

Preferences for PrEP program attributes among Black women across the Southern United States:
A discrete choice experiment

Amber I. Sophus, PhD, MPH^{1,2} Jason W. Mitchell, PhD, MPH³ Joanna Fernandez Fuentes,⁴
Shawndasia Collins,⁴ Joyonna Gamble-George,, PhD^{2,5,6,7,8} Alex Dubov, PhD, DrPH^{2,4}

¹ University of Texas School of Public Health San Antonio, San Antonio, TX, USA, sophus@uthscsa.edu (AIS)

² Center for Interdisciplinary Research on AIDS at Yale University, New Haven, CT, USA, sophus@uthscsa.edu (AIS), jgambl17@jhu.edu (JGG), adubov@llu.edu (AD)

³ Robert Stempel College of Public Health & Social Work, Florida International University, Miami, FL, USA, jamitch@fiu.edu (JWM)

⁴ School of Behavioral Health, Loma Linda University, Loma Linda, CA, USA, adubov@llu.edu (AD), jfernandezfuentes@llu.edu (JFF), SJCollins@llu.edu (SC)

⁵ Fuqua School of Business, Duke University, Durham, NC, USA, jgambl17@jhu.edu (JGG)

⁶ Department of Computer Science, Whiting School of Engineering, Johns Hopkins University, Baltimore, MD, USA, jgambl17@jhu.edu (JGG)

⁷ Environmental Sciences Graduate Program, Oregon State University, Corvallis, OR, USA, jgambl17@jhu.edu (JGG)

⁸ Center for Drug Use and HIV Research, New York University School of Global Public Health, New York, NY, USA, jgambl17@jhu.edu (JGG)

Corresponding Author:

Amber I. Sophus

University of Texas School of Public Health San Antonio

8403 Floyd Curl Dr

San Antonio, TX 78229

832.235.6717

sophus@uthscsa.edu

Conflict of Interest and Source Fundings: All authors declare no conflict of interest. Research reported in this publication was supported by the National Institute on Minority Health and Health Disparities of the National Institutes of Health under Award Number U54MD012393, Florida International University Research Center in Minority Institutions. The content is solely

the responsibility of the authors and does not necessarily represent the official views of the National Institutes of Health.

ABSTRACT

Background: HIV disproportionately affects cisgender Black women (CBW), yet fewer than 2% of eligible CBW use pre-exposure prophylaxis (PrEP); an effective biomedical HIV prevention method. To improve PrEP uptake, this study identified CBW's preferences for key features of PrEP delivery programs using a discrete choice experiment (DCE).

Methods: CBW were recruited, screened online, and completed a one-time DCE survey. Participants completed 14 choice tasks involving 6 PrEP program attributes: 1) administration method, 2) access location, 3) healthcare integration, 4) provider demographics, 5) payment options, 6) support services. Hierarchical Bayes models estimated attribute importance; latent class analysis was used to group participants by similar preferences.

Results: Among 390 participants, administration method was the top-ranked attribute (48%), followed by provider demographics (13.2%), and access location (12%). Preferences clustered into five groups. Group 1 (n=82), younger women with high educational attainment, preferred telehealth initiated bi-monthly injectable PrEP. Group 2 (n=82), older women with lower HIV vulnerability, favored oral and injectable PrEP prescribed by a physician during women's health visits. Group 3 (n=108) had the highest HIV vulnerability, showed strong interest in PrEP, preferred the vaginal ring accessed through pharmacies or telehealth. Group 4 (n=59) had the lowest access to healthcare, preferred injectable PrEP in clinical settings with income-based cost adjustments. Group 5 (n=59), one of the youngest and economically advantaged, favored the vaginal ring from a pharmacy.

Conclusion: Findings indicate administration method, provider type, and access location mattered most to CBW for PrEP programming, indicating the need to use multiprong approaches to bolster PrEP uptake.

Key words: Black women; patient preference; discrete choice experiment; HIV prevention; health services accessibility; HIV pre-exposure prophylaxis

INTRODUCTION

Cisgender Black women (CBW) in the United States (US) experience a disproportionate HIV burden, accounting for half of new HIV diagnoses among women despite representing 13% of the population.¹⁻⁷ The US South faces unique systemic challenges, including poorer health, higher poverty rates, and worse health outcomes for individuals living with HIV.⁸⁻¹⁰ To combat these disparities, targeted efforts are needed to increase use of evidence-based HIV prevention strategies among CBW.¹¹ Pre-exposure prophylaxis (PrEP) is one such strategy to achieve the federal Ending the HIV Epidemic goal of zero new HIV infections.¹¹

PrEP is an FDA-approved antiretroviral that reduces HIV acquisition risk when taken as prescribed.¹²⁻¹⁷ PrEP comes as a daily oral pill^{18,19} and a bi-monthly injection (long-acting injectable [LAI]), which demonstrated superior efficacy to oral PrEP among women in the HPTN-084 trial.¹⁸⁻²¹ Despite high efficacy (>95%),^{12-14,16,17,19} only 2% of PrEP-eligible CBW use PrEP.^{22,23} Prior research has identified barriers contributing to low PrEP uptake among CBW,^{24,25} including limited awareness and inaccurate knowledge about PrEP, perceived low vulnerability to HIV acquisition, inadequate health insurance, lack of social support, HIV- and PrEP-related stigma, medical mistrust, and structural barriers, such as transportation and insurance challenges.²⁶⁻³⁹ Recent studies further emphasize the influence of structural inequities, gendered racism, systemic barriers, and negative experiences with providers on PrEP access and engagement among Black women.^{29-31,40-43} New interventions and improved programs may address these barriers and leverage known facilitators to increase PrEP uptake and sustained use among CBW.

Few studies have explored what features CBW prioritize in PrEP programs.⁴⁴⁻⁴⁸ Irie et al⁴⁵ examined PrEP modality preferences among CBW, finding oral PrEP as the preferred option (51.1%), followed by LAI (25.7%), vaginal gel (16.5%), and vaginal ring (6.7%).⁴⁵ When only

oral and LAI PrEP were considered, most CBW (62.7%) preferred oral PrEP.⁴⁵ Elope et al⁴⁴ used a discrete choice experiment (DCE) to identify PrEP service delivery preferences among CBW living in Alabama and found that PrEP medication form was the most important attribute (37.5%), followed by the healthcare facility for obtaining PrEP (23.6%) and visit frequency (17.6%).⁴⁴ More research is needed on CBW's preferences for PrEP to design client-centered, culturally responsive strategies that improve PrEP uptake and adherence.

To address this gap, this study evaluated CBW's preferences for PrEP program attributes using DCEs.^{47,49,50} DCEs are widely used in HIV research to quantify stakeholder preferences and inform program development, including preferences for HIV testing, care delivery, antiretroviral therapy, and PrEP programs.^{44,47} A DCE evaluates an intervention, such as PrEP, as a set of attributes (e.g., administration method, access location) and assigns value to each. Using these estimates, we conducted a segmentation analysis to identify groups of CBW with similar preferences and inform responsive PrEP delivery models. The objective was to use choice-based conjoint analysis (CBC), a type of DCE, to identify CBW's preferences for PrEP delivery features.

METHODS

Study procedures

We conducted all activities online and in English. The Florida International University Institutional Review Board (IRB-23-0283-AM01) and University of Texas Health Science Center San Antonio (STUDY00001802) approved the study. We recruited participants between June and August 2024 through social media ads, printed flyers in locations frequented by CBW, email listservs from community-based organizations and local health agencies, and snowball

sampling. Interested individuals accessed the study webpage through Qualtrics (Qualtrics, Provo, UT) and completed electronic consent and the eligibility screener.

Eligibility criteria

Eligible participants reported being: (1) at least 18 years old; (2) a cisgender woman; (3) Black/African American; (4) HIV-negative or with unknown serostatus; (5) a resident of a US Southern state; and (6) engaged in at least one behavior associated with HIV acquisition in the past 6 months (i.e., condomless vaginal and/or anal sex with a male partner; injection drug use; sex exchange; diagnosed with a sexually transmitted infection [STI], excluding HIV).^{19,51} We used these indicators to identify individuals who could benefit from PrEP based on CDC guidelines,⁵² and served as eligibility criteria rather than to calculate a validated measure of HIV acquisition. After providing consent, eligible individuals completed a one-time Qualtrics survey that collected demographic information, behaviors associated with possible HIV acquisition, and PrEP awareness, interest, and intention. The survey included a CBC task housed in Sawtooth[®]. Participants who completed the survey and CBC task received a \$50 USD electronic gift card by email. We thanked ineligible individuals for their interest in the study and provided information and resources on PrEP and sexual health. We provided eligible participants who completed the survey with information about PrEP and resources for locating PrEP providers if interested.

Survey Measures

Participants reported demographic information, including age, ethnicity, employment, education, household income, health insurance, sexual orientation, relationship status, and primary transportation mode. They completed a 3-item discrimination subscale from the Group Based Medical Mistrust Scale (GBMMS)⁵³⁻⁵⁵ which assessed perceived racial bias in healthcare (e.g., “Black people are treated the same as people of other groups by doctors and health care

workers”)⁵⁴ using a 5-point Likert scale (5=Strongly Agree to 1=Strongly Disagree). The subscale showed high internal reliability (Cronbach’s $\alpha=.91$). We also assessed perceived concern of acquiring HIV (i.e., worry about acquiring HIV) (5-point Likert scale: 1 = Not at all, 5 = A lot).¹⁹ We provided participants with a definition of PrEP, and information about PrEP efficacy, effectiveness, modality, and the general process used to obtain PrEP, before answering PrEP-related questions. PrEP-related measures included prior awareness (dichotomous: yes/no), interest in learning about PrEP (5-point Likert scale: 1 = Not at all interested, 5 = Extremely interested), comfort discussing PrEP with a provider (5-point Likert scale: 1 = Very comfortable, 5 = Very uncomfortable), and intentions to discuss PrEP with a provider and obtain a prescription within the next 6 months (4-point Likert scale: 1 = I definitely will not do, 4 = I definitely will do).

Choice Based Conjoint (CBC) Task

We used Sawtooth Software, SSI Web 8.2, to design the CBC task and ascertain preferences for PrEP program attributes. We selected attributes and their levels based on literature^{26,30-32,56-58} on PrEP preferences among Black women, as well as formative feedback from focus groups conducted with the target population (CBW) (see Supplemental Digital Content 1 for a detailed description of how the CBC attributes and their levels were identified and implemented in this study). The final CBC instrument covered six modifiable PrEP program attributes: (1) Administration method (daily pill, bimonthly shot, monthly vaginal ring), (2) Access location (doctor's office, community clinic, pharmacy, telehealth (with mailed meds)), (3) Healthcare integration (family planning, women's health checkups, STI care), (4) Provider demographic (any provider, same race, same gender, or both), (5) Payment method (one-time fee, income based, cost assistance), and (6) Support services (text support, online group, help

disclosing PrEP to partner) (see Table 1, Supplemental Digital Content 2). The attribute levels reflected PrEP modalities that were available or widely discussed during the study design phase. We included the vaginal ring as a potential female-controlled prevention option because previous studies showed interest in this modality among women globally, and it is approved for use among women in countries outside of the US. We did not include emerging PrEP modalities, such as longer-acting subcutaneous injections (e.g., Lenacapavir), because they were not yet approved when this study was developed.

We solicited preferences for PrEP program attributes through 14 choice tasks presenting experimentally varied combinations of attribute levels. Participants were asked to select their preferred option among two possible PrEP programs, displaying the 6 attributes and select levels. A ‘None’ option was included to allow participants to opt out of a proposed program (see Figure 1, Supplemental Digital Content 3).

Sawtooth Software’s experimental design module generated 450 survey versions according to three principles: (1) each attribute level appeared once per task; (2) levels appeared equally across tasks; and (3) levels were chosen independently. Utility scores from these tasks were used to predict preference shares for hypothetical PrEP programs.

Statistical analyses

We conducted all CBC analyses in Sawtooth Lighthouse Studio 9.16.10, using the Hierarchical Bayes model to estimate part-worth utilities (PWUs) for 20 attribute levels. PWU reflects the value respondents assign to a specific attribute level. These PWUs are zero-centered, with larger absolute values indicating stronger positive or negative preferences relative to other levels of the same attribute. We rescaled mean relative importance scores (RIS) to 100 to reflect each attribute’s influence on decision-making (e.g., a RIS of 27% implies that the attribute drives

27% of a participant's preference). Latent class multinomial logit analysis then grouped respondents by PWUs, identifying segments with similar preferences. We selected a five-group solution based on the Consistent Akaike Information Criterion (CAIC).

We entered utilities into SAS software, version 8.2, and merged them with respondents' characteristics. We used RStudio (2022.02.0 Build 443) for descriptive statistics by segmentation group. Chi-square or Fisher's exact tests evaluated differences in categorical variables. We assessed latent class group differences using analysis of variance (ANOVA) for continuous variables and chi-square tests for categorical variables. Only completed surveys were included.

RESULTS

Participants

We enrolled 390 CBW who were included in the final analytic sample (see Figure 2, Supplemental Digital Content 4); Table 1 presents participant characteristics (mean age=34.8 years, SD=11.4). Most participants identified as non-Hispanic (n=379, 97.2%), heterosexual (n=329, 84.4%), employed (n=307, 78.7%), and having health insurance (n=333, 85.4%). Nearly half (n=192, 49.2%) had a household income between \$35,000 and \$99,000, and 60% (n=234) were in a relationship. Participants also reported high levels of perceived discrimination and group-based disparities in healthcare (*Mean*=4.07).

Most participants reported at least one behavioral indicator used to determine PrEP eligibility, with 94.9% (n=370) reporting condomless vaginal sex and 16.4% (n=64) reporting condomless anal sex in the past six months. A little over half of the women tested for HIV (n=216, 55.4%), and/or other STIs (n=224, 57.4%) during the same time; a smaller proportion tested positive for an STI (n=37, 9.5%). Among participants who tested positive for an STI (n=37, 9.5%), most reported Herpes Simplex Virus (HSV-1 and/or HSV-2) (n=13, 35.1%) or did

not specify (n=10, 27.0%). On average, participants reported a low-to-moderate level of concern about acquiring HIV (*Mean*=2.26). Regarding PrEP, 65.6% (n=256) of participants reported prior awareness of PrEP. Participants reported moderate interest in learning more about PrEP (*Mean*=2.66) and were somewhat comfortable discussing PrEP with a provider (*Mean*=2.00). However, participants did not expect to discuss PrEP with a provider (*Mean*=2.46) or receive a prescription (*Mean*=2.08) within the next 6 months.

Relative importance scores and part-worth utilities for the full sample

Tables 2 and 3 present the attribute importance and PWUs for each attribute level. In the full sample, administration method ranked first in importance (48%). Within this attribute, bi-monthly injectable (i.e., shot) had the highest utility score, followed by the daily pill; the vaginal ring ranked last. Provider demographic ranked second in importance (13.2%), with the highest utility scores for matching race and gender. Access location ranked third (12%), with telehealth and pharmacies having the highest utility scores.

Latent class analysis identified five distinct segment groups. Group 1 (n=82, 21.0%) (*telehealth LGBTQ, prefers injectable*) had a higher proportion of non-heterosexual identities (n=20, 32.3%), were young (*Mean age*=33.1), likely to work full-time, had high educational attainment, and reported higher levels of discrimination in healthcare settings (*Mean*=4.20). Within this group, the bi-monthly injectable initiated via telehealth had the highest utility scores, with follow-up support delivered through text messaging.

Group 2 (n=82, 21.0%) (*Traditional care seekers, prefers oral pill*) had one of the highest proportions of older women (≥ 45 years of age; n=22, 26.8%), high healthcare access, and was more likely to identify as straight (n=76, 92.7%). Women in this group reported the lowest concern about acquiring HIV (*Mean*=1.72) and fewer behavioral indicators associated with HIV

acquisition than other groups. The daily pill and bi-monthly injectable, delivered during women's health visits by race and gender concordant providers, ranked highest. Many participants chose "none" in the conjoint tasks, suggesting lower interest in the PrEP programs presented.

Group 3 (n=108, 27.7%) (*Cost-aware ring preference, who could benefit from PrEP*) had greater structural and interpersonal vulnerability, including lower educational attainment, financial disadvantage, reliance on public transportation, and more behavioral indicators associated with HIV acquisition. Despite this, they were engaged in HIV prevention, with higher HIV/STI testing rates (n=66, 61.1%) and greater concern about acquiring HIV (*Mean*=2.67). They also reported the least discrimination in health care (*Mean*=3.94), which may contribute to their strong interest in learning more about PrEP (*Mean*=3.29) and seeking a prescription (*Mean*=2.57). Within this group, the vaginal ring had the highest utility score, with pharmacy or telehealth delivery and PrEP financial assistance also ranking highly.

Group 4 (n = 59, 15.1%) (*Underserved, prefers injectable, unlikely adopters*) had limited educational attainment and access to care, with a higher proportion lacking insurance (n=12, 20.3%) and testing positive for an STI in the past 6 months (n=9, 15.3%). Although initial awareness of PrEP was low (n=32, 54.2%), this group had the second-highest interest in learning more about PrEP (*Mean*=3.14) and were comfortable discussing PrEP with a provider (*Mean*=1.84). Within this group, the bi-monthly injectable received in clinical settings with income-based payment models had the highest utility scores.

Group 5 (n=59, 15.1%) (*High-SES PrEP-reluctant, ring preference*) was one of the youngest groups (*Mean age*=33.6), with high levels of educational attainment, income, health insurance, and infrequent HIV/STI testing. Within this group, the vaginal ring obtained from a

pharmacy with provider race concordance ranked highest. Despite high initial PrEP awareness (n=45, 76.3%), this group showed the least intention to talk to a provider about PrEP (*Mean*=1.79) or get a PrEP prescription (*Mean*=1.57), suggesting they would opt-out even if services are available.

DISCUSSION

This study offers insights into preferences for PrEP delivery features among cisgender Black women in the US South, a group disproportionately affected by HIV. The PrEP administration method was the most influential factor in PrEP decision-making, indicating that product features, such as dosing frequency, ease of use, and discretion shape PrEP acceptability among CBW. Consequently, even excellent care or convenient access may not overcome reluctance toward formulations seen as burdensome or misaligned with women's daily lives.^{29,43,59,60} Clinicians should routinely discuss all available PrEP modalities with Black women to align options with their needs and preferences.^{61,62} LAI PrEP was the most preferred option, consistent with emerging research showing its appeal to women seeking convenience and privacy.^{44-46,63} The daily oral pill remained a strong alternative, indicating it continues to meet many women's needs. While the vaginal ring was less preferred, consistent with prior studies,^{44-46,63-65} some subgroups favored it, potentially valuing discretion or longer-acting protection.

Provider characteristics emerged as the second most influential factor in PrEP decision-making, underscoring the importance of the patient-provider relationship. Participants strongly preferred providers who shared their race and gender, consistent with prior research on the importance of race and gender congruence in PrEP decision-making among Black women.^{66,67} For many Black women, patient-provider race and gender concordance was as critical as PrEP

information itself, likely serving as a protective response to anticipated or experienced discrimination in healthcare settings.

Building on the need for affirming, discrimination-free care, the choice of access location ranked third in importance. Telehealth and pharmacies were the preferred settings, likely valued for convenience, accessibility, and privacy.^{68,69} Telehealth may also reduce exposure to potentially discriminatory clinical encounters.^{68,70} Pharmacy-based access is increasingly recognized for convenience (as pharmacies are often located within communities), longer operation hours (e.g., nights and weekends), and availability without an appointment.^{69,71} Offering PrEP in familiar, everyday settings may reduce barriers to access, and reduce discrimination in clinical environments.

This study identified five segments of CBW, each with unique sociodemographic characteristics, vulnerabilities, and PrEP preferences. This segmentation challenges viewing Black women as a uniform group, offering a nuanced understanding of how different characteristics and life experiences shape PrEP decision-making. For example, women in Group 1 preferred telehealth and bi-monthly injectable PrEP. Preference for telehealth may reflect attempts to avoid in-person encounters where women experienced discrimination.⁷² Given this finding, DCE may help identify preferred PrEP program features among Black women who identify as LGBTQ to determine if culturally sensitive, LGBTQ-affirming telehealth models that offer private, supportive care would be ideal for this population.⁷³ In contrast, women in Group 2, who were generally older, had lower concern about acquiring HIV and had limited interest in PrEP, preferred access through routine women's health visits. Their comfort with these settings presents an opportunity to integrate PrEP into regular gynecological or primary care visits,^{74,75} helping normalize it within standard sexual health services. Future research should examine

Black women's preferences for discussing PrEP in primary care settings, where many women routinely access preventive and reproductive health services and may have ongoing relationships with providers.^{74,75} Tailoring interventions to these groups may enhance PrEP uptake and adherence among Black women.

Implications for Clinical Practice and Public Health

These findings have implications for clinical practice and HIV prevention program design. First, tailored PrEP education strategies should reflect differences in HIV vulnerability perceptions and information needs among Black women. Some patients, such as those in Group 4, may need clear, accessible PrEP information, while others, such as Group 2, may benefit from personalized discussions that address misperceptions of low HIV acquisition. Second, providers serving Black women should be trained in anti-racism, culturally safe care, and communication strategies that facilitate patient-centered, affirming, and nonjudgmental discussions about sexual health, behaviors associated with HIV acquisition, and PrEP options. For instance, Black women in Group 5 showed low interest in PrEP and may feel uncomfortable discussing sexual health. In these situations, providers may need to normalize PrEP discussions within routine sexual and reproductive healthcare and create safe, supportive environments through nonjudgmental, empathetic, and person-first communication.⁷⁶ These approaches may help engage patients who might otherwise avoid conversations about HIV prevention or perceive themselves to be at low “risk” for HIV. When patients share experiences of healthcare discrimination, providers should validate those feelings and work to ensure a supportive and affirming PrEP experience. Third, public health programs must move beyond a one-size-fits-all approach by adopting strategies that reflect the diverse needs and preferences of Black women to increase PrEP uptake. Clinicians should engage in shared decision-making, tailoring choices to each patient's lifestyle and

preferences. In practice, identifying patients' PrEP preferences may require brief preference assessments or decision-support tools used in clinical encounters. These tools could help providers gauge priorities related to medication modality, provider characteristics, and service delivery settings, enabling personalized PrEP counseling. Some Black women may prioritize convenience and privacy through telehealth or pharmacy-based PrEP delivery, while others may prefer care from race and gender concordant providers in traditional clinical settings. Expanding telehealth services, investing in culturally affirming platforms, particularly for Black LGBTQ individuals, and supporting pharmacy-based PrEP initiation and management may help reduce barriers to PrEP access. Finally, cost must not be a barrier. Ensuring that PrEP and related clinical costs are fully or partially covered remains critical to prevent financial barriers from limiting access to HIV prevention services. Policies and programs that expand financial assistance and insurance coverage for PrEP are essential.

Limitations

Social desirability bias may have influenced responses, affecting the accuracy of self-reported behaviors associated with HIV acquisition and PrEP-related attitudes. However, anonymous surveys and culturally informed data collection methods⁷⁷ likely reduced this bias. Next, the sample was limited to CBW living in the southern US; findings may not be transferable to women in other regions. Nonetheless, focusing on this population fills a critical gap in literature, given their disproportionate HIV burden and historical underrepresentation in research. We also did not collect contextual information about sexual partnerships (e.g., number of partners or partner HIV status), which may influence HIV acquisition and interpretation of condomless sex as a behavioral indicator. Despite this, this study captured a broad range of behavioral and attitudinal indicators associated with HIV acquisition. We also did not assess key

structural and contextual factors, such as food and housing security, history of incarceration, employment challenges, or current access and availability for local PrEP services, that may impact women's PrEP decision-making. Additionally, because this study assessed stated preferences using a discrete choice experiment, we were unable to determine whether these preferences translate into real-world PrEP initiation or persistence. Only a small number of participants reported current PrEP use (n=9), which limited our ability to examine associations between preferences and PrEP uptake. Future longitudinal research should examine whether preference patterns identified through DCE methods predict actual engagement with PrEP services among cisgender Black women. Furthermore, because PrEP options evolved after study design, the DCE may not reflect all currently available modalities. The DCE did not include emerging PrEP modalities, such as longer-acting injectable agents (e.g., Lenacapavir) or on-demand PrEP strategies currently under evaluation, which may influence preferences in future studies. Lastly, incorporating a mixed-method approach with qualitative follow-up interviews may have expanded our understanding of women's PrEP decision-making. The findings still offer insight into the drivers of preferences for PrEP programming and intention among a high-priority population.

Conclusion

This study offers a data-driven roadmap to tailor PrEP implementation to meet the diverse needs of CBW in the US. Our findings highlight key PrEP preference trends, including strong preferences for injectable PrEP, provider race and gender concordance, and access through telehealth and pharmacies, while emphasizing variation in preferences across CBW subgroups. This heterogeneity points to the need for more innovative, responsive, and effective HIV prevention strategies designed for CBW. To address the disproportionate HIV burden

among CBW, health systems must design and deliver PrEP services in ways that center CBW's lived experiences, honor their preferences, and remove barriers they face. These findings suggest moving beyond simply offering different PrEP options and toward more responsive approaches to engaging Black women. By respecting their choices, understanding their priorities, and designing programs that are medically effective, culturally affirming, accessible, and equitable, HIV preventive efforts may better reduce disparities among CBW in the US South.

Acknowledgements: We thank The Well Project; Health and Wellness Education Center – Alabama; Five Horizons Health Services; Selma AIR – Alabama; Alabama Department of Health; AIDS Healthcare Foundation - Communication Department; Texas D-CFAR; FIU-RCMI CAB; Dallas County Court Services; Black Women's Health Imperative; HAWC Houston; and Healthy Start Coalition of Miami Dade for their amazing contributions to the study's recruitment efforts. We also thank the participants for their important contributions to this work.

Supplemental Digital Content 1 - <http://links.lww.com/QAI/C699>

Table 1 Supplemental Digital Content 2 - <http://links.lww.com/QAI/C700>

Figure 1 Supplemental Digital Content 3 - <http://links.lww.com/QAI/C701>

Figure 2 Supplemental Digital Content 4 - <http://links.lww.com/QAI/C702>

REFERENCES

1. Centers for Disease Control and Prevention. Diagnoses of HIV Infection in the United States and Dependent Areas, 2021. 34.

https://www.google.com/url?sa=t&source=web&rct=j&opi=89978449&url=https://stacks.cdc.gov/view/cdc/149071/cdc_149071_DS1.pdf&ved=2ahUKEwjiOPyr4WOAXeEFkFHTEeLccQFnoECBUQAQ&usg=AOvVaw0mq9ksQj8imu1GoTxDgERb

2. Centers for Disease Control and Prevention. Estimated HIV incidence and prevalence in the United States, 2018–2022. HIV Surveillance Supplemental Report 2024;29(No. 1). Published May 2024. <https://www.cdc.gov/hiv-data/nhss/estimated-hiv-incidence-and-prevalence.html>
3. Centers for Disease Control and Prevention. HIV and Black/African American People in the U.S. Fact Sheet. Updated July 6, 2022. <https://www.cdc.gov/nchhstp/newsroom/fact-sheets/hiv/black-african-american-factsheet.html>
4. Centers for Disease Control and Prevention. HIV Surveillance Report, 2020; vol. 33. <https://www.cdc.gov/hiv/library/reports/hiv-surveillance.html>
5. Reif S, Safley D, McAllaster C, Wilson E, Whetten K. State of HIV in the US Deep South. *J Community Health*. Oct 2017;42(5):844–853. doi:10.1007/s10900-017-0325-8
6. AIDSVu. Regional Data: South. <https://aidsvu.org/local-data/#/regional>
7. Centers for Disease Control and Prevention. HIV in the United States by Region. <https://www.cdc.gov/hiv/statistics/overview/geographicdistribution.html>
8. Centers for Disease Control and Prevention. HIV in Southern United States. Updated May Accessed January 29, 2018. <https://www.cdc.gov/hiv/pdf/policies/cdc-hiv-in-the-south-issue-brief.pdf>
9. Centers for Disease Control and Prevention. HIV in the United States by Geography. <https://www.cdc.gov/hiv/statistics/overview/geographicdistribution.html>
10. Reif S, Whetten, K., Wilson, E.,. HIV/AIDS Epidemic in the South Reaches Crisis Proportions in Last Decade. <http://cdn.trustedpartner.com/docs/library/CareNetworkOfTheTreasureCoast2011/News/HIV/AIDS%20Epidemic%20in%20the%20South%20Reaches%20Crisis%20Proportions%20in%20Last%20Decade.pdf>
11. Centers for Disease Control and Prevention. Ending the HIV Epidemic in the U.S. (EHE). <https://www.cdc.gov/endhiv/index.html>
12. Baeten JM, Donnell D, Ndase P, et al. Antiretroviral prophylaxis for HIV prevention in heterosexual men and women. *N Engl J Med*. Aug 2 2012;367(5):399–410. doi:10.1056/NEJMoa1108524
13. Celum C, Baeten JM. Tenofovir-based pre-exposure prophylaxis for HIV prevention: evolving evidence. *Curr Opin Infect Dis*. Feb 2012;25(1):51–7. doi:10.1097/QCO.0b013e32834ef5ef
14. Choopanya K, Martin M, Suntharasamai P, et al. Antiretroviral prophylaxis for HIV infection in injecting drug users in Bangkok, Thailand (the Bangkok Tenofovir Study): a randomised, double-blind, placebo-controlled phase 3 trial. *Lancet*. Jun 15 2013;381(9883):2083–90. doi:10.1016/S0140-6736(13)61127-7
15. McCormack S, Dunn DT, Desai M, et al. Pre-exposure prophylaxis to prevent the acquisition of HIV-1 infection (PROUD): effectiveness results from the pilot phase of a pragmatic open-label randomised trial. *Lancet*. Jan 2 2016;387(10013):53–60. doi:10.1016/S0140-6736(15)00056-2
16. Thigpen MC, Kebaabetswe PM, Paxton LA, et al. Antiretroviral preexposure prophylaxis for heterosexual HIV transmission in Botswana. *N Engl J Med*. Aug 2 2012;367(5):423–34. doi:10.1056/NEJMoa1110711

17. Van Damme L, Corneli A, Ahmed K, et al. Preexposure prophylaxis for HIV infection among African women. *N Engl J Med*. Aug 2 2012;367(5):411–22. doi:10.1056/NEJMoa1202614
18. US Food and Drug Administration (FDA). FDA Approves First Injectable Treatment for HIV Pre-Exposure Prevention. <https://www.fda.gov/news-events/press-announcements/fda-approves-first-injectable-treatment-hiv-pre-exposure-prevention>
19. Centers for Disease Control and Prevention. Centers for Disease Control and Prevention: US Public Health Service: Preexposure prophylaxis for the prevention of HIV infection in the United States—2021 Update: a clinical practice guideline. <https://www.cdc.gov/hiv/pdf/risk/prep/cdc-hiv-prep-guidelines-2021.pdf>
20. HIV Prevention Trials Network. HPTN 084 study demonstrates superiority of CAB LA to oral FTC/TDF for the prevention of HIV. HIV Prevention Trials Network, Durham, NC. <https://www.hptn.org/news-and-events/press-releases/hptn-084-study-demonstrates-superiority-of-cab-la-to-oral-tdfftc-for>
21. Delany-Moretlwe S, Hughes JP, Bock P, et al. Cabotegravir for the prevention of HIV-1 in women: results from HPTN 084, a phase 3, randomised clinical trial. *Lancet*. May 7 2022;399(10337):1779–1789. doi:10.1016/S0140-6736(22)00538-4
22. Sullivan PS, Woodyatt C, Koski C, et al. A Data Visualization and Dissemination Resource to Support HIV Prevention and Care at the Local Level: Analysis and Uses of the AIDSvu Public Data Resource. *J Med Internet Res*. Oct 23 2020;22(10):e23173. doi:10.2196/23173
23. Sullivan PS, DuBose SN, Castel AD, et al. Equity of PrEP uptake by race, ethnicity, sex and region in the United States in the first decade of PrEP: a population-based analysis. *The Lancet Regional Health – Americas*. 2024;33doi:10.1016/j.lana.2024.100738
24. Nunn AS, Brinkley-Rubinstein L, Oldenburg CE, et al. Defining the HIV pre-exposure prophylaxis care continuum. *Aids*. Mar 13 2017;31(5):731–734. doi:10.1097/qad.0000000000001385
25. Hojilla JC, Hurley LB, Marcus JL, et al. Characterization of HIV Preexposure Prophylaxis Use Behaviors and HIV Incidence Among US Adults in an Integrated Health Care System. *JAMA Network Open*. 2021;4(8):e2122692–e2122692. doi:10.1001/jamanetworkopen.2021.22692
26. Mayer KH, Agwu A, Malebranche D. Barriers to the Wider Use of Pre-exposure Prophylaxis in the United States: A Narrative Review. *Adv Ther*. May 2020;37(5):1778–1811. doi:10.1007/s12325-020-01295-0
27. Patel AS, Goparaju L, Sales JM, et al. Brief Report: PrEP Eligibility Among At-Risk Women in the Southern United States: Associated Factors, Awareness, and Acceptability. *J Acquir Immune Defic Syndr*. Apr 15 2019;80(5):527–532. doi:10.1097/QAI.0000000000001950
28. Park CJ, Taylor TN, Gutierrez NR, Zingman BS, Blackstock OJ. Pathways to HIV Pre-exposure Prophylaxis Among Women Prescribed PrEP at an Urban Sexual Health Clinic. *J Assoc Nurses AIDS Care*. May–Jun 2019;30(3):321–329. doi:10.1097/jnc.0000000000000070
29. Boudreaux J, Valdebenito CM, Pichon LC. Identifying Access Barriers to PrEP Among Cisgender Black/African American Women in the United States: A Systematic Review of the Literature. *Healthcare (Basel)*. Jan 6 2025;13(1)doi:10.3390/healthcare13010086
30. Smit F, Masvawure TB. Barriers and Facilitators to Acceptability and Uptake of Pre-Exposure Prophylaxis (PrEP) Among Black Women in the United States: a Systematic Review. *J Racial Ethn Health Disparities*. Aug 2 2023;doi:10.1007/s40615-023-01729-9

31. Knight D, Saleem HT, Stockman JK, Willie TC. Experiences of Black Women in the United States Along the PrEP Care Continuum: A Scoping Review. *AIDS Behav.* Jul 2023;27(7):2298–2316. doi:10.1007/s10461-022-03960-7
32. Conley C, Johnson R, Bond K, Brem S, Salas J, Randolph S. US Black cisgender women and pre-exposure prophylaxis for human immunodeficiency virus prevention: A scoping review. *Womens Health (Lond).* Jan–Dec 2022;18:17455057221103098. doi:10.1177/17455057221103098
33. Goparaju L, Praschan NC, Warren-Jeanpiere L, Experton LS, Young MA, Kassaye S. Stigma, Partners, Providers and Costs: Potential Barriers to PrEP Uptake among US Women. *J AIDS Clin Res.* Sep 2017;8(9)doi:10.4172/2155-6113.1000730
34. Chandler R, Guillaume D, Wells J, Hernandez N. Let Me Prep You to PREP Me: Amplifying the Voices of Black Women and Their Providers to Consider PrEP as an HIV Prevention Option. *International Journal of Environmental Research and Public Health.* 2022;19(3):1414.
35. Ojikutu BO, Landers S. Black Women With HIV: Ongoing Challenges and New Strategies to Improve Health Outcomes. *Am J Public Health.* Apr 2025;115(S1):S4–S5. doi:10.2105/AJPH.2025.308040
36. Ojikutu BO, Amutah-Onukagha N, Mahoney TF, et al. HIV-Related Mistrust (or HIV Conspiracy Theories) and Willingness to Use PrEP Among Black Women in the United States. *AIDS Behav.* Oct 2020;24(10):2927–2934. doi:10.1007/s10461-020-02843-z
37. Scott JC, Rocco M, Kitchen M, et al. Intersectional HIV Stigma Among Black Women: Regional Differences and Implications From the Black Women First Initiative. *Am J Public Health.* Apr 2025;115(S1):S75–S84. doi:10.2105/AJPH.2025.308037
38. Kwakwa HA, Bessias S, Sturgis D, et al. Engaging United States Black Communities in HIV Pre-exposure Prophylaxis: Analysis of a PrEP Engagement Cascade. *J Natl Med Assoc.* Oct 2018;110(5):480–485. doi:10.1016/j.jnma.2017.12.006
39. Alade T, Hull S, Sinks H, Zack J, Moriarty P, Scott RK. Medical Distrust and the Intention to Initiate Pre-Exposure Prophylaxis in Black Cisgender Women. *AIDS Patient Care STDS.* Jul 2025;39(7):273–280. doi:10.1089/apc.2025.0043
40. Irie WC, Mahone A, Heffron R, Elopre L. Where do we go from here? Reconciling implementation failure of PrEP for Black women in the South. Leveraging critical realism to identify unaddressed barriers as we move forward. Review. *Frontiers in Reproductive Health.* 2024–November–19 2024;6doi:10.3389/frph.2024.1449554
41. Willie TC, Kershaw TS, Blackstock O, et al. Racial and ethnic differences in women's HIV risk and attitudes towards pre-exposure prophylaxis (PrEP) in the context of the substance use, violence, and depression syndemic. *AIDS Care.* Feb 2021;33(2):219–228. doi:10.1080/09540121.2020.1762067
42. Nydegger LA, Dickson-Gomez J, Ko TK. Structural and syndemic barriers to PrEP adoption among Black women at high risk for HIV: a qualitative exploration. *Cult Health Sex.* May 2021;23(5):659–673. doi:10.1080/13691058.2020.1720297
43. Willie TC, Monger M, Nunn A, et al. “PrEP’s just to secure you like insurance”: a qualitative study on HIV pre-exposure prophylaxis (PrEP) adherence and retention among black cisgender women in Mississippi. *BMC Infectious Diseases.* 2021/10/26 2021;21(1):1102. doi:10.1186/s12879-021-06786-1

44. Elopre L, Boutwell A, Gordon B, et al. PrEP service delivery preferences of black Cis-gender women living in the Southern United States. *AIDS and Behavior*. 2022/04/21 2022;doi:10.1007/s10461-022-03691-9
45. Irie WC, Calabrese SK, Patel RR, Mayer KH, Geng EH, Marcus JL. Preferences for HIV Preexposure Prophylaxis Products Among Black Women in the U.S. *AIDS Behav*. Jul 2022;26(7):2212–2223. doi:10.1007/s10461-021-03571-8
46. Knight D, Saleem H, Baral S, German D, Willie TC. HIV Pre-exposure prophylaxis (PrEP) Modalities and Service Delivery Preferences Among Black Cisgender Emerging and Older Adult Women in Baltimore, Maryland. *Res Sq*. Nov 13 2024;doi:10.21203/rs.3.rs-5112395/v1
47. Rodriguez CA, Mitchell JW. Use of Stated Preference Methods in HIV Treatment and Prevention Research in the United States: A Systematic Review. *AIDS Behav*. Jul 2023;27(7):2328–2359. doi:10.1007/s10461-022-03962-5
48. Waldron EM, Goodman GR, Rivas AM, et al. Perceptions of and preferences for PrEP use among African American women and providers in the U.S. South: a qualitative study. *Psychol Health*. Mar 5 2024;1–20. doi:10.1080/08870446.2024.2322079
49. Bridges JF, Hauber AB, Marshall D, et al. Conjoint analysis applications in health--a checklist: a report of the ISPOR Good Research Practices for Conjoint Analysis Task Force. *Value Health*. Jun 2011;14(4):403–13. doi:10.1016/j.jval.2010.11.013
50. Ryan M, Scott DA, Reeves C, et al. Eliciting public preferences for healthcare: a systematic review of techniques. *Health Technol Assess*. 2001;5(5):1–186. doi:10.3310/hta5050
51. Sales JM, Sheth AN. Associations Among Perceived HIV Risk, Behavioral Risk and Interest in PrEP Among Black Women in the Southern US. *AIDS Behav*. Jul 2019;23(7):1871–1876. doi:10.1007/s10461-018-2333-9
52. HIV Risk Behaviors (National Center for HIV VH, STD, and Tuberculosis Prevention, Division of HIV/AIDS Prevention) (2015).
53. Shelton RC, Winkel G, Davis SN, et al. Validation of the group-based medical mistrust scale among urban black men. *J Gen Intern Med*. Jun 2010;25(6):549–55. doi:10.1007/s11606-010-1288-y
54. Thompson HS, Valdimarsdottir HB, Winkel G, Jandorf L, Redd W. The Group-Based Medical Mistrust Scale: psychometric properties and association with breast cancer screening. *Prev Med*. Feb 2004;38(2):209–18.
55. Tekeste M, Hull S, Dovidio JF, et al. Differences in Medical Mistrust Between Black and White Women: Implications for Patient-Provider Communication About PrEP. *AIDS Behav*. Sep 27 2018;doi:10.1007/s10461-018-2283-2
56. Flash CA, Dale SK, Krakower DS. Pre-exposure prophylaxis for HIV prevention in women: current perspectives. *Int J Womens Health*. 2017;9:391–401. doi:10.2147/IJWH.S113675
57. Kudrati SZ, Hayashi K, Taggart T. Social Media & PrEP: A Systematic Review of Social Media Campaigns to Increase PrEP Awareness & Uptake Among Young Black and Latinx MSM and Women. *AIDS Behav*. Dec 2021;25(12):4225–4234. doi:10.1007/s10461-021-03287-9
58. Koechlin FM, Fonner VA, Dalglish SL, et al. Values and Preferences on the Use of Oral Pre-exposure Prophylaxis (PrEP) for HIV Prevention Among Multiple Populations: A Systematic Review of the Literature. *AIDS Behav*. May 2017;21(5):1325–1335. doi:10.1007/s10461-016-1627-z

59. Hill LM, Lightfoot AF, Riggins L, Golin CE. Awareness of and attitudes toward pre-exposure prophylaxis among African American women living in low-income neighborhoods in a Southeastern city. *AIDS Care*. Feb 2021;33(2):239–243. doi:10.1080/09540121.2020.1769834
60. Willie TC, Knight D, Baral SD, et al. Where's the "Everyday Black Woman"? An intersectional qualitative analysis of Black Women's decision-making regarding HIV pre-exposure prophylaxis (PrEP) in Mississippi. *BMC Public Health*. 2022/08/23 2022;22(1):1604. doi:10.1186/s12889-022-13999-9
61. Kasal N, Devlin S, Johnson AK, et al. Increasing providers' PrEP prescription for Black cisgender women: A qualitative study to improve provider knowledge and competency via PrEP training. *Womens Health (Lond)*. Jan–Dec 2024;20:17455057241277974. doi:10.1177/17455057241277974
62. Arnold T, Whiteley L, Elwy RA, et al. Mapping Implementation Science with Expert Recommendations for Implementing Change (MIS-ERIC): Strategies to Improve PrEP Use among Black Cisgender Women Living in Mississippi. *J Racial Ethn Health Disparities*. Dec 2023;10(6):2744–2761. doi:10.1007/s40615-022-01452-x
63. Johnson AK, Ott E, Friedman EE, et al. Exploring pre-exposure prophylaxis (PrEP) modality preferences among black cisgender women attending family planning clinics in Chicago via a cross-sectional mixed-methods study. *BMJ Public Health*. Jan 2025;3(1):e000809. doi:10.1136/bmjph-2023-000809
64. Calabrese SK, Galvao RW, Dovidio JF, et al. Contraception as a Potential Gateway to Pre-Exposure Prophylaxis: US Women's Pre-Exposure Prophylaxis Modality Preferences Align with Their Birth Control Practices. *AIDS Patient Care STDS*. Mar 2020;34(3):132–146. doi:10.1089/apc.2019.0242
65. Hill MJ, Sophus AI, Gray A, Wright JI. A Qualitative Study Exploring How the Perspectives and Experiences of Cisgender Black Women Inform Their Readiness to Consider Pre-Exposure Prophylaxis for HIV Prevention. *Int J Environ Res Public Health*. Apr 3 2025;22(4)doi:10.3390/ijerph22040558
66. Hill MJ, Sapp S, McCants S, et al. An Examination of Perceptions among Black Women on Their Awareness of and Access to Pre-Exposure Prophylaxis (PrEP). *Int J Environ Res Public Health*. Aug 16 2024;21(8)doi:10.3390/ijerph21081084
67. Pyra M, Johnson AK, Devlin S, et al. HIV Pre-exposure Prophylaxis Use and Persistence among Black Ciswomen: "Women Need to Protect Themselves, Period". *J Racial Ethn Health Disparities*. Jun 2022;9(3):820–829. doi:10.1007/s40615-021-01020-9
68. Bonett S, Li Q, Sweeney A, Gaither-Hardy D, Safa H. Telehealth Models for PrEP Delivery: A Systematic Review of Acceptability, Implementation, and Impact on the PrEP Care Continuum in the United States. *AIDS Behav*. Sep 2024;28(9):2875–2886. doi:10.1007/s10461-024-04366-3
69. Roche SD, Were D, Crawford ND, et al. Getting HIV Pre-exposure Prophylaxis (PrEP) into Private Pharmacies: Global Delivery Models and Research Directions. *Curr HIV/AIDS Rep*. Jun 2024;21(3):116–130. doi:10.1007/s11904-024-00696-y
70. Bonett S, Sweeney A, Li Q, et al. Facilitators and Barriers to Equitable Implementation of Telehealth PrEP Delivery: A Qualitative Descriptive Study of Program Staff and Stakeholders. *Health Promot Pract*. Jun 19 2025:15248399251347253. doi:10.1177/15248399251347253

71. Kennedy CE, Yeh PT, Atkins K, Ferguson L, Baggaley R, Narasimhan M. PrEP distribution in pharmacies: a systematic review. *BMJ Open*. 2022;12(2):e054121. doi:10.1136/bmjopen-2021-054121
72. Casanova-Perez R, Apodaca C, Bascom E, et al. Broken down by bias: Healthcare biases experienced by BIPOC and LGBTQ+ patients. *AMIA Annu Symp Proc*. 2021;2021:275–284.
73. Goswami S, Bentley JP, Kang M, Bhattacharya K, Barnard M. Preferences for a community pharmacy-based pre-exposure prophylaxis (PrEP) delivery program: A discrete choice experiment. *Journal of the American Pharmacists Association*. 2024;64(4)doi:10.1016/j.japh.2024.102091
74. Danvers AA, Chew Murphy E, Avila K, et al. Women Trust Their OBGYNs to Provide Preexposure Prophylaxis: An Opportunity for HIV Prevention. *Front Reprod Health*. 2022;4:832287. doi:10.3389/frph.2022.832287
75. Khosropour CM, Healy E, Murphy EM, et al. "I honestly didn't know it was for women too..." acceptability and feasibility of integrating PrEP services into OB/GYN practices from the perspectives of practice staff and cisgender women in the community: a qualitative study. *Front Health Serv*. 2025;5:1567688. doi:10.3389/frhs.2025.1567688
76. National Institute of Allergy and Infectious Diseases (NIAID). HIV Language Guide. <https://www.prepwatch.org/resources/niaid-hiv-language-guide-2024/>
77. Sophus AI, Mitchell JW, Sales JM, Braun K. "Our Community Comes First": Investigating Recruitment Ads That Represent and Appeal to Black Women for Online, HIV-Related Research Studies. *J Racial Ethn Health Disparities*. Dec 2024;11(6):3478–3488. doi:10.1007/s40615-023-01800-5

Table 1. Demographic characteristics of the sample, stratified by segmentation group identified from Latent Class Analysis

	Total (N=390)	Group 1 (n=82) <i>Telehealth LGBQ, prefers injectable</i>	Group 2 (n=82) <i>Traditional care seekers, prefers oral pill</i>	Group 3 (n=108) <i>Cost-aware ring preference, who could benefit from PrEP</i>	Group 4 (n=59) <i>Underserved, prefers injectable, unlikely adopters</i>	Group 5 (n=59) <i>High-SES PrEP- reluctant, ring preference</i>	F/χ^2 (p value)
Demographics							
Age: Mean (SD), [range: 18-71]	34.8 (11.4)	33.1 (9.8)	35.7 (12.1)	36.3 (12.1)	34.5 (10.8)	33.6 (11.4)	0.136
18-24	85 (21.8%)	19 (23.2%)	20 (24.4%)	18 (16.7%)	13 (22.0%)	15 (25.4%)	
25-34	132 (33.8%)	30 (36.6%)	19 (23.2%)	43 (39.8%)	18 (30.5%)	22 (37.3%)	
35-44	90 (23.1%)	24 (29.3%)	21 (25.6%)	17 (15.7%)	17 (28.8%)	11 (18.6%)	
45-54	62 (15.9%)	7 (8.5%)	16 (19.5%)	21 (19.4%)	10 (16.9%)	8 (13.6%)	
55+	21 (5.4%)	2 (2.4%)	6 (7.3%)	9 (8.3%)	1 (1.7%)	3 (5.1%)	
Ethnicity							0.398
Non-Hispanic	379 (97.2%)	79 (96.3%)	81 (98.8%)	103 (95.4%)	57 (96.6%)	59 (100%)	
Hispanic	11 (2.8%)	3 (3.7%)	1 (1.2%)	5 (4.6%)	2 (3.4%)	0 (0%)	
Education							0.371
Less than a bachelor's degree	180 (46.2%)	34 (41.5%)	35 (42.7%)	57 (52.8%)	30 (50.8%)	24 (40.7%)	
Bachelor's degree or higher	210 (53.8%)	48 (58.5%)	47 (57.3%)	51 (47.2%)	29 (49.2%)	35 (59.3%)	
Employment							0.620
Unemployed or in between jobs	83 (21.3%)	14 (17.1%)	21 (25.6%)	21 (19.4%)	12 (20.3%)	15 (25.4%)	
Employed full or part time	307 (78.7%)	68 (82.9%)	61 (74.4%)	87 (80.6%)	47 (79.7%)	44 (74.6%)	
Household Income							0.002
< \$15,000 - \$34,000 USD	148 (37.9%)	23 (28.0%)	31 (37.8%)	55 (50.9%)	26 (44.1%)	13 (22.0%)	
\$35,000 - \$99,000 USD	192 (49.2%)	47 (57.3%)	41 (50.0%)	45 (41.7%)	28 (47.5%)	31 (52.5%)	
>= \$100,000 USD	50 (12.8%)	12 (14.6%)	10 (12.2%)	8 (7.4%)	5 (8.5%)	15 (25.4%)	
Had health insurance							0.058
No	57 (11.6%)	12 (14.6%)	16 (19.5%)	15 (13.9%)	12 (20.3%)	2 (3.4%)	

Yes	333 (85.4%)	70 (85.4%)	66 (80.5%)	93 (86.1%)	47 (79.7%)	57 (96.6%)	0.167
Had a primary care provider							
No	55 (14.1%)	16 (19.5%)	9 (11.0%)	10 (9.3%)	12 (20.3%)	8 (13.6%)	0.975
Yes	331 (84.9%)	65 (79.3%)	73 (89.0%)	95 (88.0%)	47 (79.7%)	51 (86.4%)	
Had a family planning provider							0.020
No	114 (29.2%)	25 (30.5%)	23 (28.0%)	30 (27.8%)	19 (32.2%)	17 (28.8%)	
Yes	268 (68.7%)	55 (67.1%)	57 (69.5%)	76 (70.4%)	39 (66.1%)	41 (69.5%)	0.134
Transportation							
Other	34 (8.7%)	7 (8.5%)	3 (3.7%)	15 (13.9%)	8 (13.6%)	1 (1.7%)	0.251
Car	356 (91.3%)	75 (91.5%)	79 (96.3%)	93 (86.1%)	51 (86.4%)	58 (98.3%)	
Sexual orientation							0.534
Heterosexual (straight)	329 (84.4%)	61 (74.4%)	76 (92.7%)	92 (85.2%)	49 (83.1%)	51 (86.4%)	
Gay or lesbian	6 (1.5%)	2 (2.4%)	0 (0%)	3 (2.8%)	1 (1.7%)	0 (0%)	0.005
Bisexual	39 (10.0%)	13 (15.9%)	3 (3.7%)	11 (10.2%)	7 (11.9%)	5 (8.5%)	
Queer	5 (1.3%)	3 (3.7%)	2 (2.4%)	0 (0%)	0 (0%)	0 (0%)	0.125
Pansexual	7 (1.8%)	2 (2.4%)	1 (1.2%)	1 (0.9%)	1 (1.7%)	2 (3.4%)	
Questioning	1 (0.3%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	1 (1.7%)	0.005
Relationship status							
Single	156 (40.0%)	33 (40.2%)	24 (29.3%)	48 (44.4%)	26 (44.1%)	25 (42.4%)	0.005
In a relationship	234 (60.0%)	49 (59.8%)	58 (70.7%)	60 (55.6%)	33 (55.9%)	34 (57.6%)	
Perceived discrimination and group disparities in health care Mean (SD) ^b	4.07 (1.02)	4.20 (1.04)	4.09 (0.890)	3.94 (1.17)	4.07 (0.936)	4.15 (0.935)	0.534
Behavioral indicators associated with HIV acquisition							
Engagement in behaviors associated with HIV acquisition in past 6 months							0.005
1 behavioral indicator	328 (84.1%)	67 (81.7%)	76 (92.7%)	81 (75.0%)	47 (79.7%)	57 (96.6%)	0.125
> 1 behavioral indicator	62 (15.9%)	15 (18.3%)	6 (7.3%)	27 (25.0%)	12 (20.3%)	2 (3.4%)	
Had condomless vaginal sex in							0.125

the past 6 months

No	20 (5.1%)	8 (9.8%)	1 (1.2%)	7 (6.5%)	2 (3.4%)	2 (3.4%)
Yes	370 (94.9%)	74 (90.2%)	81 (98.8%)	101 (93.5%)	57 (96.6%)	57 (96.6%)

Had condomless anal sex in the past 6 months

p<.001

No	326 (83.6%)	69 (84.1%)	77 (93.9%)	78 (72.2%)	46 (78.0%)	56 (94.9%)
Yes	64 (16.4%)	13 (15.9%)	5 (6.1%)	30 (27.8%)	13 (22.0%)	3 (5.1%)

Tested for HIV in the past 6 months

0.038

No	174 (44.6%)	34 (41.5%)	49 (59.8%)	42 (38.9%)	26 (44.1%)	23 (39.0%)
Yes	216 (55.4%)	48 (58.5%)	33 (40.2%)	66 (61.1%)	33 (55.9%)	36 (61.0%)

Tested for an STI (not including HIV) in the past 6 months

0.152

No	166 (42.6%)	37 (45.1%)	43 (52.4%)	40 (37.0%)	26 (44.1%)	20 (33.9%)
Yes	224 (57.4%)	45 (54.9%)	39 (47.6%)	68 (63.0%)	33 (55.9%)	39 (66.1%)

Among those tested in the past 6 months, self-reported testing positive for an STI (not including HIV)^c

	37 (9.5%)	7 (8.5%)	5 (6.1%)	11 (10.2%) ^d	9 (15.3%) ^d	5 (8.5%)	0.455
--	-----------	----------	----------	-------------------------	------------------------	----------	-------

Chlamydia	5 (13.5%)	0 (0.0%)	0 (0.0%)	2 (18.2%)	3 (33.3%)	0 (0.0%)
-----------	-----------	----------	----------	-----------	-----------	----------

Gonorrhea	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (11.1%)	0 (0.0%)
-----------	----------	----------	----------	----------	-----------	----------

Herpes Simplex Virus (HSV-1 and/or HSV-2)	13 (35.1%)	4 (57.1%)	1 (20.0%)	5 (45.4%)	2 (22.2%)	1 (20.0%)
---	------------	-----------	-----------	-----------	-----------	-----------

Human Papillomavirus (HPV)	5 (13.5%)	0 (0.0%)	1 (20.0%)	2 (18.2%)	1 (11.1%)	2 (40.0%)
----------------------------	-----------	----------	-----------	-----------	-----------	-----------

Trichomoniasis	6 (16.2%)	1 (14.3%)	1 (20.0%)	2 (18.2%)	0 (0.0%)	1 (20.0%)
----------------	-----------	-----------	-----------	-----------	----------	-----------

Syphilis	1 (2.7%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	1 (11.1%)	0 (0.0%)
----------	----------	----------	----------	----------	-----------	----------

Did not specify	10 (27.0)	2 (28.6%)	2 (40.0%)	1 (9.09%)	4 (44.4%)	1 (20.0%)
-----------------	-----------	-----------	-----------	-----------	-----------	-----------

Worry about acquiring HIV

<i>Mean (SD)^b</i>	2.26 (1.18)	2.45 (1.10)	1.72 (0.850)	2.67 (1.37)	2.27 (1.06)	2.00 (1.08)	<i>p</i> <0.001
------------------------------	-------------	-------------	--------------	-------------	-------------	-------------	-----------------

PrEP related variables							
Had previously heard of PrEP							0.010
No	134 (34.4%)	20 (24.4%)	36 (43.9%)	37 (34.3%)	27 (45.8%)	14 (23.7%)	
Yes	256 (65.6%)	62 (75.6%)	46 (56.1%)	71 (65.7%)	32 (54.2%)	45 (76.3%)	
Interest in learning more about PrEP <i>Mean (SD)</i> ^b	2.66 (1.31)	2.89 (1.22)	1.84 (1.08)	3.29 (1.27)	3.14 (1.03)	1.91 (1.11)	<i>p</i><0.001
Comfort discussing PrEP with a provider <i>Mean (SD)</i> ^a	2.00 (1.10)	1.91 (1.09)	2.21 (1.11)	1.84 (1.11)	1.84 (0.978)	2.24 (1.14)	0.305
Personal intention to talk to a healthcare provider about PrEP in the next 6 months <i>Mean (SD)</i> ^b	2.46 (0.938)	2.59 (0.860)	2.01 (0.809)	2.91 (0.891)	2.77 (0.824)	1.79 (0.767)	<i>p</i><0.001
Personal intention to get a prescription for PrEP in the next 6 months <i>Mean (SD)</i> ^b	2.08 (0.905)	2.10 (0.826)	1.62 (0.641)	2.57 (0.980)	2.39 (0.796)	1.57 (0.704)	<i>p</i><0.001

Notes.

Behavioral indicators include condomless vaginal and/or anal sex with a male partner; injection drug use; sex exchange; diagnosed with a sexually transmitted infection [STI]) (not including HIV) in the past 6 months.

^a Higher scores represent less comfort with respective variable.

^b **Interpretation:** Likert scale responses ranged from 1 to 5 (e.g., 1 = strongly disagree/not at all interested/definitely will not do; 5 = strongly agree/extremely interested/a lot/definitely will do), with higher values indicating greater levels of the construct unless otherwise noted.

^c Participants could select all that applied (i.e., select more than 1 response), thus percentages will not sum to 100%.

^d Had individual(s) who reported being diagnosed with 2 STIs in the prior 6 months (Group 3, one respondent: chlamydia and Human Papillomavirus (HPV); Group 4, two respondents: Herpes Simplex Virus (HSV-1 and/or HSV-2) and Syphilis / Chlamydia and Gonorrhea).

Table 2. Attribute importance, by segmentation group

Attributes	Study Sample (N=390) %	Group 1 (n=82) <i>Telehealth LGBQ, prefers injectable</i> %	Group 2 (n=82) <i>Traditional care seekers, prefers oral pill</i> %	Group 3 (n=108) <i>Cost-aware ring preference, could benefit from PrEP</i> %	Group 4 (n=59) <i>Underserved, prefers injectable, unlikely adopters</i> %	Group 5 (n=59) <i>High-SES PrEP- reluctant, ring preference</i> %
Administration method	48.12	52.81	63.66	30.83	79.31	48.4
Access location	12.08	12.01	6.96	14.61	9.2	8.1
Healthcare integration	7.22	9.61	8.63	10.3	1.69	7.33
Provider demographic	13.24	7.24	11.77	15.82	3.37	24.36
Payment method	10.69	6.79	6.58	17.86	4.03	11.73
Support services	8.65	11.54	2.39	10.58	2.39	0.09
Total	100	100	100	100	100	100

Note.

Bold represents the top 3 important attributes for each group.

Table 3. Part worth utility scores (zero-centered values) across each segmentation group

Attributes	Full Sample	Group 1 (n=82) <i>Telehealth LGBTQ, prefers injectable</i>	Group 2 (n=82) <i>Traditional care seekers, prefers oral pill</i>	Group 3 (n=108) <i>Cost-aware ring preference, could benefit from PrEP</i>	Group 4 (n=59) <i>Underserved, prefers injectable, unlikely adopters</i>	Group 5 (n=59) <i>High-SES PrEP- reluctant, ring preference</i>
Administration method						
Pill (every day)	15.77	42.92	132.54	-92.60	107.89	-148.41
Shot (every two months)	59.06	136.97	116.90	0.24	184.00	6.45
Vaginal ring (replaced monthly)	-74.83	-179.88	-249.44	92.36	-291.89	141.96
Access location						
Doctor's office	-1.54	-0.44	30.60	-2.31	24.16	-19.96
Community clinic	-14.47	-34.54	-10.14	-52.92	-0.38	-23.15
Pharmacy	6.94	-2.54	-9.26	20.48	7.29	25.47
Telehealth	9.06	37.52	-11.19	34.76	-31.07	17.64
Healthcare integration						
Family planning	-11.34	-37.11	-19.87	-24.31	5.41	-20.32
Women's health checkups	10.48	16.53	31.92	37.48	-4.76	-3.32
STI testing and care	0.86	20.58	-12.04	-13.18	-0.65	23.64
Provider demographic						
Any provider	-16.45	-21.97	-6.72	-20.43	-7.09	-84.53
Provider of your race	7.80	21.49	-32.15	35.33	-9.78	61.61
Provider of your gender	-7.45	-20.37	0.39	-54.90	6.45	17.82
Provider of your race AND gender	16.10	20.84	38.48	40.00	10.42	5.10
Payment method						
One-time fee	-4.66	-15.54	2.39	-26.27	-13.14	2.20
Pay based on income	-7.37	-9.65	-20.94	-40.46	11.05	-36.28
Cost assistance	12.03	25.18	18.55	66.73	2.09	34.08
Support services						
PrEP help by text	2.54	34.43	-0.14	-5.72	-6.76	0.19
Online support group	4.21	-34.80	7.24	34.60	7.58	-0.36

Help disclosing PrEP to partner	-6.75	0.37	-7.10	-28.88	-0.82	0.17
Not willing to take PrEP regardless of attribute	58.89	90.64	878.70	-1410.34	-435.18	1426.56

Notes.

Interpretation: negative values imply negative preferences for the program attribute and the magnitude of the preference is associated with the strength.

PrEP: pre-exposure prophylaxis.

Italics represent the most preferred item within each attribute.