

# Barriers to uptake and effective integration of PMTCT into SRH services in selected health facilities in Nairobi county, Kenya

## Abstract

**Introduction:** Prevention of Mother to child transmission (PMTCT) of HIV for a long time has been implemented as standalone programs. Recently, there has been increasing awareness and discussion on possible benefits of integrating Sexual and Reproductive Health (SRH) and PMTCT services to reduce mother to child transmission of HIV.

**Aims and objectives:** To identify barriers to PMTCT uptake and assesses challenges experienced in integration of PMTCT with SRH services.

**Material and methods:** The study employed mixed methods of study design and three stage cluster sampling strategy to recruit 340 HIV positive postnatal mothers. Twelve key informants were purposively selected from all selected study facilities. A structured questionnaire and a focus group discussion guide were used to obtain information from postnatal HIV infected mothers on barriers to PMTCT uptake. Key informants interview guides (KIIs) were used to obtain information from hospitals administrators and PMTCT staff on barriers to effective integration of SRH and PMTCT services. Data collected using questionnaires was analysed using Statistical Package for Social Sciences (SPSS) version 17. Qualitative data from key informants was analysed using Microsoft office excel.

**Observation and results:** Lack of partners support, stigma and discrimination were reported as the main hindrances to PMTCT uptake. Inadequate staffing and lack of specialized training was reported as a barrier to PMTCT and SRH services integration.

**Conclusion:** Barriers to PMTCT integration with SRH programme can be eliminated by addressing shortage of staff, equipping staff with specialized knowledge and skills on SRH and PMTCT.

**Keywords:** effective integration, barriers to PMTCT uptake, integrated sites, nonintegrated sites, sexual and reproductive health services, PMTCT services

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**Abbreviations:** AIDS, acquired immune deficiency syndrome; ART, anti-retro viral therapy; ARV, anti-retro viral drugs; CASCOs, county AIDs and STDs coordinating officers; CCC, comprehensive care clinic; DASCOS, district AIDs and STI coordinating officers; ERC, Ethical and research committee; HIV, human immunodeficiency virus; KDHS, Kenya demographic and health survey; KIIS, key informants interviews; PMTCT, prevention of mother to child prevention of HIV; PNC, Post Natal Clinic; SPSS, statistical package for social scientists; SRH, sexual and reproductive health; WHO, world health organization

## Introduction

While substantial progress has been made in reaching women who need PMTCT services, most pregnant women with HIV in Africa still do not have access to them. Many international organizations such as United States Agency for International Development (USAID) are working to rapidly expand outreach of PMTCT services. In many areas, the uptake of PMTCT services by women has been low due to a variety of barriers women face in accessing these services, which may include socio-cultural factors such as lack of community support, psychosocial barriers related to HIV stigma, socio-economic factors like lack of money for transport to health service centres and poor counselling and testing services.<sup>1,2</sup> Other factors affecting uptake of available services may include; denial of HIV infection, opposition from male partners, women's fear of disclosure of HIV status to their partner-fear of being 'found out' if taking drugs, not returning for

checkups in the month before delivery, delivering at home or with the traditional birth attendants and premature delivery before treatment can be given.

Kenya began implementing PMTCT programmes as standalone programs in 2002 and has committed itself to elimination of mother-to-child HIV transmission by 2015. The programs have been effective but hindered by high drop-out rates of mothers due to stigma associated with Comprehensive Care Clinic (CCC).<sup>3</sup> There has been gradual integration of PMTCT into maternal and newborn healthcare services.<sup>4</sup> The rationale for integrating PMTCT interventions with other healthcare services is to improve access for women and children and increase the quality of care through better and synergistic use of human and financial resources. Furthermore, implementing a PMTCT program as a part of routine healthcare may reduce stigma experienced by HIV infected women.<sup>5</sup> Integration of PMTCT with other healthcare services is a crucial component of the strategy to scale up PMTCT programs.

Integration of PMTCT with SRH poses a challenge of overburdening already weak healthcare services in resource-limited countries. Lack of resources, leadership and monitoring could have a negative impact on the implementation and sustainability of the integrated services.<sup>6</sup> The existing integrated PMTCT programs experience attrition at each step of the program delivery; from the first contact, through counselling, testing, collecting results, receiving antiretroviral therapy (ART), infant treatment and feeding recommendation and postnatal

follow-up, thereby reducing program effectiveness.<sup>7</sup> Fragmentation of services, with PMTCT care being delivered in particular areas of the clinic, and by different cadres of health workers, has been named as a major barrier to accessing services.<sup>8</sup> Mothers are afraid of being stigmatized by community members if receiving PMTCT services identifies them as HIV infected. Fear of such unintended disclosure may be an important reason why mothers fail to seek care for HIV-exposed infants. Thus, improving integration of PMTCT services into routine care is critical to improve access to these services.<sup>9</sup> The study assessed barriers to PMTCT uptake and identifies challenges associated with integration of PMTCT with SRH services in integrated and non-integrated facilities in Nairobi County.

## Materials and methods

### Study design and site

Mixed methods study design was used which employed qualitative and quantitative methods of data collection. Eight integrated and non-integrated facilities within Nairobi County were selected for the study.

### Study population

Three hundred and forty HIV positive postnatal mothers and 12 administrators and PMTCT staffs were selected as study participants.

### Sampling

A three stage cluster sampling strategy was employed, where each health facility was considered as a cluster. First stage involved selection of three Districts within Nairobi County using simple random sampling method. Facilities in each district were grouped into two categories, PMTCT integrated and non-integrated facilities. From each category a list of high volume facilities with high prevalence of HIV was prepared and 8 health facilities were selected from it. Simple random procedure was finally used to sample 340 study participants from PNC attendance register. Eligible PNC mothers who were not sampled for questionnaire were requested to participate in focus group discussion. Eight focus group discussions (FGDs) were conducted, each group with 8-12 participants. All the facilities administrators and PMTCT staffs who consented were purposively selected to participate in key informants interviews.

### Statistical analysis

Data from the questionnaires was entered, validated and analyzed using statistical package for social sciences (SPSS/PC™) software version 17.0. Comparisons between integrated and non-integrated facilities was carried out using Students T test for normally distributed continuous variables and Mann-Whitney U test for skewed continuous variables. For categorical variables Chi-square and where applicable Fisher's exact probability was used. Qualitative data was transcribed and analyzed in thematic areas using Microsoft Office Excel.

### Ethical considerations

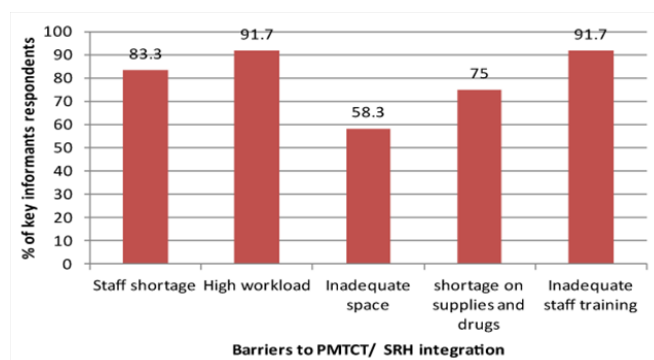
The study proposal was reviewed and approved by Kenyatta National Hospital Ethical Review Committee (ERC) prior to commencement of the study. Participants were asked to give written informed consent for them to participate in the study in voluntary manner.

## Results

### Demographic characteristics of HIV positive postnatal mothers

The study was conducted in Nairobi County in eight health facilities

within Makadara, Njiru and Kamukunji districts between the months of October to December 2013. A total of 340 HIV positive post-natal mothers and their exposed children attending PMTCT services were enrolled into the study with 170 participants each from integrated and non-integrated facilities. The mean age of mothers in integrated facilities was 31.21 years (Standard deviation (SD); 5.18) while in non integrated facilities was 29.74 years (SD; 5.77). The median age of the children in non-integrated facilities was 10 months (Interquartile range (IQR); 4 - 20) while in integrated facilities was 12 months (IQR; 7 - 16). There was no significant difference in age distribution of the mothers between the integrated and no-integrated facilities ( $p=0.603$ ) but there was a significant difference in age distribution of the children between the two types of facilities ( $p=0.028$ ).



**Figure 1** Barriers to PMTCT/SRH integration by hospital administrators and PMTCT staff.

Majority of the families were low income earners with 212 (62.3%) earning Kshs 10,000 and below. Participants from non-integrated facilities were 129 (83.8%) compared to 83 (50.6%) from integrated facilities in the above mentioned category. The difference was statistically significant ( $p<0.001$ ). The main source of income among the participants from integrated facilities was self employment 87 (52.8%) while casual employment was the main source of income for the participants from non-integrated facilities, 78 (48.1%). There was significant difference in the source of income among participants from integrated and non-integrated facilities ( $p=0.03$ ). Level of education among the women from integrated facilities was significantly higher (Primary 30.4% and secondary plus 69.6%) compared to women from non-integrated facilities (No education 7.2%, primary 50.9% and secondary plus 41.9%), ( $p <0.001$ ). Married PMTCT mothers dominated the study with 125 (79.1%) attending integrated facilities and 117 (73.1%) attending non-integrated ones. There was no significant difference in marital status ( $p= 0.317$ ) Majority of the PMTCT mothers were Christians with 166 (97.6%) from integrated facilities and 151 (91.5%) non-integrated ones. There was significant difference in religious affiliation of the mothers among the study subjects ( $p= 0.019$ ).

Barriers to PMTCT uptake among the HIV positive PNC mothers.

To identify reasons that hinder HIV positive mothers from enrolling for PMTCT, sources of encouragement and support of PNC mothers to join PMTCT were identified. Majority of the participants who attended integrated facilities said they would share information with their partners, 61 (36.5%) while 58 (35.6%) participants from non-integrated facilities indicated that they would opt to discuss their health issues with the health care. There was no significant difference in the source of encouragement and support of the participants either from health provider or the partner in joining PMTCT programmed in both types of facilities ( $p= 0.198$ ).

Participants indicated that lack of support from the partner was most prominent barrier to seeking PMTCT services especially with participants from non integrated facilities 111 (65.3%) compared to 61 (35.9%) among women in integrated facilities. There was a significant difference in the partners support in joining PMTCT programme between participants from integrated and non-integrated facilities ( $p < 0.001$ ). Participants gave reasons such as not accepting their status, fear of not knowing their status, partner reactions and lack of confidentiality as reasons for low uptake of PMTCT. They suggested that remedies would be peer counselling and PMTCT services provision in private clinics. There were also myths that ART and ARVs makes PMTCT mothers to regain their health and therefore increase rate of promiscuity. Participants were in agreement that introduction of guidelines allowing HIV positive mothers to breast feed their children have reduced stigma.

Participants reported that spouse support has been improving but some reported resistance which amounts to threats when partners requested to attend PMTCT services. Despite many challenges experienced by mothers in both facilities with regard to seeking PMTCT services, one mother commented *'I will always attend PMTCT services in this facility because there is no stigma and discrimination'* a participant from integrated facility. Another one commented that *'I like this hospital because the staff know me and are friendly, services are fast and there is consistency in management of HIV. I don't care about stigma because my health is of paramount'* a participants from a non-integrated site.

### Barriers in integration of PMTCT in SRH services as reflected by the key informants

The main barriers reported to affect integration of SRH and PMTCT were; high volumes of clients seeking services, increase in waiting time by clients, increase in staff workload resulting to burnout and hence potential compromise on quality of services provided. Majority of the hospital administrators feared that integration implementation may be expensive and cumbersome to the hospital management. Majority also mentioned high workload and inadequate capacity of the staff to handle specialized care 11(91.7%) followed by shortage of staff 10(83.3%). One of the PMTCT counsellor said *'There are many women coming here for PMTCT services. We do not have enough staff to provide services for them. How can I counsel all of the hundreds of women who come every day?'*

Other barriers reported were lack of knowledge regarding PMTCT and lack of skills to provide counselling. Some PMTCT officers revealed that their knowledge and skills on counselling, ARV prophylaxis and on follow-up care, such as continuing replacement feeding (RF) supplies, infant testing and services for HIV-infected mothers and exposed infants was generally limited. Participants indicated that there was also inconsistency in provision of drugs and other supplies. One of PMTCT nurses commented *'We know how to protect ourselves against occupational exposure to HIV and we do it so very carefully as if we know who is infected. However, even if health workers want to protect themselves by using protective equipment, not all health facilities can provide these means for them'*.

### Discussion

The national uptake of PMTCT services by women has been low as 10%-15%.<sup>10</sup> This is probably due to a variety of barriers women face in accessing these services, including socio-cultural factors such as lack of community support, psychosocial barriers related to HIV

stigma, socio-economic factors like lack of money for transport to health service centres and poor counselling and testing services.<sup>1</sup> In this study social economic factors such as family income of more than half of the study participants were earning Kshs 10,000 (\$125) and below. Over 80% of the participants were from non integrated facilities whose likely catchment area was slums. Sources of income earned in the families represented by the participants varied. Majority of participants were self employed and casuals in integrated facilities and non-integrated respectively.

Participants from integrated facilities reported higher levels of education compared to their counterpart in the non-integrated facilities. On social-economics factors such as amount of income, sources of income and education levels in integrated facilities participants were relatively higher compared to non-integrated. It was observed that catchment area of non integrated facilities probably lies within/along Nairobi county slums where as the integrated facilities targets medium class city dwellers. On marital status of the respondents in both types of facilities, majority (more than 70%) were married. Religious affiliation of the mothers attending both types of facilities for the services, were Christians with over 90%. The figure is slightly higher compared with 82.5% reported by Kenya Demographics and Health Surveys (KDHS).<sup>11</sup> This could be due to geographical coverage of the study sites that was favorable to Christian community unlike KDHS which covered the whole country.

The study showed that participants would prefer opening up to health providers on their HIV status more than to their partners. This could be due to fear and negative reactions from the partners when their status is disclosed. A study done by Kiarie et al.<sup>12</sup> showed that disclosure of HIV status among HIV-positive women to their partners results in improved adherence to PMTCT antiretroviral regimens. However, disclosure of HIV status has also been associated with increases in adverse social outcomes, including violence, abandonment and divorce.<sup>13</sup> Male partner involvement in VCT and PMTCT may increase the likelihood of PMTCT uptake, behavior change, as well as improve compliance with PMTCT ARV therapy. Fear, stigma, discrimination and perceived reaction of partners to the women's HIV test results or need for partner permission affect uptake of HIV testing and interventions to MTCT.<sup>14</sup> In this study, source of encouragement and support of the participants was mainly from the health care providers and sexual partners. A study that was done by WHO.<sup>15</sup> showed that women fear to disclose to their partner for fear of being 'found out' that they are taking drugs as factors that hinders uptake of PMTCT. This study confirms that women would prefer opening up to the health provider and their partners.

Barrier to PMTCT uptake was mainly lack of support from the partners which inclined towards participants who attended non-integrated facilities unlike participants who visited integrated facilities. Stigma was found still high in both types of facilities. Similar results on study done by Moth et al.<sup>1</sup> indicate low PMTCT uptake due to socio-cultural factors such as lack of community support, psychosocial barriers related to HIV stigma. Unfriendly health care providers, time constrains and financial implications were not mentioned as barriers to PMTCT in this study. Challenges experienced in integration of PMTCT with SRH services were mainly on staff capacity, high workload and inadequate staffing in the health care facilities. Similar findings were reported in a study by Nguyen et al.<sup>16</sup> which found that high workloads and inadequate staffing were the major challenges of integration of PMTCT and SRH.

**Table 1** Demographic characteristics of HIV infected postnatal mothers

Characteristics	Facility Type Integrated(n)%	Non-integrated(n)%	P Value
<b>Family Monthly Income(K shs)</b>			
< 10,000	83(50.6)	129(83.8)	<0.001
10,000-30,000	56(34.1)	21(13.6)	
> 30,001	25(15.3)	4(2.6)	
<b>Source of Income</b>			
Business/Self employment	87(52.8)	73(45.1)	0.003
Casual	55(33.3)	78(48.1)	
Permanent Job	23(13.9)	11(6.8)	
<b>Level of Education</b>			
Never gone to school	0	12(7.2)	<0.001
Primary school	51(30.4)	85(50.9)	
Secondary school	73(43.5)	48(28.7)	
College/University	44(26.2)	22(13.2)	
<b>Marital Status</b>			
Single	33(20.9)	43(26.9)	0.7518
Married	125(79.1)	117(73.1)	
<b>Religion</b>			
Muslim and others	4(2.4)	12(8.5)	0.0288
Christian	166(97.6)	151(91.5)	

**Table 2** Barriers to PMTCT uptake by HIV positive postnatal mothers

Barriers to PMTCT Uptake	Response	Integrated(n)%	Non-integrated(n)%	P Value
<b>Source of Encouragement and Support</b>				
Partner		61(36.5)	44(27.0)	0.198
Mother		23(13.8)	29(17.8)	
Health provider		55(32.9)	58(35.6)	
Peer counselors		19(11.4)	27(16.6)	
Others		9(5.4)	5(3.0)	
<b>Barriers to PMTCT Uptake</b>				
Unfriendly health providers	Yes	34(20.0)	49(28.8)	0.058
	No	136(80.0)	121(71.2)	
Time constrains	Yes	40(23.5)	52(30.6)	0.143
	No	130(76.5)	118(69.4)	
Financial implications of PMTCT	Yes	17(10.0)	5(2.9)	0.008
	No	153(90.0)	165(97.1)	
Stigma	Yes	122(72.2)	116(68.2)	0.428
	No	47(27.8)	54(31.8)	
Lack of support from the partner	Yes	61(35.9)	111(65.3)	<0.001
	No	109(64.1)	59(34.7)	

## Conclusion

Lack of partners support, stigma and discrimination were reported as the main hindrances to PMTCT uptake among participants in non-integrated facility. Reported barriers to PMTCT integration with SRH programme were shortage of staff, and inadequate specialized knowledge and skills on SRH and PMTCT.

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## Conflicts of interest

Author declares there are no conflicts of interest.

## Funding

None.

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