

Missed initial clinic visits among women living with HIV in the transition from
maternal and child health clinics to general HIV care clinics in western Kenya

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Abstract

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Women living with HIV (WLHIV) of reproductive age transfer their HIV care from general HIV care clinics to maternal and child health (MCH) clinics during pregnancy or breastfeeding to access prevention of mother to child transmission (PMTCT) services. Upon cessation of breastfeeding, they transition back to the general HIV care clinics to continue routine follow up. Studies in parts of sub-Saharan Africa have reported that up to 25% of WLHIV miss their clinic visits during the transition from the MCH to the general HIV care clinic. Our primary aim was to estimate the prevalence and correlates of missed initial clinic visit at the general HIV care clinic after planned transition from the MCH clinic among WLHIV in Homabay county, Kenya.

Between January 2024 and March 2024, we enrolled 152 WLHIV and 20 health care workers (HCWs) from three Ministry of Health clinics in Homabay county, Kenya.

WLHIV were eligible if they were 1) aged 15 and above, 2) HIV positive and on antiretroviral treatment (ART) and 3) were scheduled to transition their HIV care to the general HIV care clinic after completing PMTCT follow up. For the WLHIV we used a prospective cohort study design with one follow up visit. At baseline we

collected demographic data, screened for depression and intimate partner violence, and abstracted clinical data from participant records. The follow up visit was conducted two weeks after the appointment date at the general HIV care clinic where we assessed clinic attendance at the general HIV care clinic and recoded any barriers or facilitators to clinic attendance. For the HCWs we administered a cross-sectional survey that explored patient barriers to clinic attendance during this transition. We conducted univariate analysis using logistic regression to calculate relative risk (RR) of binary correlates, clustered by clinic. Additionally, we performed multivariate analysis calculating the adjusted relative risk (aRR) for depression, age group and ART initiation relative to the first trimester of the current pregnancy, also clustered by clinic. Data from the cross-sectional healthcare worker survey was summarized into thematic areas and presented in a table.

In univariate analysis, Age <25 years and ART initiation after the first trimester of current pregnancy were associated with a 2.64-fold (RR 2.64, 95% CI: 2.02, 3.46, $P<0.001$) and 86% (RR 1.86, 95% CI (1.37, 2.53, $P<0.001$) higher likelihood of missing the initial clinic visit at the general HIV care clinic respectively. In multivariate analysis, age <25 years and ART initiation after the first trimester of the current pregnancy were associated with a 2.71-fold (aRR 2.71, CI 2.27, 3.24, $p<0.001$) and an 90% (aRR1.90, CI 1.34, 2.69, $p<0.001$) higher likelihood of missing the initial clinic visits.

In conclusion, a significant proportion, especially young women, and women newly on ART, miss their initial clinic visit at general HIV care clinic after planned transition from MCH post PMTCT. A structured approach to transitioning WLHIV out of MCH is necessary.

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Introduction

Globally, women continue to suffer a disproportionately higher burden of HIV.

Women living with HIV (WLHIV) of reproductive age transition HIV care into and out of maternal and child health (MCH) clinics each time they are pregnant or breastfeeding. At the MCH clinic, WLHIV go through a well-structured prevention of mother-to-child transmission (PMTCT) program designed to ensure HIV-free survival of HIV exposed infants (HEIs)(2). For the first 24 months postpartum, these women have clinic visits every three months with viral load testing and counselling every six months and have access to psychosocial support through clinic staff and other support networks, including mentor mothers. These interventions create a supportive environment for WLHIV, increasing adherence to antiretroviral treatment (ART), viral suppression and retention in care(3).

Upon completion of the PMTCT follow-up at the MCH clinics, WLHIV are transitioned back to follow-up at the general HIV care clinic. The transition between these two clinics is characterized by numerous changes both at the clinic and at home, including a change in healthcare providers, reduction in clinic visits and fewer social support networks(4–6). Despite this period being a vulnerable stage for WLHIV, little is known about factors associated with missed clinic visits during the transition period and there are no clear guidelines on how to effectively provide support to mothers during this period. Consequently, women often miss their initial clinic visit at the general HIV care clinic and experience interruptions in HIV care and ART.

Studies in sub-Saharan Africa have reported that approximately 15%-25% of WLHIV miss clinic visits and disengage in HIV care during the process of transitioning from the MCH to the general HIV care clinics (7–9).

Our primary aims were to estimate the proportion of WLHIV who miss the initial clinic visit at the general HIV care clinic when transitioning from the MCH clinic, and to evaluate the factors associated with these missed initial clinic visits at the general HIV care clinic among women living with HIV in Homabay county, Kenya.

Methods

Study design and setting

To address the two main aims of the study, we used prospective cohort and cross-sectional study designs to collect data from two distinct study populations, WLHIV in the PMTCT program and health care workers (HCWs) providing HIV care at the MCH and general HIV care clinic, in three Ministry of Health (MoH) clinics in Homabay county, Kenya. The participating clinics were Mbita Subcounty Hospital, Suba Subcounty Hospital and Homabay County Referral Hospital. We selected these clinics because they had a large catchment population size (>10,000 individuals), the same HIV implementing partner (LVCT Health), and they serve the same socio-geographic population (lakeside fishing communities). Additionally, each of the clinics had a comprehensive maternal and child health (MCH) department that was separate from the general HIV care clinic department. Although these two departments were within the same compound, they operated independently.

Study population

In the prospective cohort study, we recruited women who met the following criteria: 1) aged ≥ 15 years, 2) HIV positive and on ART, 3) completed PMTCT follow up at the MCH and were scheduled to transition to the general HIV care clinic to continue with routine HIV care and treatment, and 4) able and willing to provide informed consent in English, Swahili or Dholuo. Women without phone access who declined

physical tracking to their homes and those who intended to seek HIV care services at clinics not participating in the study were excluded.

In a separate cross-sectional study, we enrolled HCWs providing HIV care at the MCH and general HIV care clinics who were willing and able to provide consent in any of the three languages above. The cadres of HCWs enrolled into the study included: clinical officers, nurses, mentor mothers, peer educators and adherence counsellors. All eligible HCWs who were willing to participate in the study were included.

Study procedures

Participants provided written informed consent and were enrolled into the prospective cohort study if they met the inclusion criteria.

At the baseline visit, in addition to collection of demographic data, we surveyed participants on HIV status self-disclosure, prior experience going through the PMTCT program, and history of vertical transmission of HIV in previous pregnancies.

Additionally, we screened the participants for history of intimate partner violence (IPV) in the preceding one year and history of symptoms of depression in the past two weeks using the PHQ-9 questionnaire. Participants who scored a PHQ-9 score of ≥ 10 were offered therapeutic counselling and referred to MoH staff for further management as per the MoH guidelines.

We also abstracted data from the participants' clinic records including date of HIV diagnosis, date of ART initiation, current ART regimen, most recent viral load (VL), HIV status of the exposed infant at 18 months, date of transfer from the MCH and appointment date for the general HIV care clinic entry visit.

The follow up visit was conducted two weeks after the appointment date for the general HIV care clinic entry visit. This visit was conducted in person or over the phone depending on the participant's availability and preference. During this visit, the study staff ascertained the participant's clinic attendance: either the participant attended the general HIV care clinic as scheduled or they missed the clinic visit. We adjudicated the responses provided by the participants by reviewing the participant's clinic records. For example, if a participant reported attending clinic, this was confirmed in the clinic records. For participants who were unreachable via phone and physical tracking, we reviewed their clinic records to ascertain their clinic attendance. Those with missing clinic records were considered to have missed their clinic visit. Depending on the clinic attendance status, we surveyed the participants for the main barrier or facilitator to clinic attendance.

A survey was administered by study staff to HCWs enrolled at the MCH and the general HIV care clinic. The survey explored the provider's individual perspectives on the patient and provider barriers to clinic attendance to the general HIV care clinic during the transition from the MCH. Open-ended questions solicited their suggestions on possible interventions to address these barriers.

Measures

We collected demographic data including age, highest level of education (none, some/all primary education, some/all secondary education, tertiary education), marital status (single, married, divorced/separated, widowed, other), residence (urban, rural), average monthly household income (<100 USD, 100-500 USD, 501-1000 USD, >1000 USD), prior history of going through the PMTCT program (Yes, No) and history of vertical transmission of HIV to exposed infants (Yes, No).

We estimated whether a participant had begun ART after their first trimester during the current pregnancy by using a two and a half years (30 months) cutoff between the date of ART initiation and the date of transition to general HIV care clinic. Participants who started ART less than 30 months before the transition were considered to have initiated ART after the first trimester of the current pregnancy. In contrast, those who began ART more than 30 months prior to the transition date were considered to have started ART before the first trimester of their current pregnancy. History of IPV was categorized as none (Score 0) vs any (score 1-3). depression was categorized as follows: PHQ-9 score 0-4: no depression, PHQ-9 score 5-9: mild depression, PHQ-9 score: 10-14 moderate depression, PHQ-9 score: 15-19- moderately severe depression PHQ-9 score 20-27: severe depression.

Statistical analysis

Descriptive statistics of the WLHIV who participated in the study were presented overall and stratified by clinic. We used the binomial test to test the hypothesis that 20% of WLHIV would miss their first clinic visit after transitioning from MCH to the general HIV care clinic. Using logistic regression and standard errors clustered by clinic, we conducted univariate analysis to generate relative risks (RR) for binary variables that were selected a priori based on literature and clinical significance. The preselected variables included age group (<25 vs $\geq$ 25 years), presence of symptoms of depression (none vs any form of depression), average household monthly income (<100 USD vs $\geq$ 100 USD), ART initiation relative to the first trimester of the current pregnancy (before vs after first trimester) and history of vertical transmission of HIV in previous pregnancies (yes vs no). We conducted a multivariate analysis using logistic regression and standard errors clustered by clinic to calculate the adjusted

relative risk (aRR) for any type of depression, age group and ART initiation relative to the first trimester of the current pregnancy.

We used counts and proportions to present the barriers and facilitators to successful linkage to the general HIV care clinic after transition from MCH. Responses on the healthcare workers survey were summarized into themes and presented in a table.

The calculated sample size of 150 participants was powered at 0.8 and $\alpha=0.05$. All statistical analyses were performed using R 4.3.2 (R Foundation for Statistical Computing, Vienna, Austria, 2023).

Ethical approval

University of Washington's, Human Subjects Division (USA), and the Kenya Medical Research Institute's Ethical Review Committee (Kenya) approved the study. All participants in the study provided written informed consent in their preferred language (English, Swahili or Dholuo).

Results

From January 2024 to March 2024, we screened 206 women living with HIV (WLHIV), of which 152 (73.8%) were eligible and were all subsequently enrolled into the study. Of the 54 (26.2%) ineligible individuals, 5 (9.3%) did not have phone access and declined home tracking and 49 (90.7%) planned to transfer their HIV care to HIV clinics not participating in the study mostly because they planned to move back to their matrimonial homes after cessation of breastfeeding as is culturally practiced in this region (**Figure 1**).

The median age was 34.5 years (IQR 30.8-38.0) (**Table 1**) and 141 (92.8%) were aged ≥ 25 years; 98(64.5%) attained either none, some, or all primary education as their highest level of education; 123 (80.9%) were married; 17 (11.2%) initiated ART

at MCH after first trimester of the most recent pregnancy; 5.9% had severe depression and 75 (49.3%) had a monthly household income of <100 USD. Among the 114 (76%) multiparous mothers, 26 (22.4%) reported history of vertical transmission of HIV in earlier pregnancies.

Fifty-two (34.6%), of enrolled WLHIV missed their initial general HIV care clinic visit after the planned transition from MCH.

In univariate analysis, WLHIV aged <25 years were 2.64-fold more likely to miss their initial clinic visit at the general HIV care clinic (Relative risk [RR] 2.64, 95% Confidence Interval [CI] 2.02, 3.46, $p<0.001$) (**Table 2**). Women who were newly diagnosed with HIV and started ART after the first trimester of the current pregnancy were 86% more likely to miss their initial clinic visit (RR 1.86, 95% CI 1.37, 2.53, $p<0.001$). Additionally, unmarried women were 2.02-fold (RR 2.02, CI 1.53, 2.68, $p<0.001$) more likely to miss their initial clinic visits.

Other factors tested in the univariate analysis showed a trend in the direction of effect however were not statistically associated with missed clinic visits. These included: any form of depression (RR 1.51, 95% CI 0.95, 2.41, $p=0.08$), average monthly household income <100 USD, (RR 1.19, 95% CI 0.80, 1.79, $p=0.37$) and history of vertical transmission of HIV in earlier pregnancies (RR 0.60, 95% CI 0.32, 1.12, $p=0.10$).

In multivariate analysis, age <25 years and ART initiation after the first trimester of the current pregnancy were associated with a 2.71-fold (aRR 2.71, CI 2.27, 3.24, $p<0.001$) and an 90% (aRR 1.90, CI 1.34, 2.69, $p<0.001$) higher likelihood of missing the initial clinic visits. The adjusted relative risk of any form of depression was in the direction of effect however it was not statistically significant (aRR 1.49, 95% CI 0.99, 2.26), $p=0.05$).

Among surveyed participants who missed the initial clinic visit at the general HIV care clinic (n=38), social responsibilities such as travel, taking care of ailing relatives and attending social functions (burials/weddings) were the most common barriers to clinic attendance (54%), while appointment reminders (52%) and belief that ART is beneficial to individual's health (40%) were the most commonly reported motivators for clinic attendance among surveyed participants who successfully linked to the general HIV care clinics (n=65) **(Figure 2)**.

Out of 72 HCWs working in the MCH and general HIV care clinics in the three study clinics, 20 (28%) consented to participate in the study. Among HCWs enrolled, there were 4 nurses, 6 clinical officers, 4 adherence counselors, 4 mentor mothers and 2 peer educators. Ten HCWs (50%) worked in the general HIV care clinic and 12 (60%) were female.

From the health care worker survey, perceived patient barriers to successful linkage to the general HIV clinic after the transition from MCH included: 1) clinic setting and service delivery at the general HIV care clinic. Service delivery issues included poor provider attitude, especially towards “difficult patients”, and long waiting time at the clinic (70%), 2) stigma and fear of unintended disclosure of HIV status (65%), 3) insufficient patient preparation on anticipated differences in service delivery between MCH and general HIV care clinic (25%) and 4) lack of motivation among WLHIV to adhere to ART since they are no longer breastfeeding their children (30%) **(Table 3)**.

Discussion

Our study sought to estimate the proportion of WLHIV who miss their initial clinic visit during the transition from the MCH to the general HIV care clinic and determine factors associated with missed initial visit. We found that over a third of women living with HIV (WLHIV) in Homabay county, Kenya, missed their initial clinic visits at the general HIV care clinic after transition from the MCH. This was higher than what has been reported by other studies in other parts of sub-Saharan Africa, including in a systematic review that included 22 studies, in which missed visits ranged from 15%-25% (7–9). Notably, none of these studies were conducted in Kenya. Our findings highlight that the period of transition from the MCH to the general HIV care clinic remains a vulnerable period. There is need for innovative interventions to address this gap.

WLHIV aged less than 25 years were significantly more likely to miss their first clinic visit at the general ART clinic. Young women account for majority of new HIV diagnoses and ART initiations at the MCH. Consequently, they are unfamiliar with and anxious about HIV service delivery at the general HIV care clinic (9,14).

Additionally, stigma and the fear of unintended disclosure of their HIV status if seen at the general HIV care clinic, may contribute to missed clinic visits in this group of WLHIV(15). Our findings are consistent with findings from a study in South Africa that reported an 11% lower likelihood of younger women attending clinic visit after transition from MCH to general HIV clinic(9). Another study conducted among WLHIV in Tanzania, also reported 40% higher likelihood of treatment interruption among women aged 25 years and below (13). Our findings demonstrate the need to prioritize interventions that target young WLHIV during the period of transition from the MCH to the general HIV care clinic.

In our analysis, recent HIV diagnosis and ART initiation at MCH during the most recent pregnancy was associated with a higher attrition rate, regardless of age or presence of depression. Results from the healthcare worker survey highlighted some of the possible barriers to clinic attendance after transitioning from MCH in this subpopulation including stigma and fear of unintended disclosure of HIV status once they move to the general HIV care clinic. This is similar to the findings of a study conducted in Ethiopia in a comparable population(16). Another plausible explanation put forward by the healthcare workers was the lack of motivation to continue with HIV care, particularly if the WLHIV do not fully understand the benefits of consistent use of ART, since their exposed infants are no longer at risk of acquiring HIV once breastfeeding has stopped. This is supported by the prospective cohort study in Tanzania that made similar observations (17).

The prevalence of any form of depression among our study participants was less than 10%. This is lower than what has been reported in other studies in similar cohorts (18–20). We believe this could partly be due to the choice of screening tool (PHQ-9 questionnaire) that has been shown to underestimate the prevalence of depression when compared to other tools validated among postpartum women (the CESD-10 and EPDS tools) in similar settings (21). Despite the relatively low prevalence of depression, we noted a trend in the multivariate analysis between presence of symptoms of depression and missed initial clinic visits at transition. The strength of the effect may have been attenuated by the therapeutic counselling that was offered to all our participants with a cumulative PHQ-9 score of ≥ 10 at enrolment as recommended by the in-country Ministry of Health guidelines (2). The association between depression and HIV care interruption during the period of transition is not extensively studied. Our results demonstrate the need to train healthcare workers in

the MCH to actively monitor for signs and symptoms of depression and offer timely interventions during postpartum follow-up.

There is paucity of data on the impact of a history of vertical transmission on HIV care engagement among WLHIV during subsequent pregnancies. Our study found that multiparous WLHIV who reported a history of vertical transmission of HIV in previous pregnancies tended to be less likely to miss their initial clinic visits at the general HIV care clinic after transitioning from the MCH. This suggests that this category of WLHIV have better engagement in HIV care compared to their counterparts, a finding that was also reported in a study in South Africa(18). On the contrary, the findings of a qualitative study done in Tanzania reported that the resultant dual burden of clinic appointments may push women to disengage from HIV care (22). We hypothesize that the comprehensive care provided, the post HIV test counselling and psychosocial support offered following a positive test in early infant diagnosis (EID) may contribute to better understanding the lifelong benefits of consistent ART use and sustained engagement in HIV care. There is need for qualitative investigation on the psychosocial effects on WLHIV when HIV is diagnosed in exposed infants. This will help stakeholders better understand any other long-term consequences of vertical transmission of HIV on the WLHIV.

Our results should be interpreted with the following considerations in mind. First, we had a relatively small sample size. Hence, we may not have had sufficient statistical power to examine some of the correlates of interest. Secondly, we recruited participants from three different clinics that used unique approaches when transitioning WLHIV to the general HIV care clinics after completion of the PMTCT program. The resultant heterogeneity may have made it difficult to detect a

difference. To account for differences in transition approaches in the three clinics, we used clustered standard errors by clinic. On the other hand, enrolling from three clinics was a strength as it increases the generalizability of our results. Another strength of our study is the use of a prospective cohort study design that enables us to demonstrate temporality in our findings.

In conclusion, while the PMTCT program has improved health outcomes for WLHIV and their children, the period of transition from the MCH to the general ART clinic is characterized by a high rate of attrition in HIV care engagement among WLHIV. This underscores the need to develop guidelines and strategies to minimize the number of women who experience treatment interruption during this period. Our results identify young WLHIV and newly diagnosed WLHIV who start ART in MCH as high priority sub-groups for intervention during the period of transition from the MCH to the general HIV care clinics.

Tables and Figures

Table 1: Characteristics of women enrolled during the transition from MCH to general HIV care clinic in 3 Ministry of Health hospitals in Homabay county, Western Kenya

	Homabay County Referral Hospital	Mbita Sub- County Hospital	Sindo Sub- County Hospital	Total
	(N=80)	(N=34)	(N=38)	(N=152)
Median Age (IQR¹)	36 (31.8, 39)	32 (29, 37.8)	33 (30, 37)	34.5 (30.8, 38)
Age group categories				
25 years old and above	74 (92.5%)	33 (97.1%)	34 (89.5%)	141 (92.8%)
Highest level of education²				
Primary	50 (62.5%)	22 (64.7%)	26 (68.4%)	98 (63.2%)
Secondary	20 (25.0%)	7 (20.6%)	10 (26.3%)	37 (24.3%)
Tertiary	10 (12.5%)	5 (14.7%)	2 (5.3%)	17 (11.2%)
Marital status				
Divorced/separated	3 (3.8%)	1 (2.9%)	2 (5.3%)	6 (3.9%)
Married	64 (80.0%)	30 (88.2%)	29 (76.3%)	123 (80.9%)
Single	5 (6.3%)	1 (2.9%)	5 (13.2%)	11 (7.2%)
Widowed	8 (10.0%)	2 (5.9%)	2 (5.3%)	12 (7.9%)
ART initiation during at MCH in 1st trimester of current pregnancy				
Yes	5 (6.2%)	8 (23.5%)	4 (10.5%)	17 (11.2%)

Prior history of vertical HIV transmission				
Yes	17 (27.9%)	3 (12.5%)	6 (19.4%)	26 (22.4%)
Depression³				
Any form of depression	3 (3.8%)	2 (5.9%)	4 (10.5%)	9 (5.9%)
Any IPV in the past 1 year⁴				
Yes IPV	19 (23.8%)	7 (20.6%)	7 (18.4%)	33 (21.7%)
HIV status self disclosure⁵				
Yes	53 (66.3%)	19 (55.9%)	23 (60.5%)	95 (62.5%)
Average household monthly income				
<100 USD	47 (58.8%)	17 (50.0%)	11 (28.9%)	75 (49.3%)
¹ Interquartile range ² Categories include individuals who completed some or all the specified level of education ³ Categorized by PHQ9 score ⁴ Any intimate partner violence (verbal, physical, sexual) ⁵ Disclosure to any individual in participants' social networks				

Table 2: Univariate analyses of correlates of missing initial clinic visit among WLHIV during transition from MCH to the general HIV care clinic

Characteristic	n	RR	95% CI ¹	P Value	aRR	95% CI ¹	P Value
Age							
25 years and over	139	Ref			Ref		
Less than 25 years	11	2.64	2.02, 3.46	<0.001	2.71	2.27, 3.24	<0.001
Presence of depression²							
No depression	136	Ref			Ref		
Any form of depression	14	1.51	0.95, 2.41	0.08	1.49	0.99, 2.26	0.05
Average monthly household income							
>10 USD	76	Ref					
<10 USD	74	1.19	0.80, 1.79	0.37	-	-	-
ART initiation at MCH after 1st trimester of current pregnancy							
No	124	Ref					
Yes	26	1.86	1.37, 2.53	<0.001	1.90	1.34, 2.69	<0.001
Vertical transmission of HIV in previous pregnancies⁴							
No	88	Ref					
Yes	26	0.60	0.32, 1.12	0.10	-	-	-
Highest level of education							
Higher than primary education	52	Ref					

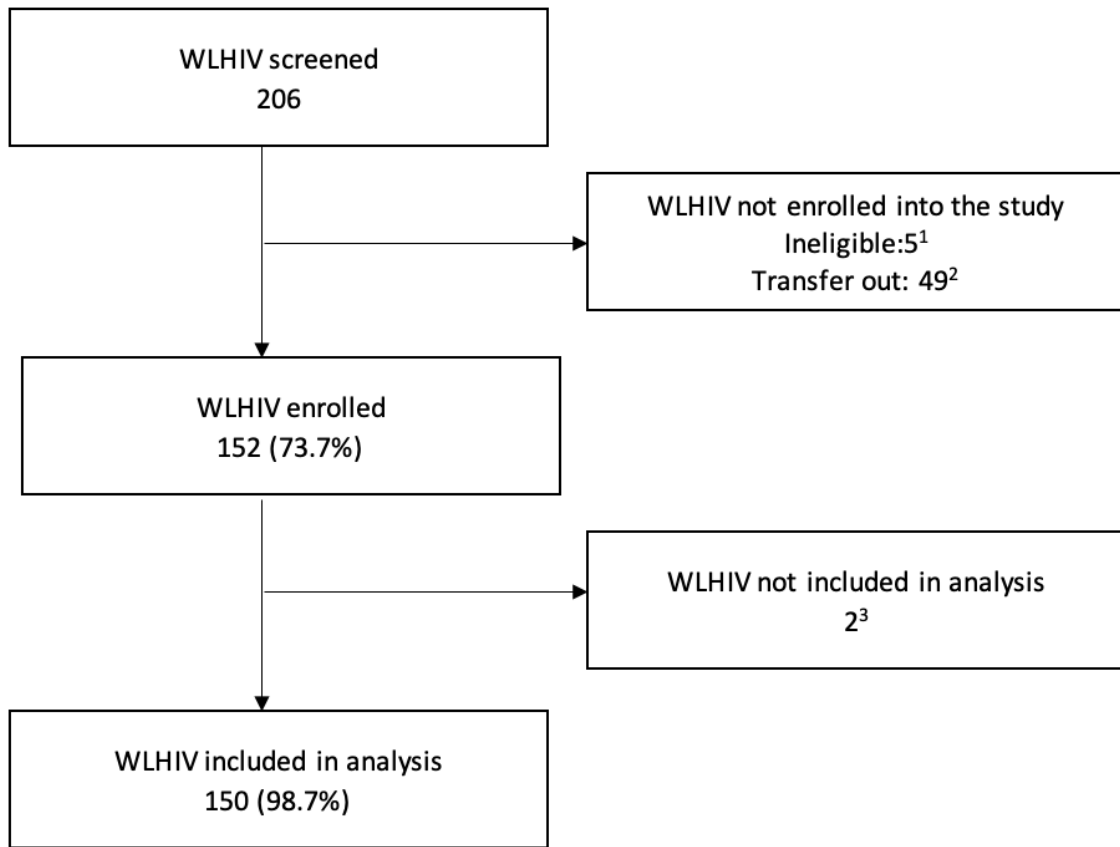
All primary or below ⁵	98	1.00	0.71, 1.41	0.99	-	-	-
Marital status							
Married	121	Ref					
Unmarried ⁶	29	2.02	1.53, 2.68	<0.001	-	-	-
Any IPV in the past 1 year⁷							
No IPV	117	Ref					
Any form of IPV	33	0.74	0.50, 1.09	0.13	-	-	-
HIV status self-disclosure							
Yes	93	Ref					
No	57	1.02	0.79, 1.31	0.88	-	-	-
¹ Clustered standard errors ² Screening done by PHQ9 tool. ³ Physical, sexual or verbal Violence ⁴ Among the multiparous women ⁵ None, some, or all primary education ⁶ Divorced, separated, widowed, single ⁷ Any intimate partner violence (verbal, physical, sexual)							

Table 3: Provider reported patient-barriers to successful linkage during transition from MCH to general HIV care clinic

Thematic areas	N (%)	Highlights
Stigma	13 (65%)	Stigma and fear of unintended disclosure of their HIV status at general HIV care clinic that is known to offer health services to individuals living with HIV, especially among women newly diagnosed with HIV during PMTCT
Insufficient patient preparation	5 (25%)	Insufficient patient preparation by the MCH staff regarding anticipated differences in service delivery between MCH and general HIV care clinic
General HIV care clinic setting	14 (70%)	- Young women feeling out of place or do not 'fit in' with the crowd at the general HIV care clinic. - Poor provider attitude, especially towards "difficult patients" - Long waiting time at the general HIV care clinic
Misconceptions	6 (30%)	Some WLHIV lack motivation to continue consistently taking their antiretroviral treatment as their children

		are no longer at risk of acquiring HIV after cessation of breastfeeding.
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Figure 1: Participant screening and enrolment framework

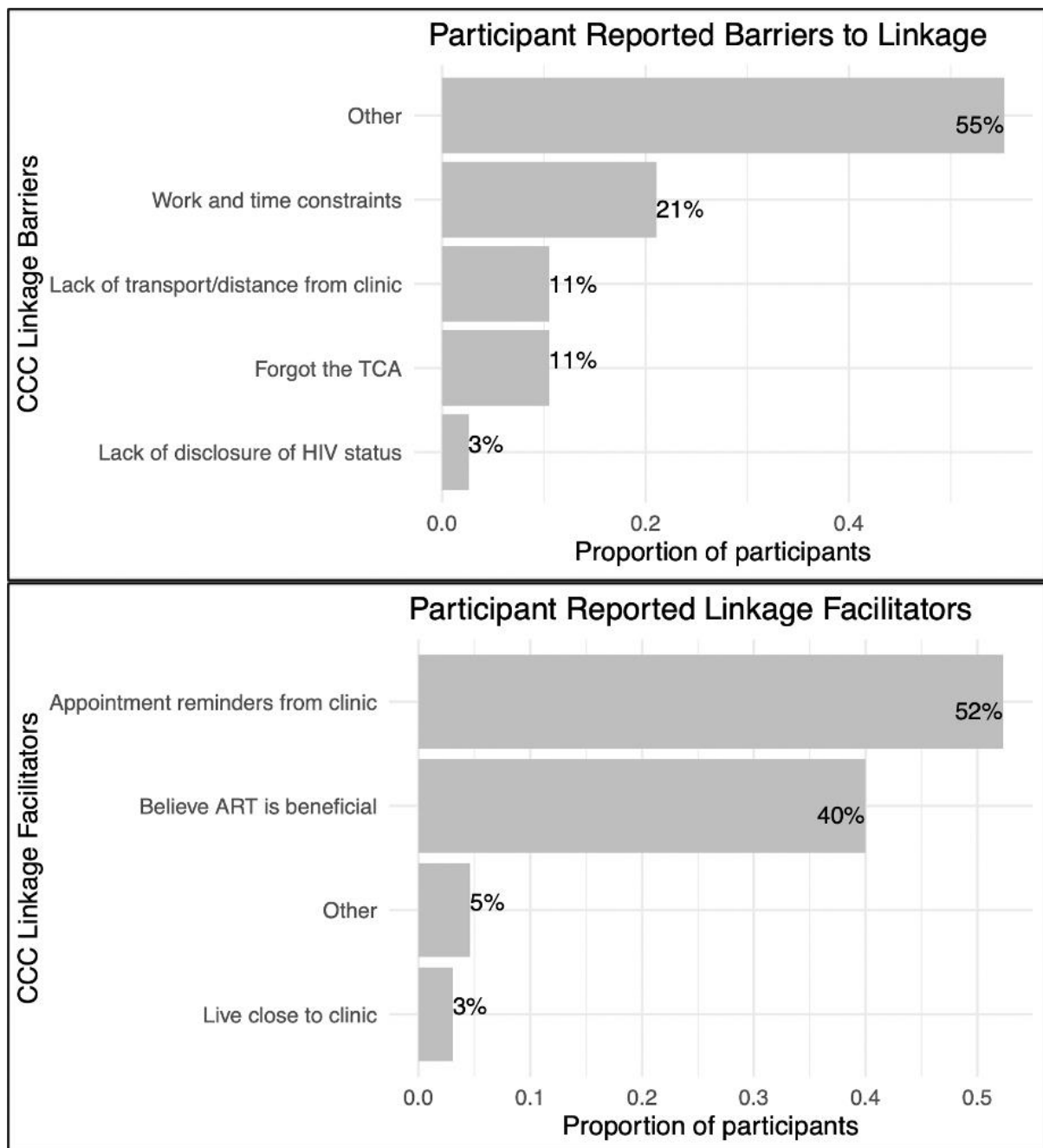


¹ WLHIV without phone access and declined physical tracking to their homes

² WLHIV who planned to seek HIV care from MOH clinics not participating in the study

³ WLHIV whose clinic appointment date at the general HIV clinic was after 20 June 2024

Figure 2: Figure 2: Participant reported barriers and facilitators to linkage during transition from MCH to general HIV care clinics



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