Acceptability of same-day HIV pre-exposure prophylaxis initiation among individuals with depression symptoms during emergency care in Nairobi, Kenya.

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Abstract

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Introduction

HIV pre-exposure prophylaxis (PrEP) is an important prevention strategy, but its integration into routine care faces challenges, especially in low- and middle-income countries. Emergency departments (EDs) present a unique, yet underutilized, opportunity for PrEP delivery, particularly for people with less access to care or who are marginalized and face challenges accessing care, such as those from key populations. Emergency care utilization is high among people with depression and may influence health decision-making, including PrEP uptake. This study aimed to determine the acceptability of same-day PrEP initiation among ED patients with varying depression severities and identify associated patient-level factors. The hypothesis was that patients screening positive for moderate to severe depression would be less likely to accept same-day PrEP than those with screening scores consistent with a lower risk of depression due to the potential impact of depression-related cognitive impairment on health decision-making.

Methods

This cross-sectional study utilized secondary data from the ED-PrEP study, conducted from July 5, 2024, to August 18, 2024, at the ED of Kenyatta National Hospital in Nairobi, Kenya. [1] The study population included 295 adult ED patients (aged ≥18) who were not critically ill or pregnant and had a Patient Health Questionnaire 9 (PHQ-9) scores of 1 or higher. The primary outcome was the acceptability of same-day PrEP initiation, defined as willingness to start PrEP if eligible. Depression severity was the primary exposure, categorized by PHQ-9 scores: minimal to mild (scores 1-8), moderate (scores 9-14), and moderately severe to severe (scores 15-27). Statistical analysis was conducted using chi-square tests, simple, univariate, and multivariate logistic regression to calculate unadjusted and adjusted odds ratios (aOR) with 95% confidence intervals (CI), adjusting for sociodemographic and behavioral confounders.

Results

Of the 295 participants analyzed, 46% had minimal to mild depression, 39% moderate, and 15% moderately severe to severe depressive symptoms. Willingness to initiate same-day ED-PrEP was high across all groups: 76.3% (minimal to mild), 76.5% (moderate), and 84.4% (moderately severe to severe). There was no statistically significant association between depression severity and PrEP acceptability. However, being unmarried (aOR=2.93, 95% CI: 1.42-6.06), reporting consistent condom use (aOR=3.72, 95% CI: 1.22-11.34), knowing a partner's HIV status (aOR=2.07, 95% CI: 1.18-3.64), and experiencing intimate partner violence (IPV) (aOR=2.34, 95% CI: 1.15-4.76) were significantly associated with higher PrEP acceptability.

Conclusions

Depressive symptom severity did not influence the acceptability of same-day PrEP initiation among ED patients in Nairobi. The high overall PrEP acceptability highlights the feasibility of integrating PrEP services into the emergency departments. Factors such as marital status, condom use, awareness of partner HIV status, and history of IPV were strong predictors of PrEP acceptability. These results underscore the importance of comprehensive, person-centered approaches in EDs that address both HIV risk and co-occurring vulnerabilities like IPV, to effectively improve PrEP uptake in high-burden settings.

INTRODUCTION

HIV pre-exposure prophylaxis (PrEP) is a proven pharmacological intervention for preventing HIV and has been integrated into routine HIV care in Kenya since 2017. [2, 3] There is growing recognition that emergency departments (EDs) in low- and middle-income countries (LMICs) present a critical opportunity to reach individuals at elevated risk for HIV, particularly those who may not routinely access preventive services. [4, 5, 6] EDs often serve as the first or only point of contact with the healthcare system for individuals from key populations, many of whom seek care for urgent health issues rather than ongoing primary care. [7, 8] These same individuals are frequently at heightened risk for both HIV and mental health conditions such as depression, which can compound barriers to prevention and care. [9]

Leveraging EDs for PrEP initiation aligns with UNAIDS 2025 targets to advance person-centered, context-specific HIV prevention strategies. [10] Integrating services such as HIV testing, same-day PrEP initiation, and mental health-informed linkage to care within emergency settings offers a promising approach to close gaps in the HIV prevention cascade for populations with limited access to traditional HIV prevention services. [11] [12] [1238759610]Globally, depression is prevalent among ED patients, with data from the United States showing that 11.4% of annual ED visits involve individuals with depressive symptoms.[12] Studies in East Africa similarly indicate a high prevalence of depression in ED populations; for instance, in northern Tanzania, up to 25% of females in the EDs exhibited major depressive disorder (MDD) symptoms. In this context, MDD was defined as women who scored a PHQ-9 score of 10 and above, indicating moderate to severe depressive symptoms. [13]Among patients in the Kenyatta National Hospital ED, up to 40% of participants in one study had PHQ-9 scores (10 -27), which defines the established threshold for MDD. [11] If untreated, depression may lead to dysfunction and impaired decision-making and may significantly hinder PrEP acceptability among patients in emergency care. [14,]

Individuals with depression face an increased risk of HIV due to overlapping syndemic factors, including substance use, interpersonal violence, and risky sexual behaviors, which amplify vulnerability.[14] [15]Impaired judgment, reduced self-efficacy, and challenges in negotiating safer sex practices, often associated with

depression, further compound this susceptibility.[16] Substance use, frequently co-occurring with depression, further augments this risk by facilitating unsafe injection practices or transactional sex while impairing decision-making. [17]

These overlapping risks are especially pronounced in emergency department (ED) populations, where individuals often present with acute injuries or crises linked to violence or substance use.[8] [18]As such, integrating innovative PrEP models into ED settings catering to the compounded HIV risks faced by individuals with depression and syndemic conditions provides a pathway for prevention tailored to this high-risk population.

Limited data exists on how the severity of depression affects PrEP acceptability in emergency department (ED) settings. Prior research presents mixed findings: some studies report a positive association, [15] where individuals with depressive symptoms were more willing to initiate PrEP; others show a neutral association, [16, 17] finding no significant difference in PrEP acceptability across varying levels of depression severity, while a few report a negative association, indicating that higher depressive symptoms were linked to reduced willingness to initiate PrEP. [18] These divergent results highlight the complexity of the relationship and the need for further investigation in ED contexts.

This study sought to fill gaps in the Understanding of the relationship between depressive symptoms and PrEP delivery through the ED setting by exploring whether patients with moderate, and moderately severe to severe depressive symptoms, PHQ-9, (9-14) and (15-27) respectively, are less likely to find same-day PrEP initiation acceptable compared to patients with minimal to mild depressive symptoms, PHQ-9 (1-8) during emergency care in a tertiary hospital in Nairobi, Kenya. Secondly, the study sought to identify patient-level factors associated with the acceptability of same-day ED-PrEP initiation among patients with mild, moderate, and moderately severe to severe depressive symptoms (PHQ-9 scores 1-8, 9-14, 15-27, respectively) during emergency care.

METHODS

Study Design

This study employed a cross-sectional study design and utilized secondary data from the ED-PrEP study, a

mixed-methods study aimed at informing the development and implementation of an emergency department (ED)-based same-day initiation PrEP model at the Kenyatta National Hospital (KNH) ED. [1]

Study Setting

The parent study was conducted between July 5, 2024, to August 18, 2024, in the Emergency Department (ED) of Kenyatta National Hospital in Nairobi, Kenya, the largest tertiary ED in the country. The KNH ED operates 24 hours a day, 7 days a week, providing specialized emergency services alongside continuous HIV testing services (HTS). During the study period, PrEP services in the KNH ED were initiated through the Comprehensive Care Clinic (CCC), and the ED lacked formal PrEP protocols and depression screening procedures.

Study Population

The study population was a subset of the parent study's population (Figure 1). Eligible participants were adults aged 18 years and above who were able to give consent. Exclusion criteria included critical illness, defined as a red triage category per the South African Triage Scale[27], as well as pregnancy and incarceration. Patients seeking emergency care were screened for eligibility, and those meeting the inclusion criteria were consented and enrolled in the ED-PrEP study. We analyzed data from the total parent study sample of 295 participants.

Power and Sample Size

This study was a secondary analysis of a pre-existing dataset with a fixed sample size. Therefore, a pre-study power calculation was not performed to determine the required sample size for detecting a specific effect. Instead, a post-hoc power analysis was conducted to estimate the minimum detectable proportional difference. With a total sample of 295 participants, a significance level (α) of 0.05, and a target power of 80%, the study was powered to detect a minimum proportional difference of 16.5% between the minimal and moderate depressive symptoms groups and 21.9% between the minimal and severe depressive symptoms groups.

Data Collection

A team of research assistants approached eligible patients who presented to the ED, explained the study, and obtained informed consent. Data was collected using a pre-programmed tablet-based survey tool. The survey captured sociodemographic information, medical history, and specific measures related to HIV risk and mental health. All data were collected on-site in a private consultation area within the ED to ensure confidentiality. The data were securely stored and anonymized for analysis.

Study Measures and Definition of Variables

For the first aim, the primary outcome variable was the acceptability of same-day PrEP initiation, a binary variable categorized as "Acceptable" or "Not Acceptable." This was based on patients' reported willingness to initiate PrEP during their ED visit, if deemed eligible, in response to the question: "If you qualified for PrEP, would you be willing to start it today during your ED visit?" Notably, PrEP was not available in the ED at the time of the study, and no participants received PrEP during their visit.

The primary predictor variable was depressive symptoms, measured using the PHQ-9 scale. This continuous score was categorized into three groups: minimal to mild (scores 1-8), moderate (scores 9– 14), and moderately severe to severe (scores 15-27). It is important to note that a PHQ-9 score of 1 to 8 indicates the presence of minimal to mild depressive symptoms, not the absence of symptoms. The study used these categories to describe a spectrum of symptom severity and potential risk for depression, rather than a formal clinical diagnosis. The study adopted the PHQ-9 scores validated in Tanzania, demonstrating a cutoff score of 9 with a sensitivity of 78% and a specificity of 87% for diagnosing major depressive disorder.[28] Secondary independent variables determined a priori for this aim included sociodemographic factors including age, sex, marital status, and level of education.

The independent variables included: depression symptoms severity categories; age in years, a continuous variable; sex, self-reported as male or female; marital status, categorized as married or unmarried, employment status, classified as employed or unemployed; education, categorized based on the highest level of education completed as no formal education, primary/secondary, or tertiary; alcohol use, which was measured using AUDIT-C scores and categorized as non-hazardous (men <4, women <3) or hazardous (men ≥4, women ≥3),

consistent with validated definitions in East Africa. [19, 20] Social health risk factors included self-reported condom use during the last sexual encounter (always, sometimes, or never), partner HIV status (Known or unknown), and other high-risk characteristics, such as belonging to key populations (e.g., sex workers, men who have sex with men, gay, transgender and people who inject drugs), reported as yes or no. Participants self-reported whether they had ever experienced intimate partner violence (IPV), recorded as a binary (yes/no) variable, using WHO definitions and tools that have been validated in East Africa. [21] They also reported their housing status, categorized as either housed or unhoused. These variables provided a comprehensive framework for examining the relationship between individual and social factors and the acceptability of same-day PrEP initiation.

Statistical Analysis.

Descriptive statistics were employed to present baseline population characteristics, stratified by depression severity. The categorical data were summarized into proportions and presented using a frequency table. Age was analyzed as a continuous variable with a median with interquartile ranges (IQR) since it was skewed to the younger population.

The association, in the first aim, between depression severity and acceptability of same-day PrEP initiation was assessed using the Chi-Square test for proportions, with statistical significance set at a p-value of 0.05. Confidence intervals (95%) were calculated to provide precision for the estimated proportions. A simple logistic regression model was employed to estimate crude odds ratios (OR) and their 95% confidence intervals. Subsequently a partial multivariate logistic regression (adjusted for age, sex, marital status, and level of education), to assess the influence of socio-demographic variables on the primary associations.

In the second aim, a full multivariate logistic regression was performed, which utilized a backward, stepwise variable selection.[22] Variables remained in the model if they had more than 10% effect on the primary association, [23] had no collinearity, p-values ≤ 0.05, and were theoretically sound. Results were reported as adjusted odds ratios (or) with 95% confidence intervals (CIs) and p-values.

All statistical tests used a two-sided significance level of 0.05, and model diagnostics were conducted to assess multicollinearity, goodness-of-fit, and influential outliers. The regression models' results were presented in an association table for clarity.

RESULTS

Of the 325 participants enrolled in the parent study, 30 (9%) individuals were excluded from this analysis due to PHQ-9 scores of 0, resulting in a sample of 295 participants with mild to severe depression symptoms. Table 1 presents the sociodemographic and behavioral characteristics of participants stratified by depressive symptoms severity: minimal to mild symptoms (PHQ-9: 1–8), moderate (9–14), and moderately severe to severe (15–27). Of the sample, 46% (n = 135) reported minimal to mild depression, 39% (n = 115) had moderate depression, and 15% (n = 45) fell into the moderately severe to severe category.

Median age was 31 years (interquartile range, IQR=25, 39) across the depression severity categories. Most participants were male (54.6%), married (56.9%), and had at least secondary education (78.3%). Nearly three-quarters (72.5%) reported being employed. Hazardous alcohol use was reported by 43.2% of those with minimal to mild depressive symptoms, with lower proportions observed among those with moderate (32.4%) and moderately severe to severe depressive symptoms (24.3%). Consistent condom use was reported by only 13.9% of participants, while 41.4% reported never using condoms. Known partner HIV status was reported by 55% of those with minimal to mild symptoms and 35.2% of those with moderate depression, while only 13.9% of the moderately severe to severe group had a partner known to be HIV-negative.

Individuals from key population were most frequently reported among participants with moderate depression symptoms at 51.1%, compared to 25.5% and 23.4% in the minimal to mild and moderately severe to severe groups, respectively. Experiences of IPV was reported by 84 (28.5%) of the overall sample, of whom 52% females, and 26.2% among those in the severe depression category. Homelessness was notably more common in the moderately severe to severe group, 47.1% compared to none in the minimal to mild group.

Willingness to initiate same-day PrEP was high across all depression symptom categories. Among participants with minimal to mild symptoms, 76.3% were willing to start PrEP the same day, followed by 76.5% of those

with moderate depression symptoms, and 84.4% of those with moderately severe to severe symptoms. However, there was no statistically significant difference in PrEP acceptability across the three depression categories ($\chi^2 = 0.174$, $p = 0.917$). Similarly, the Cochran-Armitage test for trend in proportions failed to detect a significant linear trend in PrEP acceptability with increasing depression severity ($\chi^2 = 0.893$, $p = 0.345$). Thus, there was no evidence to reject the null hypothesis that there is no relationship between depression severity and PrEP acceptability among the study population.

Logistic regression models (Table 2) assessed the relationship between depression symptom severity and PrEP acceptability. In univariate analysis, participants with moderately severe to severe depression symptoms had higher, but not statistically significant, odds of PrEP acceptability (OR = 1.69; 95% CI: 0.68, 4.18; p = 0.26) compared to those with minimal to mild symptoms. These findings remained non-significant after partially adjusting for sociodemographic variables (aOR = 1.58; 95% CI: 0.63, 3.99; p = 0.33) and after the full multivariate model (aOR = 1.42; 95% CI: 0.52, 3.87; p = 0.49). Similarly, moderate depression symptoms were not significantly associated with PrEP acceptability in any model.

Among sociodemographic characteristics, being unmarried was associated with higher odds of accepting PrEP in the multivariate model (aOR = 2.93; 95% CI: 1.42, 6.06; p = 0.004). Several behavioral factors also demonstrated significant associations. Participants who consistently used condoms had significantly higher odds of PrEP acceptance (aOR = 3.72; 95% CI: 1.22, 11.34; p = 0.02), as did those who knew their partner's HIV status (aOR = 2.07; 95% CI: 1.18, 3.64; p = 0.01). Reports of IPV were also significantly associated with PrEP acceptability (aOR = 2.34; 95% CI: 1.15, 4.76; p = 0.019).

DISCUSSION

This study explored the association between depression severity and the acceptability of same-day HIV pre-exposure prophylaxis (PrEP) initiation among adults seeking care at a large emergency department (ED) in Nairobi, Kenya. The study found no statistically significant relationship between depression symptoms and willingness to initiate PrEP. The strong overall acceptability of PrEP underscores the feasibility of offering PrEP in the ED.

These findings challenge assumptions that depression impairs decision-making in ways that consistently reduce engagement in HIV prevention in high-stress environments such as the ED. [24, 25, 26] However, our results are consistent with other studies in diverse settings, which reported mixed or null associations between depression and PrEP acceptability.[15] For example, a study among young women in sub-Saharan Africa found no difference in PrEP willingness between participants with mild and moderate-to-severe depressive symptoms when using the PHQ-9 scale. [16] Similarly, in Uganda, depression was not a significant predictor of PrEP interest among female sex workers. [17]These findings suggest that depression alone may not diminish the capacity to recognize HIV risk or the motivation to engage in protective behaviors like PrEP initiation, particularly when offered as part of a person-centered, same-day intervention in an accessible setting like the ED.

This carries important implications for Kenya's national HIV prevention strategy. The National AIDS and STI Control Program (NASCOP) has emphasized differentiated service delivery models that reach individuals in non-traditional settings, including EDs, were high-risk individuals, such as those experiencing depression, may present during times of crisis. [27, 28] Integrating same-day PrEP initiation into ED workflows directly supports these goals by providing low-barrier, client-centered interventions. [28, 29]

The high prevalence of depressive symptoms and a significant proportion of key populations among ED attendees, coupled with the strong acceptability of PrEP regardless of depression severity, suggests that EDs are an underutilized and strategic point for HIV prevention. Leveraging EDs to initiate PrEP contributes to global efforts to reduce HIV transmission and achieve UNAIDS prevention targets.

The absence of statistically significant linear or categorical trends in depression's effect on PrEP acceptability suggests that depression severity does not exert a systematic influence on PrEP decision-making. Rather than acting as a barrier, depression may serve as an indicator for a more comprehensive intervention. Given the well-documented comorbidity between depression, substance use, sexual risk behaviors, and violence, HIV prevention efforts must incorporate psychosocial dimensions to be fully effective. [30, 31, 32]

Biological and behavioral factors may also shape the relationship between depression and PrEP acceptability. A 2024 meta-analysis across East Africa reported high comorbidity between depression and alcohol use, while a

study in northern Tanzania found that male ED patients with depressive symptoms had significantly higher AUDIT scores than their counterparts without depression.[33, 13] These findings highlight the importance of addressing co-occurring mental health and substance use conditions when designing PrEP interventions in emergency settings. Additionally, screening for both HIV risk and mental health symptoms during ED visits could allow providers to tailor counseling and linkage strategies in ways that acknowledge and address overlapping vulnerabilities.

This study provides a strong rationale for conducting implementation science research to develop and test person-centered care programs that integrate HIV prevention with mental health and social support services in the ED. By evaluating these models, we can identify best practices for addressing syndemic conditions, which is essential for ensuring PrEP is delivered effectively and sustainably to this highly vulnerable population.

Importantly, several other factors emerged as strong predictors of PrEP acceptability. Being unmarried, knowing a partner's HIV status, consistent condom use, and reporting a history of intimate partner violence (IPV) were all significantly associated with increased willingness to initiate same-day PrEP. These results align with previous research highlighting that relationship dynamics, sexual health awareness, and prior experiences of risk often shape PrEP decision-making. [34] The strong association between intimate partner violence (IPV) and PrEP acceptability suggests that survivors have a heightened awareness of HIV vulnerability, driving a desire for self-protective strategies. This is a critical insight, particularly since a significant proportion of patients with severe depressive symptoms reported a history of IPV. These results indicate that syndemic factors, rather than depression severity alone, may be a primary motivator for PrEP uptake. Therefore, PrEP program development should leverage these findings by integrating target screening for IPV and other syndemic risks within the ED. This would not only identify a highly motivated subgroup of patients with depressive symptoms but also emphasize the necessity of a trauma-informed approach in all PrEP counseling and delivery to ensure care is sensitive to the unique experiences and motivations of survivors.

This study's findings carry several implications for HIV prevention programming. First, integrated services that include mental health screening, trauma support, and PrEP counseling should be scaled up in emergency care

settings. Patients with depressive symptoms should not be excluded from PrEP interventions; rather, they should be proactively supported to access and adhere to PrEP as part of comprehensive care. Second, task-shifting models that enable ED providers to deliver brief, targeted PrEP counseling, even amid the acute care environment could help bridge gaps in HIV prevention for underserved populations. Kenyan national PrEP guidelines already prioritize accessibility and client-centered care, and this study adds empirical support for extending those principles into emergency care workflows. [3]

This study also demonstrates the practicality and acceptability of initiating PrEP in the ED, despite the absence of formal protocols or depression screening guidelines at the time of data collection. Our ability to detect meaningful associations between behavioral variables and PrEP acceptance highlights the value of collecting holistic, person-centered data in emergency settings.

This study's strengths include the use of a rich dataset from a high-volume urban ED in Nairobi, leveraging validated tools like the PHQ-9, and recruiting a robust sample. The consistency of our findings with other published studies reinforces their validity. [16,] Nonetheless, several limitations should be considered. The primary outcome was a theoretical self-reported willingness, and the high acceptability may not directly translate to actual PrEP initiation. However, even a modest initiation rate could reach a large number of at-risk individuals given the high volume of ED visits in Africa. [35] As a secondary analysis, the study was limited by pre-existing variables, and the use of PHQ-9 symptom categories does not provide a formal clinical diagnosis. Furthermore, the study was underpowered to detect small, clinically meaningful differences in PrEP acceptability, suggesting that the lack of a significant finding may be a Type II error. Finally, the exclusion of critically ill patients may have introduced selection bias. Despite these limitations, this study provides valuable insights into the intersection of mental health and HIV vulnerability, highlighting the strategic opportunity for EDs to engage at-risk individuals who may otherwise be overlooked.

Conclusion

This study found no significant association between depression severity and same-day PrEP acceptability among adults in emergency care in Nairobi. These results suggest that depressive symptoms do not impair

preventive decision-making and should not be viewed as barriers to PrEP initiation. Instead, depression symptoms may reflect an underlying vulnerability coupled with a strong motivation to engage in HIV prevention.

PrEP programs must therefore be designed to accommodate, rather than exclude, individuals with mental health needs. Emergency departments offer a critical platform to deliver these services, particularly in high-burden, resource-limited settings. Integrating mental health support, trauma-informed care, and same-day PrEP counseling into ED protocols could close existing gaps in HIV prevention.

Future implementation efforts should focus on strengthening integrated care pathways, expanding provider capacity, and ensuring that all patients, regardless of mental health status, can access timely and effective HIV prevention. Future research should investigate the impact of depression on ED-initiated PrEP adherence and long-term outcomes, and explore how syndemic factors such as IPV, stigma, and substance use further shape prevention behaviors. As Kenya and other countries strive to meet the UNAIDS 2025 targets, it is imperative that no one, especially those living with mental health challenges, is left behind.

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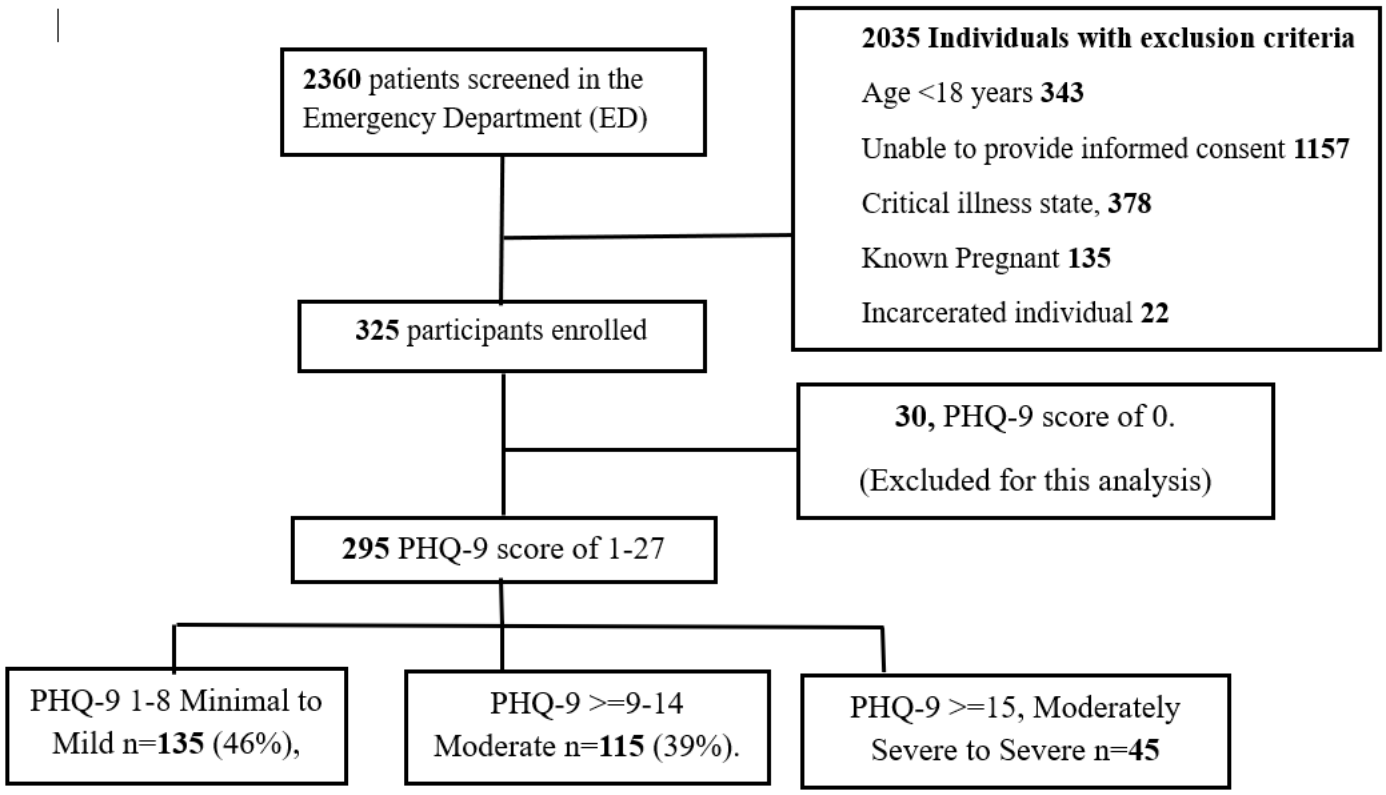
Tables and Figures

Figure 1. Flow of Participants Through Screening, Enrollment, and Final Analysis.



PHQ-9 = patient health questionnaire -9

Table 1: Sociodemographic and Behavioral Characteristics of patients with depression in the Emergency Department of Kenyatta National Hospital by PHQ-9 Depression Severity Category (N = 295)

Variable	Minor to Mild (n = 135) n (%)	Moderate (n = 115) n (%)	Moderately Severe to Severe (n = 45) n (%)	Overall (n = 295) n (%)
Age (median, (IQR)	32 (25, 40)	30 (25, 37)	30 (25, 40)	31(25, 39)
Sex at Birth				
Female	52 (38.8)	59 (44.0)	23 (17.2)	134 (45.4)
Male	83 (51.6)	56 (34.8)	22 (13.7)	161 (54.6)
PrEP Eligibility				
Eligible	18 (36.0)	22 (44.0)	10 (20.0)	50 (16.9)
Ineligible	117 (47.8)	93 (38.0)	35 (14.3)	245 (83.1)
Relationship Status				
Married	82 (48.8)	63 (37.5)	23 (13.7)	168 (56.9)
Unmarried	53 (41.7)	52 (40.9)	22 (17.3)	127 (43.1)
Education Level				
Beyond secondary	43 (49.4)	34 (39.1)	10 (11.5)	87 (29.5)
Secondary	73 (50.7)	56 (38.9)	15 (10.4)	144 (48.8)
Primary school or below	19 (29.7)	25 (39.1)	20 (31.2)	64 (21.7)
Monthly Income				
KSH 0–10,000	70 (43.8)	62 (38.8)	28 (17.5)	160 (54.2)
Above KSH 10,000	53 (44.5)	52 (43.7)	14 (11.8)	119 (40.3)
Missing	12 (75.0)	1 (6.2)	3 (18.8)	16 (5.4)
Employment Status				
Employed	103 (48.1)	81 (37.9)	30 (14.0)	214 (72.5)
Unemployed	32 (39.5)	34 (42.0)	15 (18.5)	81 (27.5)
Alcohol Use				
Hazardous use	16 (43.2)	12 (32.4)	9 (24.3)	37 (12.5)
Non-hazardous use	119 (46.1)	103 (39.9)	36 (14.0)	258 (87.5)
Condom Use				
Always	18 (43.9)	16 (39.0)	7 (17.1)	41 (13.9)
Sometimes	43 (35.2)	59 (48.4)	20 (16.4)	122 (41.4)
Never	70 (57.4)	36 (29.5)	16 (13.1)	122 (41.4)
Missing	4 (40.0)	4 (40.0)	2 (20.0)	10 (3.4)
Partner's HIV Status				
Negative	81 (50.9)	56 (35.2)	22 (13.9)	159 (53.9)
Positive	2 (40.0)	2 (40.0)	1 (20.0)	5 (1.7)
Unknown	52 (39.7)	57 (43.5)	22 (16.8)	131 (44.4)
Key Population				
Yes	12 (25.5)	24 (51.1)	11 (23.4)	47 (15.9)
No	122 (49.6)	90 (36.6)	34 (13.8)	246 (83.4)
Missing	1 (50.0)	1 (50.0)	0	2 (0.7)
Intimate Partner Violence (IPV)				
Yes	28 (33.3)	34 (40.5)	22 (26.2)	84 (28.5)
No	107 (50.7)	81 (38.4)	23 (10.9)	211 (71.5)
Housing insecurity				
Yes	0	9 (52.9)	8 (47.1)	17 (5.8)
No	135 (48.7)	105 (37.9)	37 (13.4)	277 (93.9)
Missing	0	1 (100.0)	0	1 (0.3)
Willingness to Initiate PrEP				
Yes	103 (45.0)	88 (38.4)	38 (16.6)	229 (77.6)
No	32 (48.5)	27 (40.9)	7 (10.6)	66 (22.4)

Values are presented as counts (percentage within row), with percentages rounded to one decimal. **Depression severity** is categorized by **PHQ-9** scores: Minimal to Mild: 1-8, Moderate: 9–14, Moderately Severe to Severe ≥15. **KSH** = Kenyan Shillings, **IPV** = Intimate Partner Violence, **PrEP** = Pre-Exposure Prophylaxis, **PHQ-9** = Patient Health Questionnaire–9, **Key Population** = Individuals at high HIV risk (e.g., Men who have Sex with Men, Gay, Transgender, Commercial Sex Workers, and People who inject drugs)

Table 2: Factors Associated with Acceptability of Same-Day PrEP Initiation

Variable	Univariate Model aOR (95% CI)	p-value	Partial Model (Socio-demographic) aOR (95% CI)	p-value	Multivariate Model aOR (95% CI)	p-value
Depression (Ref: Minimal–Mild)						
Moderate	1.01 (0.56–1.83)	0.97	0.98 (0.53–1.83)	0.97	1.08 (0.55–2.09)	0.83
Mod-Severe to Severe	1.69 (0.68–4.18)	0.26	1.58 (0.63–3.99)	0.33	1.42 (0.52–3.87)	0.49
Age (continuous)	0.99 (0.97–1.02)	0.56	1.00 (0.97–1.03)	0.89	1.01 (0.97–1.04)	0.76
Unmarried Status	1.90 (1.03–3.30)	0.04	1.80 (0.97–3.33)	0.061	2.93 (1.42–6.06)	**0.004**
Education (Ref: Tertiary)						
Secondary	0.77 (0.39–1.46)	0.46	0.79 (0.41–1.53)	0.48	0.74 (0.37–1.47)	0.39
Primary & below	0.87 (0.39–1.94)	0.73	0.87 (0.37–2.07)	0.76	0.93 (0.38–2.29)	0.88
Partner HIV Status Known (Yes)	3.40 (1.76–6.55)	0.0003	—	—	2.07 (1.18–3.64)	**0.01**
Condom Use (Ref: Never)			—	—		
Sometimes	1.39 (0.63–3.04)	0.41	—	—	1.73 (0.95–3.17)	0.07
Always	3.07 (0.83–11.35)	0.09	—	—	3.72 (1.22–11.34)	**0.02**
Intimate Partner Violence (Yes)	2.77 (1.32–5.81)	0.007	—	—	2.34 (1.15–4.76)	**0.02**

aOR: Adjusted Odds Ratio. 2. **Ref**: Reference category. 3. **IPV**: Intimate Partner Violence. 4. **PrEP**: Pre-Exposure Prophylaxis. 5. **Univariate model**: Each covariate assessed individually without adjustment for other variables. 6. **Partial model**: Adjusted for socio-demographic variables (age, marital status, education). 7. **Multivariate model**: Fully adjusted for all covariates presented. 8. **Bolded p-values** indicate statistical significance at $p < 0.05$.

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