



SHORT RESEARCH COMMUNICATION WOMEN'S HEALTH

Understanding Women's Preferences for Prevention of Mother-to-Child HIV Transmission Services in Kenya

John Humphrey, MD, MS¹, Esther Wanjama, MBChB, MMed², James G. Carlucci, MD³, Violet Naanyu, PhD⁴,
Lindah Muli, BS⁵, Edwin Were, MBChB, MMed, MPH⁶, Alan McGuire, PhD^{7,8}, Winstone M. Nyandiko, MBChB, MMed,
MPH⁹, Julia Songok, MBChB, MMed⁹, Gregory Zimet, PhD³, Kara Wools-Kaloustian, MD, MS¹

¹Department of Medicine, Indiana University School of Medicine, Indianapolis, IN, USA, ²Department of Pediatrics, Moi Teaching and Referral Hospital, Eldoret, Kenya, ³Department of Pediatrics, Indiana University School of Medicine, Indianapolis, IN, USA, ⁴Department of Sociology, Psychology, and Anthropology, Moi University School of Arts and Social Science, Eldoret, Kenya, ⁵Department of Research, Academic Model Providing Access to Healthcare (AMPATH), Eldoret, Kenya, ⁶Department of Obstetrics and Gynaecology, Moi University College of Health Sciences, Eldoret, Kenya, ⁷Department of Psychology, Indiana University-Purdue University, Indianapolis, IN, USA, ⁸Department of Health Services Research and Development, Richard L. Roudebush VAMC, Indianapolis, IN, USA, ⁹Department of Child Health and Pediatrics, Moi University College of Health Sciences, Eldoret, Kenya.



***Corresponding author:**
John Humphrey,
Department of Medicine,
Indiana University School of
Medicine, Indianapolis, IN,
USA

Tel +1 (317) 274-8115

humphrjm@iu.edu

Received: 26 January 2024

Accepted: 06 April 2024

Published: 17 May 2024

DOI 10.25259/IJMA_6_2024

Quick Response Code



ABSTRACT

Background and Objective: Understanding the preferences of women living with HIV (WLH) for the prevention of mother-to-child HIV transmission (PMTCT) services is important to ensure such services are person-centered.

Methods: From April to December 2022, we surveyed pregnant and postpartum WLH enrolled at five health facilities in western Kenya to understand their preferences for PMTCT services. WLH were stratified based on the timing of HIV diagnosis: known HIV-positive (KHP; before antenatal clinic [ANC] enrollment), newly HIV-positive (NHP; on/after ANC enrollment). Multivariable logistic regression was used to determine associations between various service preferences and NHP (vs. KHP) status, controlling for age, facility, gravidity, retention status, and pregnancy status.

Results: Among 250 participants (median age 31 years, 31% NHP, 69% KHP), 93% preferred integrated versus non-integrated HIV and maternal-child health (MCH) services; 37% preferred male partners attend at least one ANC appointment (vs. no attendance/no preference); 54% preferred support groups (vs. no groups; 96% preferred facility – over community-based groups); and, preferences for groups was lower among NHP (42%) versus KHP (60%). NHP had lower odds of preferring support groups versus KHP (aOR 0.45, 95% CI 0.25–0.82), but not the other services.

Conclusion and Global Health Implications: Integrated services were highly preferred by WLH, supporting the current PMTCT service model in Kenya. Further research is needed to explore the implementation of facility-based support groups for WLH as well as the reasons underlying women's preferences.

Keywords: Differentiated Care; Vertical Transmission; Prevention of Mother-to-Child Transmission; Pregnant; Postpartum

INTRODUCTION

The delivery of person-centered care (i.e., care that is more responsive to patient's values, needs, and preferences) is a core component of the HIV response for the 1.2 million women whose pregnancies are impacted by HIV each year.^[1,2] In eastern and southern Africa, where half of the pregnant women living with HIV (WLH) reside, studies have predominantly focused on

This is an open-access article distributed under the terms of the Creative Commons Attribution-Non Commercial-Share Alike 4.0 License, which allows others to remix, transform, and build upon the work non-commercially, as long as the author(s) is credited and the new creations are licensed under the identical terms.

© 2024 The Authors. Published by Global Health and Education Projects, Inc., USA.

identifying service delivery strategies to improve the prevention of mother-to-child HIV transmission (PMTCT) outcomes.^[3] This is particularly the case for women newly diagnosed with HIV at antenatal clinic (ANC) enrollment, who are at increased risk of care disengagement and HIV viremia.^[4] However, few studies have empirically assessed women's preferences for PMTCT services. Understanding women's preferences for services is integral to designing person-centered healthcare systems and identifying reasons for suboptimal uptake of services and opportunities to further strengthen the services.

There are several PMTCT services, which are evidence-based but suffer from suboptimal uptake or have mixed evidence supporting their implementation, for which women's preferences can inform their delivery.^[1,3] First, the integration of routine HIV services within maternal-child health (MCH) services was implemented in Kenya in 2015 following World Health Organization (WHO) guidelines.^[5,6] Yet despite some studies showing integration improves antiretroviral therapy (ART) access and retention in care,^[7] other studies have reported adverse effects of integration such as prolonged wait times and risk of HIV status disclosure.^[8,9] Since the widespread adoption of integrated services in Kenya, women's current preferences for this model are not well understood. Male partner involvement in ANC has also been shown to improve maternal ART adherence and reduce vertical HIV transmission.^[10] However, male partner involvement in western Kenya is low (<25%). While male-centered strategies have been recommended to encourage men's involvement in PMTCT services, little attention has been given to women's preferences for male partner involvement.^[11,12] Phone calls and home visits are additional services that have been promoted to shift PMTCT care out of the facility and into the community.^[13,14] However, women's preferences for these services, including when and where they occur and who delivers them, are not well understood.

The objective of this study is to determine women's preferences for various PMTCT services, assess differences in preference between women, who are newly diagnosed with HIV during pregnancy and those who are already known to have HIV, and identify factors associated with differential preferences between these groups.

METHODS

Setting, Population, and Data Collection

From April to December 2022, we conducted a discrete choice experiment to understand women's relative preferences for differentiated HIV services in western Kenya.^[15] In this region, the HIV prevalence is ~5% among women of reproductive age (15–49 years).^[16] PMTCT services including ART dispensing are provided in integrated ANC and postnatal clinics (PNC)

rather than HIV clinics. Routine PMTCT services for WLH involve separate, in-person encounters with a mid-level clinician and mentor mother at each appointment, from pregnancy through 18 months post-delivery when the child's final HIV test is done. Male partner engagement in ANC is often low (<25%),^[12] and implementation of support services such as phone calls, home visits, and support groups with other PMTCT clients is heterogeneous and often limited by resource constraints.

In brief, we enrolled 250 WLH who were ≥15 years of age, pregnant or ≤24 months postpartum, and enrolled in PMTCT services at five facilities affiliated with the Academic Model Providing Access to Healthcare (AMPATH) in western Kenya. WLH retained in care were consecutively recruited in person by a research assistant after their routine appointment; WLH who had a gap in care (i.e., >30 days from missed scheduled visit) were identified through facility register review and recruited through community tracing with the help of the facility outreach team. After enrollment, a research assistant administered a structured questionnaire containing a series of questions assessing women's preferences for various PMTCT services, including integrated HIV and MCH services, ART collection points, phone-based encounters with a clinician, home visits (by community health volunteer or mentor mother), facility- or community-based support groups, and male partner engagement.

Data Management and Analysis

The questionnaire was administered via REDCap in English and Kiswahili and responses were entered by a research assistant. Women were stratified based on the timing of HIV diagnosis: known HIV-positive (KHP; before ANC enrollment) and newly HIV-positive (NHP; on/after ANC enrollment). This was done because NHP status is an important risk factor for adverse PMTCT outcomes including loss of follow-up and HIV viremia, making it important to identify preferences specific to this group.^[3] Comparisons between service preferences among NHPs and KHPs were made using Fisher's exact test for categorical variables and the Wilcoxon rank-sum test for continuous variables. Multivariable logistic regression was used to further assess statistically significant associations ($p < 0.05$) between service preference (primary outcome) and KHP versus NHP status (primary exposure), controlling for age, gravidity, retention status (retained vs. gap in care), and pregnancy status (pregnant vs. postpartum at study enrollment).

Ethical Approval

The study was approved by the Moi University/Moi Teaching and Referral Hospital Institutional Research and Ethics

Committee in Kenya and the Indiana University Institutional Review Board in the United States. All participants provided written informed consent. Pregnant and postpartum adolescents 15–17 years of age were offered written assent with a waiver of parental permission because they are considered emancipated minors under Kenya law.

RESULTS

A total of 250 WLH enrolled in the study and completed the questionnaire; none of the women approached declined to participate. Their median age was 31 years, 42% were pregnant (58% postpartum), 27% were primigravida, and

31% were NHP (69% KHP). NHPs were significantly younger and more likely to be pregnant and primigravida than KHPs [Table 1].

Over 90% of WLH preferred both integrated over non-integrated services and ART collection in MCH rather than HIV clinics. Half of women preferred a phone call with a healthcare provider to replace at least one appointment during pregnancy or postpartum. A third preferred a home visit (vs. no home visit) during pregnancy or postpartum, and >99% of those who preferred a home visit preferred that a mentor mother rather than a community health volunteer conduct the visit. Preferences for male partner engagement

Table 1: Participant characteristics and preferences for PMTCT services.

| | Total N=250 | NHP N=78 | KHP N=172 | p-Value |
|---|-------------|-------------|-------------|---------|
| Characteristics at study enrollment | | | | |
| Age, median years, median (IQR) | 31 (26, 36) | 29 (25, 34) | 33 (26, 36) | <0.01 |
| Retained in care (vs. LTFU), n (%) | 200 (80) | 62 (80) | 138 (80) | 0.14 |
| Pregnant (vs. postpartum), n (%) | 104 (42) | 40 (51) | 64 (37) | 0.04 |
| Primigravida, n (%) | 68 (27) | 37 (47) | 31 (18) | <0.01 |
| Facility, n (%) | | | | |
| Busia County Referral Hospital | 60 (24) | 18 (23) | 42 (24) | 0.63 |
| Huruma Sub-County Hospital | 30 (12) | 13 (17) | 17 (10) | |
| Kitale County Referral Hospital | 45 (18) | 14 (18) | 31 (18) | |
| Moi Teaching and Referral Hospital | 70 (28) | 19 (24) | 51 (30) | |
| Uasin Gishu County Hospital | 45 (18) | 14 (18) | 31 (18) | |
| Preference for services | | | | |
| Integrated HIV-MCH services (vs. non-integrated), n (%) | 232 (93) | 75 (96) | 157 (91) | 0.20 |
| ART collection in MCH (vs. HIV clinic), n (%) | 243 (97) | 77 (99) | 166 (97) | 0.44 |
| Male partner engagement in ANC, n (%) | | | | 0.62 |
| Attends ≥1 appointment | 92 (37) | 27 (35) | 65 (38) | |
| No attendance | 139 (55) | 47 (60) | 92 (53) | |
| No preference | 19 (8) | 4 (5) | 15 (9) | |
| Phone call to replace ≥1 MCH appointment, n (%) | 124 (50) | 32 (41) | 92 (53) | 0.17 |
| Home visit during pregnancy or postpartum, n (%) | 90 (36) | 22 (28) | 68 (40) | 0.34 |
| Person conducting home visits, ^a n (%) | | | | |
| Community Health Volunteer | 1 (1) | 0 (0) | 1 (1) | 1.00 |
| Mentor Mother | 89 (99) | 22 (100) | 67 (99) | |
| Support group with other PMTCT clients, n (%) | 136 (54) | 33 (42) | 103 (60) | 0.01 |
| Location of support group, n (%) ^b | | | | |
| Facility | 130 (96) | 32 (97) | 98 (95) | 1.00 |
| Community | 6 (4) | 1 (3) | 5 (5) | |

^aAmong n = 90 who preferred a home visit. ^bAmong n = 136 who preferred a support group.

ANC: antenatal clinic, ART: antiretroviral therapy, IQR: interquartile range, KHP: known HIV positive, LTFU: lost to follow-up, MCH: maternal-child health, NHP: newly HIV positive, PMTCT: prevention of mother-to-child transmission of HIV.

Table 2: Unadjusted and adjusted odds ratios for associations with each PMTCT service preference and participant characteristics.

| Covariate | Male partner engagement in ANC (vs. no attendance or no preference) | | Phone call to replace ≥ 1 MCH appointment (vs. no phone call) | | Home visit during pregnancy or postpartum (vs. no home visit) | | Support group with other PMTCT clients (vs. no support group) | |
|------------------------------------|---|------------------|---|------------------|---|------------------|---|------------------|
| | uOR (95% CI) | aOR (95% CI) | uOR (95% CI) | aOR (95% CI) | uOR (95% CI) | aOR (95% CI) | uOR (95% CI) | aOR (95% CI) |
| Age | 1.03 (0.99–1.07) | 1.00 (0.96–1.05) | 0.98 (0.94–1.02) | 0.96 (0.92–1.00) | 1.00 (0.96–1.04) | 1.01 (0.96–1.05) | 0.98 (0.94–1.02) | 0.95 (0.91–0.99) |
| Gravidity | | | | | | | | |
| Multigravida | Ref. | Ref. | Ref. | Ref. | Ref. | Ref. | Ref. | Ref. |
| Primigravida | 0.58 (0.32–1.06) | 0.43 (0.20–0.95) | 0.74 (0.42–1.29) | 0.68 (0.32–1.41) | 1.14 (0.64–2.03) | 1.49 (0.69–3.20) | 0.67 (0.38–1.17) | 0.74 (0.35–1.56) |
| Timing of HIV diagnosis | | | | | | | | |
| KHP | Ref. | Ref. | Ref. | Ref. | Ref. | Ref. | Ref. | Ref. |
| NHP | 0.87 (0.50–1.52) | 1.02 (0.55–1.88) | 0.61 (0.35–1.04) | 0.60 (0.33–1.07) | 0.60 (0.34–1.07) | 0.54 (0.29–1.02) | 0.49 (0.29–0.85) | 0.45 (0.25–0.82) |
| Retention status | | | | | | | | |
| Retained in care | Ref. | Ref. | Ref. | Ref. | Ref. | Ref. | Ref. | Ref. |
| Gap in care | 0.77 (0.40–1.48) | 0.90 (0.44–1.84) | 1.25 (0.67–2.32) | 1.10 (0.56–2.15) | 0.80 (0.41–1.55) | 0.76 (0.37–1.55) | 0.89 (0.48–1.65) | 0.70 (0.35–1.40) |
| Pregnancy status | | | | | | | | |
| Pregnant | Ref. | Ref. | Ref. | Ref. | Ref. | Ref. | Ref. | Ref. |
| Postpartum | 0.72 (0.43–1.21) | 0.59 (0.32–1.06) | 1.35 (0.82–2.24) | 1.16 (0.66–2.04) | 1.19 (0.70–2.02) | 1.31 (0.73–2.38) | 1.55 (0.93–2.57) | 1.50 (0.84–2.67) |
| Facility | | | | | | | | |
| Moi Teaching and Referral Hospital | Ref. | Ref. | Ref. | Ref. | Ref. | Ref. | Ref. | Ref. |
| Busia County Referral Hospital | 0.94 (0.44–1.98) | 0.80 (0.37–1.73) | 1.07 (0.54–2.13) | 1.01 (0.50–2.07) | 0.76 (0.36–1.60) | 0.82 (0.38–1.77) | 1.38 (0.69–2.77) | 1.35 (0.65–2.79) |
| Huruma Sub-County Hospital | 1.45 (0.60–3.53) | 1.21 (0.48–3.06) | 1.14 (0.49–2.69) | 1.12 (0.45–2.76) | 1.28 (0.53–3.09) | 1.56 (0.62–3.94) | 2.47 (0.99–6.14) | 2.69 (1.02–7.07) |
| Kitale County Referral Hospital | 1.45 (0.67–3.18) | 1.35 (0.61–3.02) | 0.73 (0.34–1.55) | 0.71 (0.33–1.54) | 1.06 (0.48–2.32) | 1.12 (0.50–2.48) | 1.11 (0.52–2.34) | 1.09 (0.50–2.39) |
| Uasin Gishu County Hospital | 2.09 (0.96–4.52) | 2.22 (1.01–4.88) | 1.05 (0.49–2.21) | 1.10 (0.51–2.34) | 1.68 (0.78–3.61) | 1.69 (0.78–3.68) | 1.21 (0.57–2.56) | 1.26 (0.58–2.73) |

uOR: unadjusted odds ratio, aOR: adjusted odds ratio, PMTCT: Prevention of mother-to-child HIV transmission, ANC: Antenatal clinic, KHP: Known HIV positive, MCH: Maternal-child health, NHP: Newly HIV positive.

Bold values denote statistical significance at the $p < 0.05$ level.

were heterogeneous: 37% preferred their male partner to attend at least one appointment, 56% preferred them not to attend, and 8% had no preference. There were no significant differences in NHP's and KHP's preferences for any of these services [Table 1].

Overall, 54% of WLH preferred a support group for pregnant and postpartum WLH (vs. no support group), and preference for a support group was significantly more prevalent among KHPs (60%) than NHPs (42%) [$p < 0.01$; Table 1]. Additionally, among those who preferred a support group, 95% preferred that it be facility- rather than community-based.

In the multivariable analysis, NHP (compared to KHP) status was associated with a lower preference for a support group (adjusted OR 0.49, 95% CI 0.29–0.85) [Table 2]. There were no significant factors associated with preference for male partner engagement, phone calls, or home visits, while preferences for integrated services and ART collection were not included in the logistic regression analyses due to the lack of response variability for these services.

DISCUSSION, CONCLUSION, AND GLOBAL HEALTH IMPLICATIONS

In our study, women living with HIV largely preferred integrated HIV and MCH services over non-integrated services, supporting current guidelines.^[17,18] It is possible that the high prevalence of integration in our study setting, as is conventional in much of eastern and southern Africa, influenced women's preferences.^[19] Further research is needed to explore preferences in settings where integration is less common.

Half of WLH expressed a preference for a support group with other PMTCT clients. In South Africa, community-based "adherence clubs" for postpartum WLH have been shown to improve virologic outcomes.^[20] However, nearly all women in our study preferred facility- rather than community-based groups, so implementation of support groups in MCH settings should be further explored. Further, while NHPs were less likely to prefer support groups, this could be related to concerns about HIV status disclosure and stigma in the community, but it might be mitigated by hosting support groups at integrated facilities where status-neutral services are provided.^[21]

A limitation of this study is that it does not address all potential PMTCT services or explore the reasons driving women's preferences. The findings may also not be generalizable to more rural settings. Our sample size may also limit statistical power to detect significant factors associated with each of the preference outcomes in our study, though more modest

associations may not be programmatically relevant even if statistically significant.

This study offers insight into women's preferences for PMTCT services in Kenya. Understanding preferences is important for developing services that are person-centered and optimized to improve outcomes. Further research is needed to explore the implementation of facility-based support groups for WLH as well as the reasons underlying women's preferences.

Acknowledgments

The authors express gratitude to the clinical staff at the study facilities for their invaluable contribution to this study.

COMPLIANCE WITH ETHICAL STANDARDS

Conflicts of Interest

Unrelated to this study, Dr. Gregory Zimet serves on external advisory boards for Moderna (COVID-19 vaccination) and Pfizer (meningococcal vaccination), and serves as a consultant to Merck (HPV vaccination). The other authors declare no competing interests.

Financial Disclosure

Nothing to declare.

Funding/Support

This study was supported by the Eunice Kennedy Shriver National Institute of Child Health and Human Development (NICHD) (Grant Numbers K23HD105495 to J.H. and K23HD109056 to J.C.).

Ethics Approval

The study was approved by the Moi University/Moi Teaching and Referral Hospital Institutional Research and Ethics Committee in Kenya and the Indiana University Institutional Review Board in the United States. A research permit was also granted by the National Commission for Science, Technology, and Innovation (NACOSTI) in Kenya.

The research/study approved by the Institutional Review Board at Institutional Research and Ethics Committee, number 0003868, dated 5/4/2021.

Declaration of Patient Consent

All participants provided written informed consent. Pregnant and postpartum adolescents 15–17 years of age were offered written assent with a waiver of parental permission because they are considered emancipated minors under Kenya law.

Use of Artificial Intelligence (AI)-Assisted Technology for Manuscript Preparation

The authors confirm that there was no use of artificial intelligence (AI)-assisted technology for assisting in the writing or editing of the manuscript and no images were manipulated using AI.

Disclaimer

None.

REFERENCES

1. Joint United Nations Programme on HIV/AIDS. UNAIDS Data 2023. Geneva; UNAIDS; 2023 [Accessed 2024 Jan 24]. Available from: https://www.unaids.org/en/resources/documents/2023/2023_unaids_data
2. Lazarus JV, Janamnuaysook R, Caswell G. A people-centred health system must be the foundation for person-centred care in the HIV response. *J Int AIDS Soc.* 2023 Jul;26(Suppl 1):e26125.
3. Ambia J, Mandala J. A systematic review of interventions to improve prevention of mother-to-child HIV transmission service delivery and promote retention. *J Int AIDS Soc.* 2016 Apr 6;19(1):20309.
4. Humphrey JM, Songok J, Ofner S, Musick B, Alera M, Kipchumba B, *et al.* Retention in care and viral suppression in the PMTCT continuum at a large referral facility in western Kenya. *AIDS Behav.* 2022 Nov; 26(11): 3494–505.
5. Berlach M, Mercer T, Apondi EO, Mwangi W, Were E, McHenry MS. Integrating prevention of mother-to-child transmission of HIV care into general maternal child health care in western Kenya. *Int J MCH AIDS.* 2021;10(1):19–28.
6. World Health Organization. Technical Consultation on the Integration of HIV Interventions into Maternal, Newborn and Child Health Services. Geneva; 2006. [Accessed 2024 Feb 24]. Available from: https://apps.who.int/iris/bitstream/handle/10665/69767/WHO_MPS_08.05_eng.pdf;jsessionid=92B2FD4E4A4ACB8C1F7D2BA0048800B9?sequence=1
7. Tudor Car L, Van Velthoven MH, Brusamento S, Elmoniry H, Car J, Majeed A, *et al.* Integrating prevention of mother-to-child HIV transmission programs to improve uptake: A systematic review. *PLoS One.* 2012;7(4):e35268.
8. Winestone LE, Bukusi EA, Cohen CR, Kwaro D, Schmidt NC, Turan JM. Acceptability and feasibility of integration of HIV care services into antenatal clinics in rural Kenya: A qualitative provider interview study. *Glob Public Health.* 2012;7(2): 149–63.
9. Edmonds A, Feinstein L, Okitolonda V, Thompson D, Kawende B, Behets F. Implementation and operational research: Decentralization does not assure optimal delivery of PMTCT and HIV-exposed infant services in a low prevalence setting. *J Acquir Immune Defic Syndr.* 2015 Dec 1;70(4):e130–9.
10. Aluisio AR, Bosire R, Bourke B, Gatuguta A, Kiarie JN, Nduati R, *et al.* Male partner participation in antenatal clinic services is associated with improved HIV-free survival among infants in Nairobi, Kenya: A prospective cohort study. *J Acquir Immune Defic Syndr.* 2016 Oct 1;73(2):169–76.
11. Akama E, Mburu M, Mutegi E, Nyanaro G, Otieno JP, Ndolo S, *et al.* Impact of a rapid results initiative approach on improving male partner involvement in prevention of mother-to-child transmission of HIV in western Kenya. *AIDS Behav.* 2018 Sep;22(9):2956–65.
12. Oyugi E, Gura Z, Boru W, Githuku J, Onyango D, Otieno W, *et al.* Male partner involvement in efforts to eliminate mother-to-child transmission of HIV in Kisumu County, Western Kenya, 2015. *Pan Afr Med J.* 2017 Nov 4;28(Suppl 1):6.
13. Jennings L, Ong'ech J, Simiyu R, Sirengo M, Kassaye S. Exploring the use of mobile phone technology for the enhancement of the prevention of mother-to-child transmission of HIV program in Nyanza, Kenya: A qualitative study. *BMC Public Health.* 2013 Dec 5;13:1131.
14. Busza J, Walker D, Hairston A, Gable A, Pitter C, Lee S, *et al.* Community-based approaches for prevention of mother to child transmission in resource-poor settings: A social ecological review. *J Int AIDS Soc.* 2012 Jul 11;15(Suppl 2):17373.
15. Humphrey J, Wanjama E, Carlucci JG, Naanyu V, Were E, Muli L, *et al.* Preferences of pregnant and postpartum women for differentiated service delivery in Kenya. *J Acquir Immune Defic Syndr.* 2023 Dec 5;94(5):429–36.
16. Kenya Ministry of Health. Kenya HIV Estimates Report 2018. Nairobi: National AIDS and STI Control Programme (NASCO); 2018 [Accessed 2024 Jan 24]. Available from: <https://nsdcc.go.ke/wp-content/uploads/2018/11/HIV-estimates-report-Kenya-20182.pdf>
17. National AIDS and STIs Control Programme. Kenya HIV prevention and treatment guidelines, 2022. Nairobi; Kenya Ministry of Health; 2022. [Accessed 2023 December 28]. Available from: <https://www.nascop.or.ke>
18. World Health Organization. Updated recommendations on service delivery for the treatment and care of people living with HIV. Geneva: World Health Organization; 2021. [Accessed 2023 December 28]. Available from: <https://www.who.int/publications-detail-redirect/9789240023581>
19. Humphrey J, Nagel E, Carlucci JG, Edmonds A, Kinikar A, Anderson K, *et al.* Integration of HIV care into maternal and child health services in the global IeDEA consortium. *Front Glob Women Health.* 2023 Apr 17;4:1066297.
20. Myer L, Odayar J, Malaba TR, Allerton J, Kabanda S, Hu NC, *et al.* Improved virologic outcomes in postpartum women living with HIV referred to differentiated models of care. *AIDS.* 2022 Dec 1;36(15):2203–11.
21. Humphrey JAM, Kipchumba B, Pfeiffer EJ, Songok J, Mwangi W, Musick B, *et al.* A qualitative study of the barriers and enhancers to retention in care for pregnant and postpartum women living with HIV. *PLOS Glob Public Health.* 2021 Oct 13;1(10):e0000004.

How to cite this article: Humphrey J, Wanjama E, Carlucci JG, Naanyu V, Muli LM, Were E, *et al.* Understanding women's preferences for prevention of mother-to-child HIV transmission services in Kenya. *Int J MCH AIDS.* 2024;13:e009. doi: 10.25259/IJMA_6_2024