47 ***Psychosocial approaches*** to increasing male partner involvement in PMTCT, including male peer-to-peer
48 support groups facilitated by trained personnel and often using cognitive/behavioral skills training, have
49 increased male ANC attendance with improved maternal outcomes.^{8,10} For example, the *PartnerPlus*
50 intervention in South Africa comprised weekly sessions for pregnant women and their partners to develop
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3 skills related to interpersonal communication, medication adherence, HIV knowledge, condom use and
4 disclosure.¹⁵ The study found an increase in consistent condom use and HIV-related knowledge.¹⁵
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7 **Verbal encouragement** by clinic providers may motivate pregnant women to bring male partners to
8 ANC.^{1,16} Theuring et al. (2016) found that verbal and written invitations to male partners have positive
9 effects on both rates of partner return and couple HIV counseling and testing, suggesting greater benefit of
10 verbal invitations in that context.⁷ A retrospective cohort study in Malawi that studied verbal encouragement
11 to motivate male involvement in PMTCT found involvement to be associated with condom use and
12 retention in care, but not with uptake of maternal ART.¹⁶
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16 **Provider-assisted partner notification via invitation letters** are widely employed to promote male
17 involvement.^{7,8,17-19} At least two RCTs have demonstrated the effectiveness of this strategy on male
18 involvement in PMTCT,^{17,18} though invitation letters may not have impact on uptake of maternal or infant
19 ART.^{10,19} Jefferys et al. (2015) reported the use of invitation letters resulted in comparatively higher rates
20 of male partner attendance at ANC in rural versus urban sites in Tanzania.²⁰ Similarly, in South Africa,
21 Yende et al. found letters were particularly motivational if they focused on fatherhood and primary health
22 care, rather than HIV testing.²¹
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26 **Community education and sensitization.** Limited PMTCT knowledge among men can hinder their
27 participation, delaying access to prompt and effective maternal care.^{7,8} Education/sensitization programs
28 engaging community leaders and men as role models can raise PMTCT knowledge and awareness among
29 men, combat negative attitudes,³ and improve engagement with the health care system. The impact of such
30 initiatives may not be limited to PMTCT. August et al. (2016) demonstrated that a community-focused
31 lifesaving skills curriculum increased male partner involvement in maternal health (defined by a composite
32 indicator) from 39% to 81%.²² Community education/sensitization campaigns are however, often transient
33 and may not produce sustainable changes in behavior.
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Evidence from systematic reviews and meta-analyses

More rigorous analyses on male partner involvement in PMTCT are needed. A Cochrane review²³ included one eligible study that provided invitation letters to pregnant women with an unexpected negative impact on PMTCT service uptake. Takah et al. (2017) included 17 articles that met eligibility criteria, also finding that invitation letters were ineffectual in improving male partner involvement in PMTCT.¹⁰ The most effective strategies for male involvement were psychosocial interventions delivered by trained personnel and complex community interventions (Table 1).¹⁰

Morfaw et al. (2013) summarized barriers and facilitators to male involvement in PMTCT. The most pertinent barrier was the societal perception that maternal health-related services such as ANC and PMTCT were “women’s activities”.⁸ Most facilitators were related to health system or community interventions, including sensitization education, providers encouraging HIV testing and male involvement, invitation letters, couples’ discussions, and male partner counseling and testing outside of the ANC setting. Predictors of male involvement included monogamous marriage or cohabitation, HIV sero-concordance, and female partners’ financial dependence on the men (Table 1).⁸

What changes do national HIV/PMTCT programs need to institute?

Acknowledging the need to adapt interventions to sociocultural circumstances, evidence suggest that interventions should target three key factors: (1) community PMTCT knowledge and norms regarding male participation in antenatal/postnatal care; (2) community-based counseling of male partners to encourage ANC attendance and provide support during pregnancy; and (3) the availability of private space and professional couples-based counseling and testing services within health facilities. Additionally, male partner engagement should not be tied to HIV status, women should not be penalized if their partners do not participate, and women should not be responsible for requesting the presence of a male partner without programmatic or community support. National HIV/PMTCT programs need to focus on Sustainable

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3 Development Goal (SDG) 5 (Gender Equality) as well as SDG 3 (Good Health and Well-Being) to achieve
4 the EMTCT goal by 2030.
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9 **Conclusion**

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11 Policies to promote male partner involvement in PMTCT need to respect the choices of women and
12 facilitate their autonomy in decision-making. Consensus regarding the definition of what constitutes male
13 partner involvement in PMTCT programs and what level is ideal will aid the development of clear national
14 guidelines and facilitate the evaluation of progress toward the attainment of national PMTCT goals.²⁵
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19 Studies are needed on cost-effectiveness of locally-designed and culturally-sensitive strategies to encourage
20 male partners' participation in PMTCT. Simpler male-targeted interventions like male-peer psychosocial
21 initiatives show promise, even as stand-alone strategies, if designed with input from community
22 stakeholders. Finally, the research agenda (Box 1) of integrated multi-component interventions must
23 succeed at reducing harmful gender norms and practices and reducing stigma for men in ANC settings.
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TABLE 1: Male Partner Involvement in PMTCT: Barriers, Enablers and Strategies found Ineffective †

Socio-Ecological Level	Barriers	Enablers	Ineffective in some studies
Individual (Male partner)	*Reluctance to learn one's HIV status ⁸	Invitation letter for couples' testing and counselling (delivered by community leader or female partner) ⁸ , or to promote fatherhood and primary health care	Invitation letter for couples' testing and counselling delivered by female partner ^{10,23}
	*Limited HIV and PMTCT knowledge ⁸	Prior HIV testing ⁸	Verbal encouragement/invitation ¹⁰
	*Lack of time for involvement ⁸	Prior knowledge of HIV ⁸	
	Fear of stigma ⁹		
Interpersonal (with female partner(s))	Fear of stigma/abandonment/ domestic violence ⁸	Monogamous marriage and cohabitation partnerships	Male partner invitation letter for couples' testing and counselling delivered by female partner ^{10,23}
	Poor communication among couples ⁸	Couples discussing PMTCT ⁸	Verbal encouragement/invitation delivered by female partner ¹⁰
	Mistrust/fidelity issues ⁸	Sero-concordance for HIV ⁸	
		Positive attitude on HIV status disclosure among female partners ⁸	
Health Facility/ Health System	Discourteous healthcare workers ⁸	PMTCT service delivery to men outside of antenatal care clinics/hours ⁸	
	Male unfriendliness of maternal healthcare clinics ⁸	Couple testing and counseling as standard of care ⁸	
	Long clinic wait times ⁸	Healthcare worker facilitation of disclosure process ⁸	
	Distrust in confidentiality of health system	*Psychosocial interventions delivered by trained staff ¹⁰	
Community/Society	*Gendered norms for antenatal care and PMTCT service interaction/utilization ⁸	Community education and sensitization ⁸	
	Lack of community awareness of the importance of male involvement ⁸	*Complex community interventions (combining couple, healthcare and community-targeted strategies) ¹⁰	
	PMTCT teachings in conflict with socio-cultural norms ⁸		

Government/Policy	Policies that fail to prioritize, accommodate and/or detail male involvement ²		
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† According to findings from systematic reviews and meta-analyses by Brusamento et al.,²³ Morfaw et al.,⁸ and Takah et al.¹⁰

* Most influential/impactful findings overall

Confidential: For Review Only

Box 1: Research agenda for improving male partner involvement in PMTCT programs

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6	Definition of male involvement and goal 'level'
7	Effectiveness of bundled interventions
8	Comparative cost effectiveness studies of various interventions
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10	Impact of male partner involvement interventions in rural vs. urban settings
11	Culturally sensitive interventions to influence gender norms on male involvement
12	Reframing maternal health and PMTCT to incorporate men's roles
13	Engaging men to define their role in PMTCT and craft workable interventions
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