Motivations of pregnant women initiating HIV PrEP within antenatal care enrolled in a randomized trial to improve adherence in Western Kenya

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Abstract

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Vertical HIV transmission remains a significant public health challenge in high-burden settings, where maternal HIV infection during pregnancy and breastfeeding account for nearly one-third of new paediatric infections. HIV incidence doubles during the perinatal period due to biological vulnerability and ongoing behavioral risks, including partners of unknown or positive HIV status. The World Health Organization recommends HIV PrEP for pregnant and postpartum women at substantial HIV risk. HIV PrEP delivery is increasingly integrated into routine maternal and child health (MCH) services, however real-world factors influencing pregnant women's decisions to initiate PrEP remain poorly understood. We conducted a cross-sectional secondary analysis of baseline data from the mWACh-PrEP study, a randomized trial among HIV-negative, PrEP-naïve pregnant women between 24-32 weeks gestation at five public MCH clinics in

western Kenya who elected to initiate PrEP. Data on demographics, pregnancy history, HIV risk perception, partner characteristics, psychosocial factors, and PrEP attitudes were collected via structured electronic questionnaires. Poisson regression was used to examine associations between participant characteristics and high self-perceived HIV risk and PrEP initiation motivations.

Among 600 women enrolled, 36.3% reported high HIV risk perception at PrEP initiation. High self-perceived risk was associated with having more than three lifetime sexual partners (aRR 1.43), high empiric HIV risk scores (aRR 1.70), experience of intimate partner violence (IPV) (aRR 1.92), and anxiety symptoms (aRR 2.23). Conversely, participants with high self-efficacy for daily pill-taking were less likely to have high risk perception (aRR 0.63). Women with unplanned pregnancies were more likely than those with planned pregnancies to report initiating PrEP due to concerns that their partner had multiple sexual partners (44.4% vs. 32.4%; aPR 0.80; 95% CI: 0.72–0.89) and feeling at risk for HIV (44.7% vs. 32.6%; aPR 0.86; 95% CI: 0.78–0.95) Women who experienced intimate partner violence (IPV) were more likely than those without IPV histories to report initiating PrEP due to concerns that their partner had other sexual partners (66.6% vs. 38.3%; aPR 1.27; 95% CI: 1.05–1.54) and to protect their infants from HIV (77.8% vs. 49.8%; aPR 1.32; 95% CI: 1.16–1.49).

Pregnant women's decision to initiate HIV PrEP is influenced by a combination of behavioral risk factors (e.g., multiple lifetime sexual partners, condomless sex), psychosocial stressors (including IPV and anxiety), and pregnancy-specific contexts (notably unplanned pregnancies). Tailored HIV risk counseling that addresses discordance between objective risk and subjective perception, routine IPV screening, and integrated supportive services within MCH settings are critical to improving PrEP uptake and adherence and ultimately reducing maternal HIV acquisition and vertical transmission in high-risk settings

Introduction

Vertical HIV transmission remains a public health concern, with new pediatric HIV infections continuing to occur disproportionately in high HIV burden countries in sub Saharan Africa[1]. Maternal acute HIV infection during pregnancy and breastfeeding is estimated to contribute nearly one-third of global pediatric HIV infections, highlighting the need for targeted prevention strategies during this period[2,3]. Daily oral HIV pre-exposure prophylaxis (PrEP) with tenofovir disoproxil fumarate (TDF)-based regimens is effective in preventing HIV transmission when used with sustained adherence[4–6]. HIV PrEP is generally acceptable among PrEP-naive pregnant women[7], with safety data supporting its use during pregnancy and breastfeeding[8]. The World Health Organization and Kenya’s Ministry of Health recommend the use of daily oral TDF-based PrEP for pregnant and postpartum women who are at substantial risk of HIV acquisition,

including during periconception, pregnancy, and postpartum periods[9,10]. These recommendations reflect a shift toward more inclusive HIV prevention strategies that recognize the ongoing risks of HIV acquisition faced by women during pregnancy.

Integration of HIV PrEP into routine maternal and child health (MCH) clinics is expanding in settings with high HIV burden to decrease vertical transmission and promote the health of pregnant women and their children[11]. Implementation projects in Kenya illustrate that HIV PrEP delivery within MCH clinics is both feasible and acceptable, utilizing nurse-led or collaborative models to integrate HIV PrEP counselling, risk assessment, and prescription into routine antenatal and postnatal care[12–14]. This integrated approach reduces barriers to HIV PrEP access, such as stigma and logistical complexity, and capitalizes on regular contact between women and healthcare providers.

Despite the scale-up of HIV PrEP services within MCH clinics, motivators influencing pregnant women's decisions to initiate HIV PrEP remain understudied[15]. Most literature documenting HIV PrEP initiation among pregnant women derives from research settings with well-defined eligibility criteria, enhanced counselling, and frequent follow-up, which may not fully capture the complexities of decision-making in routine programmatic environments[16]. Self-perceived HIV risk has been shown to be a key motivator for PrEP uptake, yet there is limited data showing how women assess and internalize their HIV risk when offered PrEP as part of routine care[15]. Additionally, individual, social, and pregnancy-related factors such as relationship context, partner's HIV status, parity, unplanned pregnancy, and social support may interact to shape risk perception and subsequent motivation for PrEP initiation[17,18].

To better understand the factors that influence women's decisions to initiate HIV PrEP, we conducted a secondary data analysis using data from the mWACh-PrEP trial, an hybrid effective-implementation randomized clinical trial conducted within routine antenatal care settings in Kenya, which utilized a two-way mHealth communication platform to support HIV PrEP adherence[19]. Our analysis focused on assessing factors associated with high HIV risk perception and to explore how pregnancy characteristics, such as parity and pregnancy intention, inform women's decisions to initiate PrEP during antenatal visits. We hypothesize that pregnancy-related factors may motivate PrEP uptake primarily out of concern for infant protection, whereas socio-demographic and psychosocial characteristics may be more closely tied to women's self-perceived risk.

Methods

Study design

This was a cross-sectional secondary analysis of baseline data from the mWACh-PrEP randomized controlled trial (NCT04472884), conducted at five public health facilities offering (MCH) services in western Kenya[19].

Study Participants

Eligible women were HIV-negative, at least 18 years of age, within 24–32 weeks gestation, demonstrated high risk for HIV (empiric HIV risk score ≥6, corresponding to an estimated HIV incidence of 7.3 per 100 person-years[20]), attending ANC in the participating clinics, and initiating PrEP that day in clinic. The empiric

HIV risk score used to identify women at high risk for HIV was previously validated in pregnant women in Kenya[21] and the following variables: number of lifetime sexual partners, partner HIV status (including unknown status), syphilis diagnosis, and previous STIs[20]. Additional requirements included planning to reside locally for at least one year postpartum and intending to receive follow-up care at the study clinic.

Data collection and variable definition

At enrollment, structured electronic questionnaires (available in English, Swahili, or Dholuo) were administered, to captures data on demographics and pregnancy including age, marital status, education, employment, gestational age, pregnancy intention (planned vs. unplanned was defined as a self-reported intended pregnancy for which the participant described readiness for conception), and self-perceived HIV risk. Women were asked about their motivators for PrEP initiation by selecting all applicable reasons for PrEP initiation from a standardized list including: 1) feeling at risk for HIV; 2) concern that their partner may have other sexual partners 3) desire to protect their baby from HIV (protecting infants); 4) partner known to be HIV-positive; 5) unknown partner HIV status; 6) interest in trying something new, and 7) other (specify).

Other questions included: self-efficacy for daily pill-taking (assessed by asking participants to rank on a 0-10 scale (0=Cannot do it at all, 10=Completely certain can do it) their response to the question: “How confident are you that you can integrate a daily medication into your daily routine? (High self-efficacy to take daily medication: >=5). intimate partner violence (IPV) (assessed using the Hit, Insult, Threaten, Scream (HITS)[22] scale). Symptoms of depression were assessed using the center for epidemiological studies depression (CESD) scale[23] and anxiety was assessed using the generalized anxiety disorder (GAD)-7 scale[24], which have been validated in Kenya. Additional data abstracted from the MCH and PrEP records included details on PrEP initiation, confirmation of syphilis, and HIV test results.

Ethical review

Ethical approval was obtained from the University of Washington IRB (STUDY00010797) and the Kenyatta National Hospital ERC (P319.05/2021). The clinical trial was registered at ClinicalTrials.gov (NCT04472884). All participants provided written informed consent

Statistical Analysis

Descriptive statistics summarized sociodemographic, behavioral, psychosocial, and pregnancy-related characteristics among women initiating PrEP. Continuous variables, presented as medians and interquartile ranges (IQR) and categorical variables, presented as frequencies and percentages, were stratified by high versus low HIV risk perception. We used Poisson regression models with robust standard errors to estimate prevalence ratios (PRs) and adjusted prevalence ratios (aPRs) to evaluate associations between participant characteristics and (1) motivators for PrEP initiation and (2) self-perceived HIV risk. Variables predetermined a priori ─maternal age, marital status, duration with current partner and education level were included in multivariate models due to their known association with HIV risk perception and PrEP use. Analyses were conducted using STATA version 14.0 (StataCorp, College Station, TX).

Results

Participants Characteristics

Between January 2022 and July 2023, 802 pregnant women-initiated HIV PrEP at the five study sites, with 616 meeting the inclusion criteria, of whom 600 (97.4% of those eligible) enrolled in the trial (Figure 1). The median age was 24.9 years (IQR: 21.6–29.2), with 54.7% older than 24 years, 71.1% married, and a median of 12 years of education completed. Regular employment was reported by 21%, and 40.3% of pregnancies were planned. Primigravida women comprised 36.3% of the sample. Nearly all reported only one partner in the preceding year, but 91.1% were unaware of their partner's HIV status; the median empiric HIV risk score was 9 (IQR: 8–10). High self-perceived HIV risk was reported by 36.3%, and 96.3% expressed high self-efficacy for daily pill-taking. Self-reported syphilis diagnosis, IPV, and STIs were infrequently reported at 1.3%, 3.0% and 3.3 % respectively (Table 1).

Correlates of High Self-Perceived HIV Risk

After adjusting for confounders, no significant differences in self-perceived HIV risk were identified by age, education, marital status, or partner relationship duration. Having more than three lifetime sexual partners was associated with a 43% greater likelihood of perceiving high HIV risk compared to women with three or fewer partners (aRR 1.43; 95% CI: 1.11–1.83). . Women reporting IPV had nearly twice the likelihood of high-risk perception (aRR 1.92; 95% CI: 1.34–2.75) compared to those without IPV. Anxiety symptoms also doubled the likelihood (aRR 2.23; 95% CI: 1.23–4.05), while high confidence in daily pill-taking (self-efficacy) was associated with a 37% lower likelihood of high self-perceived risk (aRR 0.63; 95% CI: 0.42–0.93) (Table 2)

Motivations for PrEP initiation

Overall, the most frequent motivation for PrEP initiation was "*Partner HIV status unknown*" (40.7%), followed by "*Protecting the baby from HIV*" (22.4%), "*Feeling at risk of HIV*" (17.6%), "*Partner has other partners*" (17.3%), "*Partner known to be living with HIV*" (1.2%), "*Interested in trying something new*" at 0.5% and "*Oth*er" (0.4%) (Figure 2).

Partner having other partners: After adjusting for age, completed years of education, and marital status, women with unplanned pregnancies were more likely than those with planned pregnancies to cite concern about their partner having other sexual partners as a motivator for PrEP initiation (44.4% vs. 32.4%; aPR: 1.47 [95% CI: 1.17, 1.86]). Older women, over 24 years of age, were more likely to identify concern about their partner having other partners as a PrEP initiation motivator compared to younger women (40.2% vs. 37.9% aPR: 1.17 [95% CI: 0.92, 1.50]). Women engaging in condomless sex also showed a significantly higher likelihood of citing this concern as a motivator for PrEP initiation compared with women using condom, Apr: 2.72 [95% CI: 1.30, 5.69]).

Partner is living with HIV or partner's HIV status is unknown: Primigravida women were less likely than multigravida women to report a partner known to be living with HIV as a motivator for PrEP uptake (0.5% vs.

3.9%, aPR: 0.43 [95% CI: 0.05, 3.89]), but slightly more likely to cite unknown partner HIV status as a reason, aPR: 1.03 [95% CI: 0.99, 1.08]). Women with high self-perceived HIV risk compared to those with low self-perceived HIV risk had higher likelihood of initiating PrEP due to having a partner known to be living with HIV (5.0% vs. 1.3%, aPR: 4.32 [95% CI: 1.52, 12.24]) but a lower likelihood of citing unknown partner HIV status, aPR: 0.93 [95% CI: 0.90–0.97]. Additionally, women with high social support compared to those with low social support were less likely to cite unknown partner HIV status as a motivator for PrEP initiation, aPR: of 0.95 [95% CI: 0.91, 1.00]).

Curious to try a new method: Women older than 24 years were less likely than younger women to be motivated by curiosity about trying something new for HIV prevention aPR: 0.38: [95% CI: 0.08, 1.75]). High self-perceived risk compared to low self-perceived risk was associated with interest in trying a new prevention method (2.8% vs. 0.3%; aPR 10.43 (95% CI: 1.22, 89.40). Primigravida women were significantly less likely than multigravida women to be interested in trying something new aPR: 0.17 [95% CI: 0.03, 0.87]).

Desire to protect baby from HIV: Women experiencing intimate partner violence (IPV) more frequently reported the desire to protect their baby from HIV compared to those not reporting IPV (77.8% vs. 49.8%; aPR: 1.60 [95% CI: 1.25, 2.06]) Women with high social support were significantly more likely to cite the desire to protect their baby from HIV as a motivator compared to those with low social support (aPR: 1.87 [95% CI: 1.59, 2.20]). Conversely, currently married women were less likely to cite this as a motivator compared to unmarried women (aPR: of 0.81 [95% CI: 0.67, 0.98]).

Feeling at risk for HIV: Women experiencing IPV were more likely to cite feeling at risk for HIV as a motivator for PrEP initiation than those without IPV (72.2% vs. 38.8%, aPR: 1.84 [95% CI: 1.37, 2.48]). Women with unplanned pregnancies were more likely to cite feeling at risk for HIV as a motivator to use PrEP compared to those with planned pregnancies (aPR: 1.43 [95% CI: 1.15, 1.79]),. Women engaging in condomless sex also showed a significantly higher likelihood of citing feeling at risk for HIV as a motivator for PrEP uptake compared to those not using condoms (aPR: 2.38 [95% CI: 1.21, 4.69]).

Discussion

Our findings from a large cohort of pregnant women initiating PrEP in Kenyan public-sector MCH settings contribute to evidence that PrEP motivation is driven by behavioral, psychosocial, and pregnancy-specific factors[18,25]. In prior studies, high numbers of lifetime sexual partners and a higher empiric HIV risk score as objective measures were associated with high self-perceived HIV risk and thus higher likelihood of HIV PrEP initiation[26,27]. Subjective HIV risk perception is an actionable metric which has been associated with PrEP initiation in other studies[26].

Consistent with prior studies, we found that women who reported a higher number of lifetime sexual partners, and a higher empiric HIV risk score were more likely to perceive themselves at high HIV risk, driving HIV PrEP initiation decisions[28],[20]. Despite all women having a high empiric HIV risk score to be eligible for the parent study, only one-third of women perceived themselves to be at high risk of HIV. Having a primary partner was associated with lower HIV risk perception, suggesting that current stable relationships may falsely

reassure some women at risk for HIV acquisition. Most women (>90%) did not know their partners HIV status, consistent with previous findings across the region[29] For many, uncertainty around their partner's serostatus was a key motivator for starting PrEP. This finding highlights the need to develop tailored counseling strategies that address the discrepancy between objective risk and subjective perception, while also promoting partner testing and open disclosure within antenatal care to facilitate accurate risk assessment and informed decision-making about PrEP[17,28].

High self-efficacy to take a daily pill was consistently associated with a reduced perception of high HIV risk. This suggests that confidence in one's ability to adhere to PrEP may empower women, leading to a diminished sense of vulnerability to HIV[30].

We found that pregnancy-related characteristics were key motivators for HIV PrEP initiation. Women with unplanned pregnancies were more likely to cite concerns about partner infidelity and feeling at risk for HIV as reasons for initiating PrEP, pointing out how pregnancy circumstance influences how pregnant women perceive and respond to HIV risk[18]. Primigravida women showed slightly higher motivation to protect their babies from HIV, although this was not statistically significant after adjusting for age, education and marital status. These findings support the growing call to integrate maternal-child health with HIV prevention, where emphasizing infant protection in PrEP counselling could encourage more women to start and stay on PrEP during pregnancy[31].

Social factors, particularly IPV and presence or absence of social support, also influenced women's PrEP decision-making. Women experiencing IPV were more likely to cite partner infidelity, self-perceived HIV risk, and infant protection as reasons for PrEP initiation. This shows the interconnectedness of gender-based violence and HIV vulnerability[32], and points to the need for PrEP programs to include IPV screening and responsive, supportive services[33]. Having social support was linked to greater motivation across multiple domains, suggesting it can serve as a valuable protective factor and an opportunity to strengthen women's engagement with PrEP[34].

Behavioural factors, such as condomless sex, also influenced motivations. Women who reported unprotected sex were more likely to recognize partner infidelity and feel at risk for HIV, yet they were less likely to cite curiosity to try something new as a reason for trying PrEP. This shows that women with clear behavioural risks may be more practically focused on prevention, an important insight for designing messaging that resonates with real-life experiences rather than interests[28].

Limitations

The reliance on self-reported data on sensitive topics like IPV and sexual behaviour may be subject to bias, however, the close concordance between these findings and the prevalence estimates of IPV, risk behaviors, and unknown partner status in other Kenyan studies mitigates major concerns about reporting validity[18,29]. Additionally, because our sample included pregnant women at an elevated risk for HIV, these findings may not generalize to all pregnant populations, however, the experiences from this large sample of pregnant women at elevated risk for HIV enrolled in antenatal care in public sector Kenyan clinics are well-suited to informing HIV PrEP messaging to enhance HIV prevention in the region.

Conclusion

These findings provide insights into the factors driving PrEP initiation among pregnant women within routine antenatal care. By assessing distinct motivators including partner fidelity concerns, desire to protect infants, behavioral risk factors, psychosocial stressors, pregnancy context, and self-efficacy for pill taking, we offer evidence to inform programmatic strategies. Together, these findings emphasize the need to approach HIV prevention in pregnancy as a multidimensional issue in HIV counselling sessionsOur findings underscore the need for tailored counseling that bridges gaps between objective risk and self-perception, routine intimate partner violence (IPV) screening with psychosocial support, and enhanced partner HIV testing and disclosure support within Maternal and Child Health (MCH) PrEP programs. To support them effectively, programs should offer comprehensive care that includes counseling tailored to individual motivations, support for women facing IPV or unplanned pregnancy, and strategies to strengthen social support and partner engagement. These targeted interventions could improve PrEP uptake and adherence, ultimately reducing maternal HIV acquisition and vertical transmission.

Future longitudinal research should investigate the distinct motivations to sustain PrEP adherence, ensuring that contextually adapted messaging and support effectively promote continuous PrEP use throughout pregnancy and postpartum period.

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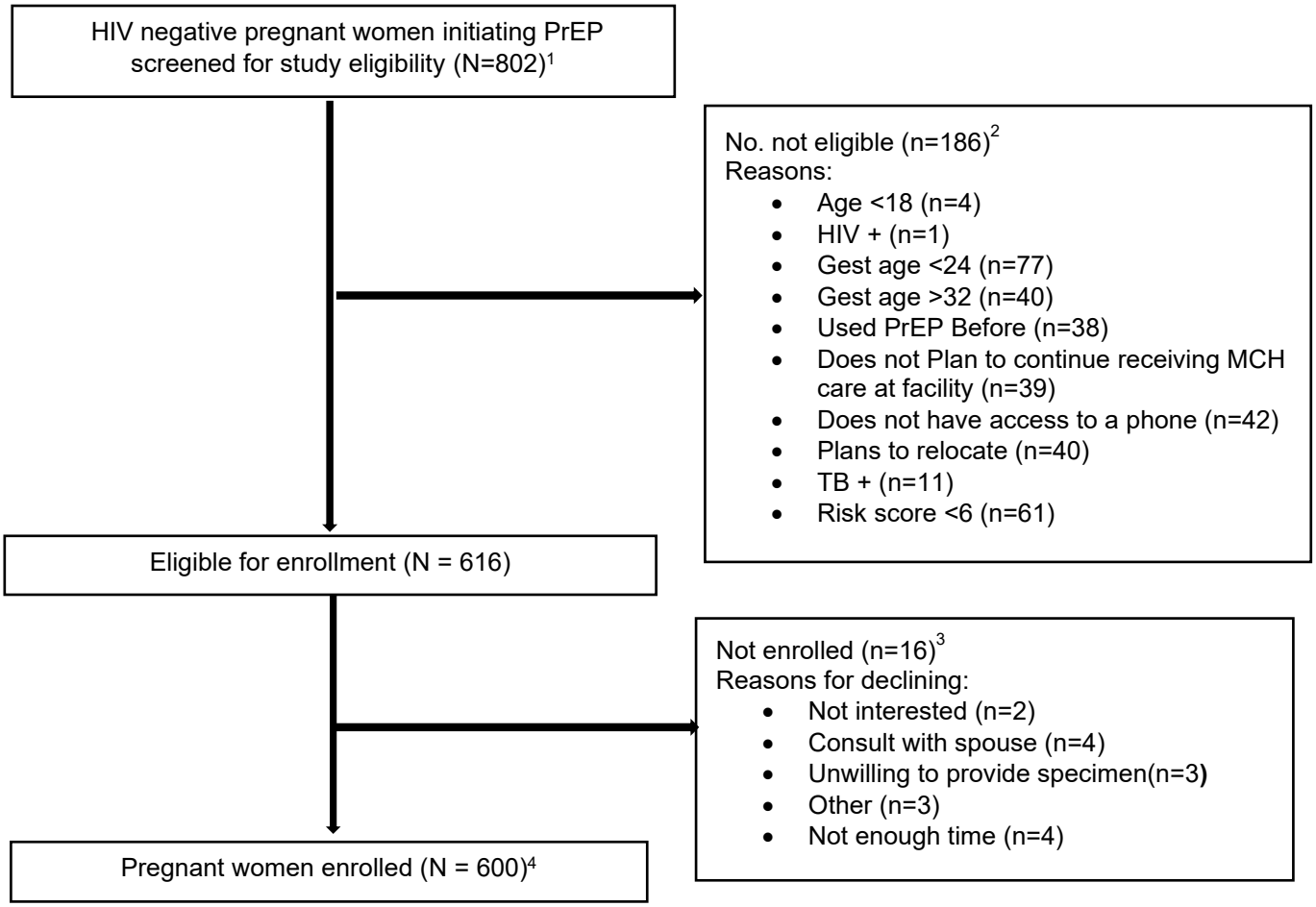
Figure 1: Flow diagram for cumulative enrollment



[1] Number of women screened for eligibility.

[2] Number not eligible for enrollment.

[3] Reflects the primary reason for not enrolling, including women who were eligible and willing to enroll, but who did not ultimately enroll.

[4] Number of pregnant HIV negative women enrolled into mWACh

Table 1: Baseline demographic, clinical, psychosocial, and partnership characteristics of pregnant women (n=600)

Demographic characteristics	n (%) or Median (IQR)	
Women age (years)	24.9	(21.6,29.2)
≤24	272	(45.3%)
>24	328	(54.7%)
Currently married	424	(71.1%)
Currently in school	69	(11.5%)
Completed education (years)	12.0	(9.00, 13.0)
Regular employment[1]	126	(21.0%)
Clinical characteristics		
Gestational age at enrolment (weeks)	26.0	(24.0, 29.0)
Timing of first ANC visit in current pregnancy		
First Trimester (0-13 weeks)	103	(17.2%)
Second Trimester (14-26 weeks)	372	(62.0%)
Third Trimester (27-40 Weeks)	125	(20.8%)
Planned pregnancy[2]	242	(40.3%)
Primigravida	218	(36.3%)
Birth history among those with prior pregnancies (n=382)		
No. of living children	2.00	(1.00, 2.00)
<2 years since last pregnancy	99	(25.9%)
Prior miscarriage	71	(18.6%)
Prior stillbirth	7	(1.8%)
Partnership characteristics		
No. of partners in the last 1 year	1.00	(1.00, 2.00)
Currently has a primary partner	564	(94.0%)
Time duration with current partner		
<1 year	51	(9.0%)
≥1 year	513	(91.0%)
Partner's age (years)	30	(26.0, 35.0)
Partner age difference [3]		
<10 years	419	(87.3%)
≥10years	61	(12.7%)
Partner's highest completed education		
Less than secondary	185	(32.8%)
Secondary	176	(31.2%)
Higher than secondary	176	(31.2%)
Unknown	27	(4.8%)
Risk assessment characteristics		
Empiric HIV risk score[4]	9	(8, 10)
Number of lifetime sexual partners	3	(2, 4)
Partner HIV status		
Negative	14	(2.3%)
Positive	16	(2.7%)
Unknown	570	(95.0%)
Syphilis status in pregnancy		
Negative	579	(96.5%)
Positive	8	(1.3%)
Intimate partner violence [5]	18	(3.0%)
Diagnosed or treated for STI [6]	12	(3.3%)
Exchanged sex for money or favors [6]	31	(5.2%)
Forced to have sex against will [6]	17	(2.8%)
Shared needles while engaging in intravenous drug use [6]	2	(0.3%)
Used post exposure prophylaxis more than twice [6]	6	(1.0%)
Psychosocial characteristics		
Knows someone taking PrEP	53	(8.8%)
High perceived HIV risk [7]	218	(36.3%)
High self-efficacy to take daily pill [8]	578	(96.3%)
Partner has other partners		
No	77	(13.7%)

	Yes	218	(38.7%)
	Don't know	269	(47.7%)
Ever drink alcohol[9]		68	(11.3%)
Depression symptoms[10]		35	(5.9%)
Anxiety symptoms[11]		8	(1.3%)
Perceived Stress[12]		262	(43.7%)
Social support[13]		332	(55.3%)

[1] Any consistent income generating activity, either formal or informal[2] Pregnancy planning was assessed by asking "If pregnant, was it planned or unplanned."

[3] Partner age difference only among participants who knew their partner's age.

[4] The empiric HIV risk assessment tool had an area under the curve of 0.76 to predict HIV incidence in pregnancy/postpartum (Pintye et al. CID 2017); score: 1 point per lifetime sexual partner, 6 points if the sexual partner's HIV status is positive or unknown and 5 points for syphilis positive. Cutoff for enrollment was HIV risk score ≥ 6 (translating to HIV incidence 7.3 per 100 person-years.

[5] HITS score ≥ 10

[6] In the last 6 months-Experience in the last 6months, prior to enrolment to the study.

[7]Self-perceived HIV risk assessed by asking "How would you describe your chances of getting HIV in the next year?", with possible responses of "No risk at all", "Small chance", "Moderate chance", "Great chance". (High self-perceived HIV risk: Great Chance/Moderate chance = "Yes", Small chance/No risk at al= "No").

[8] Self-efficacy to take a daily oral medication assessed by asking participants to rank on a 0-10 scale (0=Cannot do it at all, 10=Completely certain can do it) their response to the question: "How confident are you that you can integrate a daily medication into your daily routine? (High self-efficacy to take daily medication: >=5)

[9]Alcohol use before and during pregnancy

[10]Depression symptoms assessed using the CESD and dichotomized as low (depression <10) and high (depression score ≥10)

[11]Anxiety symptoms assessed using the GAD7 scale and dichotomized as low (anxiety score<10) and high (anxiety score ≥10)

[12]stress symptoms assessed using the perceived stress scale and dichotomized as low (pss<10) and high (pss score ≥10)

[13]Social support was assessed using the SS scale and dichotomized with the median as the cutoff point, with scores low than the median denoting low social support.

Table 2: Correlates of high HIV risk perception among pregnant women initiating PrEP during pregnancy N=600

Demographic characteristics	N	n (%) High HIV risk perception No (n=382)	Yes (n=218)	Univariable Poisson models Risk Ratio (95% CI)	p-value[1]	Multivariable Poisson models Adjusted Risk Ratio (95% CI)	p-value[1]
Age (years)							
>24		216 (56.5%)	112 (51.4%)	0.88 (0.71- 1.08)	0.221	_	_
≤24		166 (43.5%)	106 (48.6%)	ref			
Currently married							
Yes		276 (72.8%)	148 (68.2%)	0.87 (0.70- 1.09)	0.224	_	_
No		103 (27.2%)	69 (31.8%)	ref			
Education (years)							
≥12		234 (61.3%)	122 (56.0%)	0.87 (0.70- 1.08)	0.202	_	_
<12		148 (38.7%)	96 (44.0%)	ref			
Regular employment							
Yes		76 (19.9%)	50 (22.9%)	1.12 (0.88- 1.44)	0.355	_	_
No		306 (80.1%)	167 (76.6%)	ref			
Clinical characteristics							
Planned pregnancy							
Yes		159 (41.6%)	83 (38.1%)	1.10 (0.88- 1.37)	0.397	_	_
No		223 (58.4%)	135 (61.9%)	ref			
Primigravida							
Yes		139 (36.4%)	79 (36.2%)	1.00 (0.80- 1.24)	0.971	_	_
No		243 (63.6%)	139 (63.8%)	ref			
Risk assessment characteristics							
No. of lifetime sexual partners >3							
Yes		214 (56.0%)	149 (68.3%)	1.41 (1.12- 1.78)	**0.004**	1.43 (1.11-1.83)	**0.006**
No		168 (44.0%)	69 (31.7%)	ref		ref	
HIV status of primary sexual partner(s) among women with partners							
Unknown		369 (96.6%)	201 (92.2%)	0.82 (0.44,1.52)	0.0.535	_	_
Positive		5(1.3%)	11(5.0%)	1.60 (0.80,3.20)	0.179	_	_
Negative		8 (2.1%)	6 (2.8%)	ref			
Syphilis results (RPR,HIV/Syphilis dual)							
Positive		4 (1.0%)	4 (1.8%)	1.08 (0.79- 1.46)	0.639	_	_
Negative		370 (96.9%)	209 (95.9%)	ref			
Forced sex in the last 6 months:							
Yes		10 (2.6%)	7 (3.2%)	1.14 (0.64- 2.03)	0.662	_	_
No		372 (97.4%)	211 (96.8%)	ref			
IPV							
Yes		6 (1.6%)	12 (5.5%)	1.88 (1.33- 2.66)	**<0.001**	1.92 (1.34-2.75)	**<0.001**
No		376 (98.4%)	206 (94.5%)	ref		ref	

Psychosocial factors						
Know someone on PrEP						
Yes	36 (9.4%)	17 (7.8%)	0.87 (0.58- 1.31)	0.513	_	_
No	346 (90.6%)	201 (92.2%)	ref			
Depression symptoms						
Yes	22 (5.8%)	13 (6.0%)	0.98 (0.63- 1.53)	0.927	_	_
No	355 (94.2%)	203 (94.0%)	ref			
Anxiety symptoms						
Yes	4 (1.0%)	4 (1.8%)	1.38 (0.69- 2.79)	0.363	_	_
No	377 (99.0%)	213 (98.2%)	ref		_	
Perceived stress						
Yes	168 (44.0%)	94 (43.5%)	0.99 (0.80- 1.23)	0.913	_	_
No	214 (56.0%)	122 (56.5%)	ref			
Social support						
Yes	162 (42.4%)	106 (48.6%)	1.17 (0.95- 1.45)	0.140	_	_
No	220 (57.6%)	112 (51.4%)	ref			
High self-efficacy to take daily pill						
Yes	373 (97.6%)	205 (94.0%)	0.60 (0.42- 0.86)	**0.006**	0.63 (0.42- 0.86)	**0.019**
No	9 (2.4%)	13 (6.0%)	ref		ref	
Partnership characteristics						
Currently have a primary partner						
Yes	367 (96.1%)	197 (90.4%)	0.60 (0.44- 0.81)	**0.001**	omitted[1]	_
No	15 (3.9%)	21 (9.6%)	ref			
Duration with current partner (years)						
>1	328 (89.4%)	185 (93.9%)	1.53 (0.92- 2.55)	0.100	_	_
≤1	39 (10.6%)	12 (6.1%)	ref			
Partners age difference (years)						
≥10	38 (11.4%)	23 (15.6%)	1.28 (0.89- 1.82)	0.181	_	_
<10	295 (88.6%)	124 (84.4%)	ref			

[1]The variable currently having a primary partner was omitted from the adjusted Poisson regression due to perfect collinearity. In our analytic sample, all participants who were not currently in a partnership were also missing data on key adjustment variables (e.g., partner duration), making currently have a partner non-variable within the model

Figure 2: Motivations for PrEP initiation among pregnant women

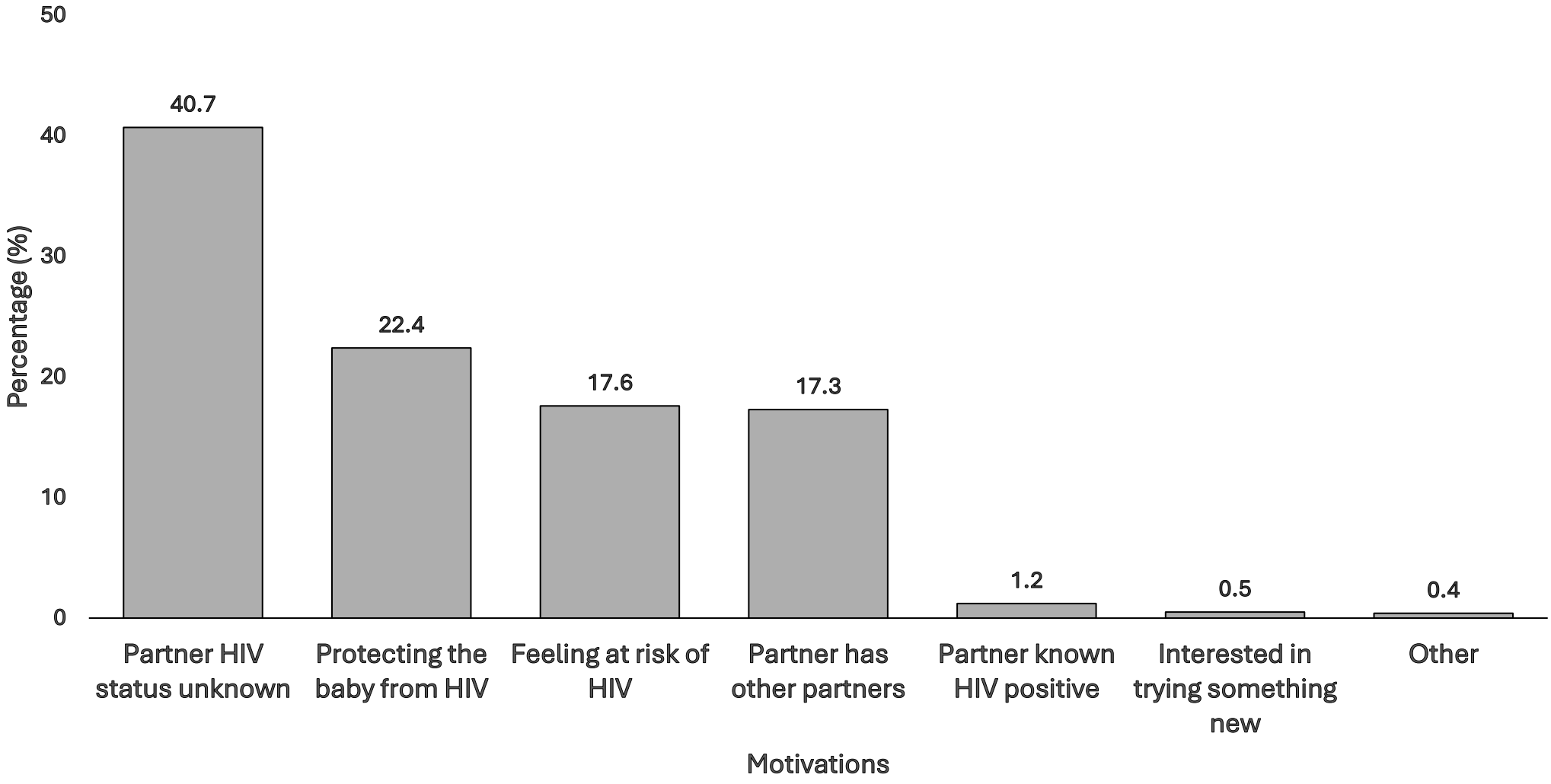


Figure 3: Adjusted prevalence ratios for motivations for PrEP initiation