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Equitable expansion of PrEP Choice for transgender women and travestis in Brazil: Community and other stakeholder perspectives on implementation opportunities

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Abstract

Expanding prevention programs to incorporate new PrEP modalities could offer important benefits to transgender women and *travestis* (TWT) in Brazil, who are underserved by current approaches. Long-acting injectable (LAI) products are not yet available through the national health system, and episodic PrEP was recently approved for some TWT, providing a critical window for formative research to guide equitable rollout. Engaging the Consolidated Framework for Implementation Research, we interviewed TWT PrEP consumers (8), PrEP providers (8), and program/policy advisors (4) in São Paulo. Participants expressed enthusiasm for offering all modalities as a cohesive 'PrEP choice' intervention– despite consensus on advantages of LAI-products (increased ease, freedom, protection) and limitations of episodic PrEP (complicated dosing, limited eligibility). We differentiated implementation opportunities related to culture, learning climate, and readiness in neighborhood primary care clinics, referral centers, and community-based programs. Findings coalesced around the need to center community in planning and executing implementation processes, by incorporating adjunctive interventions (pain management, peer navigation, food and transportation assistance) and peer staff. By interviewing stakeholders who participated in LAI-PrEP research, we elicited informed perspectives grounded in lived experience, before widespread availability. Findings provide a foundation for future studies comparing implementation and outcomes for TWT in different delivery settings.

Introduction

Persistently high new HIV diagnoses, combined with low use of PrEP, suggests an opportunity for implementation strategies that better respond to the needs and priorities of transgender women and travestis (TWT) in Brazil. Recent HIV prevalence estimates for TWT in Brazil range from 9–34%.[1–3] Daily oral PrEP has been available through the national health system (*Sistema Único de Saúde* - SUS) since 2017, yet TWT made up only 3% of people on PrEP. [4, 5] Robust literature has documented structural barriers to PrEP use and adherence among TWT in Brazil. [6–9] At the same time, community-engaged studies have shown how shifting intervention focus away from the individual towards more holistic, peer-centered service design can improve engagement.[10–13]

Expanding prevention programs to include long-acting injectable (LAI) products and episodic PrEP could offer important benefits for TWT. Research on Cabotegravir (CAB) and Lenacapivir (LEN) with TWT in Brazil showed greater efficacy than daily oral, while improving convenience and practicality.[12, 14–16] Neither LAI products are available yet through SUS and PrEP 'on demand,' was only recently approved for some TWT [17, 18], providing a critical window for formative research to guide equitable rollout of these new modalities.

Brazil has a unique and progressive implementation context that is well positioned to optimize expansion of PrEP services. [19] SUS provides HIV/STI services and gender affirming care, within a legal framework that protects universal healthcare and the rights of transgender people [20, 21] However, the day-to-day reality of access and safety are more complex. Discrimination against TWT in clinical

contexts is a recurrent concern. [13] A network of specialty neighborhood primary care clinics (Unidades básicos de saúde, UBS) and referral centers (centros de referencia, RC) was established to address this, providing welcoming and affirming services for LGBTQ+ clients in select facilities [22–25]

To better understand implementation opportunities for expanding PrEP choice through SUS, we conducted formative research with diverse health systems stakeholders in São Paulo. Guided by the intersectionality supplemented Consolidated Framework for Implementation Research (CFIR), we interviewed PrEP providers, TWT PrEP consumers, and policy or program advisors to gather insights on how to introduce innovations in a way that closes, rather than widens, existing disparities. Interviews generated ideas on delivery strategies to equitably distribute new modalities and identified supportive programming to effectively expand options. By speaking with people who participated in LAI-PrEP research, we gathered perspectives on implementation before widespread availability. Findings are relevant across contexts planning to expand PrEP choice for TWT, a population highly impacted by HIV and frequently excluded from advancements in prevention.

Methods

Conceptual Framework

We employed the intersectionality supplemented CFIR to understand multi-level factors that shape implementation, through an equity lens. We conceptualized the Intervention Characteristics Domain as 'expanded PrEP Choice:' offering LAI, on demand, and daily oral. The Inner Setting Domain encompassed three delivery environments: UBS, RC, and non-clinical programs. The Outer Setting Domain included health policy shaping implementation, as well as socioeconomic and cultural factors effecting access for TWT. We conceptualized the Characteristics of Individuals Domain as factors related to service delivery, such as education, personal beliefs, and efficacy. We defined the Implementation Processes Domain to focus on the planning and execution needed to integrate new modalities into existing programs.

Setting

Brazil's national health system (SUS) offers universal access to prevention and care services.[26] UBS are distributed throughout the country, with specific catchment areas based on population density. RCs, also with catchment areas, offer ambulatory and hospital-based services to meet complex health needs. [27] Some RC specialize in specific conditions, such as HIV/STI. There is a parallel network of private hospitals and clinics that require insurance or bill patients directly.[28,29] São Paulo has an estimated 22 million residents and a well-resourced fabric of health services that encompass SUS facilities, private facilities, and international NGOs. There are 479 UBS, of which 40 UBS specialize in serving TWT.[30] Since around 2020, a few RCs geared towards serving TWT were established and a few specialize in HIV/STI services for LGBTQIA+ populations.[31] Of these, a couple offer varying levels of mobile services. At least one mobile clinic visits community sites, such as brothels and encampments, to dispense medications, conduct HIV tests, and do lab work to monitor ART and PrEP. A few mobile

programs provide self-test kits and referrals. Brazil had a thriving informal market for feminizing hormone therapy (FHT) and silicone injections, administered through networks of *bombardeiras* (injectors), [32] although this has decreased with improved services and greater knowledge of silicone risks.

Sampling Frame

We purposefully sampled stakeholders across three categories- (1) PrEP providers, (2) program or policy advisors; and (3) TWT PrEP consumers. These categories were designed to elucidate perspectives on the larger context shaping access to services, as well as nuanced insights into delivery across settings. We interviewed researchers and participants in LAI-PrEP studies to gather experiences around implementation before public availability.

Data Collection

Based on our previous research in this area, [10,33-35] we developed an initial list of potential participants and recruited by invitations over email or phone. Experienced qualitative researchers completed a data collection workshop in February 2025. We pilot tested semi-structured guides organized around CFIR domains, tailored to participant categories (Table 1). At midpoint, we incorporated questions differentiating LAI-PrEP products, after the World Health Organization approved LEN. Interviews lasted about an hour and were conducted in-person or over videocall in Portuguese, between February and October 2025.

Table 1. Interview Guide Topics by CFIR Domain

Participant Category	CFIR Domain and Key Topics Areas
TWT PrEP Consumers	**Intervention Characteristics:** • Relative advantages of LAI products and on demand vs. daily oral PrEP • Benefits/drawbacks to various PrEP modalities • Complexity around access and adherence, including barriers and facilitators
	Inner Setting: • Experiences receiving PrEP and health services in different settings • Preferences around delivery settings (e.g. clinic type, community setting, mobile) • Preferences for prescribing practices (e.g. telehealth, in-person) • Characteristics that make a welcoming clinic culture
	Outer Setting: • Economic factors shaping use (e.g. cost, employment, housing, mobility) • Accessibility of healthcare/ getting to clinic / safety • Policy shaping availability, quality, appropriateness, and access to services • Social, cultural, human rights context of use (e.g PrEP stigma, peer support)
	Characteristics of Individuals: • Awareness, knowledge, attitudes, preferences for different PrEP modalities • Perceived need and benefits of PrEP • Experiences accessing healthcare including barriers/facilitators • Education, relationship status, other personal characteristics • Needs, priorities, concerns for TWT and how PrEP fits into these
	Implementation Processes: • Engaging community, policy leaders, and providers to expand access • Planning (needed education and other support to facilitate choice) • Executing expanded PrEP in various delivery settings
PrEP Providers **and Policy/Program Advisors**	**Intervention Characteristics:** • Relative advantages of LAI products and on-demand vs. daily oral for TWT • Evidence base for effectiveness of various modalities among TWT • Considerations around cost for expanded PrEP options • Complexity of delivery, access and adherence for TWT, including Barriers/facilitators
	Inner Setting:

- Structural characteristics (location, hours, range of services, infrastructure)
- Inner culture, values, support for serving TWT and expanding PrEP
- Learning climate
- Readiness for implementation

Outer Setting:

- Policy at various levels (city, state, national) to support PrEP expansion
- Support from advocates, community leaders, policy makers
- Cultural, economic, political factors that shape access for TWT

Characteristics of Individuals:

- Education and training, as well as factors shaping access to education
- Knowledge, awareness of PrEP modalities and beliefs on fit for TWT
- Willingness, efficacy, ability to prescribe new PrEP modalities to TWT

Implementation Processes:

- Training needs to integrate LAI-products into current programs
- Executing and adjunctive interventions
- Planning for strategies, policies, innovations to promote equable use

Data Analysis

Interviews were audio recorded. We used OpenAI Whisper Large-V2, an open-source AI model deployed in a local UCSF environment, to enable HIPAA-compliant transcription and translation. Interviewers reviewed and corrected transcripts for accuracy. In June 2025, about midpoint in data collection, we conducted an analysis workshop to systematically discuss interviews completed, identify areas for further elaboration, and areas that had reached saturation. We employed a rapid approach for analysis [36] and developed templates aligned with CFIR domains that were tailored to participant categories to summarize transcripts. We created a matrix to compare perspectives across CFIR domain and elaborated central themes.

Ethical Statement

The study protocol was approved by the University of California, San Francisco Institutional Review Board (IRB 20-32404) in the United States, and the National Ethics Committee in Brazil (IRB 46604521.6.0000.5479). All participants provided informed consent to participate. All research procedures involving human subjects was performed in accordance with the Declaration of Helinski and other relevant guidelines and regulations. PrEP consumer participants received R$50 (about US$9.70).

All study staff completed human subjects training. We used pseudonyms and generic names for clinical sites.

Results

We completed 20 in-depth interviews across three stakeholder groups (Table 2). Participants ranged in age from 24- 60 years old. We spoke with thirteen transgender women or *travesties,* one cisgender woman, and six cisgender men. Participants' occupations varied. In general, there was strong convergence in perspective. We highlighted nuance and points of divergence throughout the thematic sections as appropriate.

Table 2. Interview Participant Descriptions

Pseudonym	Participant Category	Occupation	Age	Gender
Bruno	Provider	Nurse	40	Cisgender man
Fernanda	Consumer	Student	32	Transgender woman
Aline	Consumer	Prevention educator	48	*Travesti*
Gabriel	Provider	ID physician	30	Cisgender man
Bernato	Provider	Prevention coordinator	40	Cisgender man
Miguel	Provider	Infectious disease physician	38	Cisgender man
Beatriz	Consumer	Sex worker	35	Transgender woman
Theo	Provider	Gynecologist	37	Cisgender man
Carla	Provider	Peer health educator	42	Transgender woman
Isabella	Policy/Program Advisor	Research coordinator	42	*Travesti*
Antonia	Provider	Clinic administrator	24	Transgender woman
Lara	Consumer	Dancer, producer, actress	28	Transgender woman
Camila	Provider	Mobile Program Coordinator	39	Transgender woman
Samuel	Policy/Program Advisor	Clinical Researcher	60	Cisgender man
Manuela	Consumer	Sex worker	30	Transgender woman
Carla	Consumer	Cashier and sex worker	39	Transgender woman
Patricia	Consumer	Sex worker	32	*Travesti*
Andressa	Policy/Program Advisor	Social scientist	44	*Travesti*
Isadora	Consumer	Student/unemployed	25	Transgender woman
Helena	Policy/Program Advisor	Service Coordinator	44	Cisgender woman

Conceptualizing the Analytic Framework and Mapping Central Themes

We conceptualized the analytic framework to focus on the intervention, inner setting, and implementation process domains. Three central themes that mapped to these domains structured our findings (Figure 1). The first theme, 'Revolutionary' Potential of PrEP Choice delineated the benefits of various modalities and the relative advantage of offering all as a unified intervention, 'PrEP Choice.' The second theme, 'Differentiating Implementation Opportunities,' considered how inner setting culture, learning climate, and readiness vary in UBS, RCs, and community-based programs. The third theme, 'Centering Community: Implementation Process Considerations' synthesized recommendations on planning around community priorities and executing delivery with peer staff. Outer setting factors related to client needs and resources, external policies, outer systems and structures, and outer culture are addressed throughout. We integrated perspectives across categories in each thematic area.

Figure 1. Thematic Findings Organized Around CFIR Domains

The "*Revolutionary*" Potential of PrEP Choice

Participants expressed deep interest and enthusiasm for considering 'PrEP choice' as a cohesive intervention– making LAI products, daily, and on demand oral PrEP available through SUS. Informants resoundingly endorsed offering all modalities, supporting patients to make informed decisions on which prevention strategy they prefer.

> The more options we have, the better […] People will be able to choose the strategy that makes the most sense for them. I think this fits in with the idea of democratizing access to prevention[...] If we only have one method, we'll only meet a single demand (Gabriel, age 30, cisgender man, PrEP Provider)

Participants emphasized the historical importance of offering options to TWT, who often face constrained choices in life. Rather than recommending one strategy for TWT, participants advocated for presenting a range of options and supporting informed decision-making. As one provider noted, "*enabling choice is fundamental to improving effectiveness*."

The "Dream" of LAI Products to overcome limitations of daily oral PrEP

Stakeholders described pervasive adherence barriers to daily oral PrEP, which LAI-PrEP could mitigate. TWT described difficulty remembering to take it every day, frequently loosing bottles, and persistent gastrointestinal (GI) side effects. A few people mentioned stigma from the visibility of bottles in small, shared apartments. Poly-pharmaceutical side effects with oral FHT were common and contributed to missed PrEP doses. Syndemic conditions- such as lack of housing - fueled chemical dependence and elevated susceptibility to HIV, while simultaneously increasing barriers to adherence. Several interview participants emphasized that LAI-PrEP could especially benefit the most '*vulnerable*' TWT sub-groups, by simplifying adherence.

> Marginalized trans women who don't have access to healthcare, who are street prostitutes, who don't have access to education or employment […] There's too much going on in these people's lives to worry

about taking medicine every day to maybe prevent something (Lara, age 28, trans woman, PrEP consumer)

Of TWT consumers, all preferred LAI-PrEP to daily oral. Those who had tried both highlighted serval advantages of LAI-PrEP, including increased convenience, elimination of stress around pill taking, and increased peace of mind from improved protection. TWT consumers were especially hopeful about LEN, saying things like, "*every six months is even more of a dream*."

Oral medication is a commitment that you have to take every day […] So, I opted for the injectable because of that. I go there, come back in two months, do all my tests, take it, and life goes on (Fernanda, age 30, transgender woman, PrEP consumer)

Participants shared how LAI-PrEP offered greater "*confidence*" and "*ease*" around sexual behaviors. For TWT in sex work, the comparative advantages of LAI-PrEP were highly valued, given adherence challenges from an on-the-go lifestyle and heighted risk.

For me, as I have sex constantly, as I work with it- injectable PrEP is the best, because I take it every two months, and since I'm constantly exposed, it's something that prevents it, right? (Manuela, age 30, transgender woman, PrEP consumer)

Across perspectives, stakeholders emphasized the limitations of 'on demand.' Only one participant had tried 'on demand,' and recently changed to daily oral after initiating FHT. The best candidate for 'on demand' was described as someone with an "*organized*" life and infrequent sex, since it requires advance planning.

PrEP on demand, in my reality, and for me, I don't think it works. I don't think sex is planned like that […] I've had and still have a somewhat more active sex life, and I don't have this thing about scheduled sex, you know? (Lara, age 28, transgender woman, PrEP consumer)

Despite consensus around LAI PrEP as the best products for TWT, stakeholders emphasized the importance of choice as empowering, within a larger context of disenfranchisement.

Differentiating Implementation Opportunities

Participants discussed three types of delivery settings to implement the 'PrEP choice' intervention: neighborhood primary care clinics (UBS), referral centers (RC), and community-based non-clinical environments. We differentiated opportunities for implementation in each setting, with a focus on culture, learning climate, and readiness.

Implementation Opportunities in Neighborhood Primary Care Clinics (UBS)

Stakeholders identified important opportunities to offer PrEP choice in UBS, which are the foundation of SUS. While the culture of each clinic varies, informants described pervasive experienced and anticipated discrimination. Stakeholders recounted UBS staff using incorrect names and pronouns, treating TWT in a

cold or dismissive way, and generally making them feel unwelcome. Still, a few TWT interview participants emphasized the importance of working to improve the culture at UBS, to "*democratize*" access to PrEP choice.

I think it would be nice to implement this in the UBS, to attract trans people within their own neighborhood. In my neighborhood, I'm the only [trans woman that uses the UBS] - that bothers me a lot (Lara, age 28, transgender woman, PrEP consumer)

A lot of people from the periphery and the Black population complain about the difficulty of access. So, I think that when [LAI products] are available […] it would democratize access if you had the possibility of taking injectable PrEP at a UBS near your home- (Andressa, age 44, *travesti,* PrEP program/policy advisor)

Participants highlighted a learning climate across UBS that created opportunity for change and described substantial recent progress from widespread efforts to educate staff on inclusive services. Community organizations provided training to over 40 UBS in São Paulo. Nonetheless, the task seemed endless.

Stigma, discrimination, disrespect for social names. We work hard with the UBS […] But it's a reality that turnover in these places is very high [...] You train someone today, and tomorrow they're gone (Helena, age 44, cisgender woman, PrEP program/policy advisor)

Participants uniformly agreed it would take tremendous investment to ensure all UBS could effectively serve TWT, posing a challenge to implementation readiness. However, UBS have existing protocols for multi-dose vaccines, which could be adapted for LAI-PrEP.

Implementation Opportunities in Referral Centers (RC)

Specialty RC had unique advantages to expand PrEP choice. These RC shared a culture described as gender affirming and sex positive. One participant who received her healthcare at a RC spoke highly of the services.

I am very privileged in terms of the clinic where I monitor my gender transition. They are very welcoming, very receptive, they don't make things difficult for us, they make things easier. When I decided I wanted to take PrEP, I accessed the medication quickly- (Isadora, age 25, trans woman, PrEP consumer)

Providers described learning environments designed to produce knowledge around best practices and facilitate adoption of care advances. The learning environments, combined with the culture, laid groundwork for *"smooth"* expansion of PrEP. One provider highlighted opportunity to integrate LAI-PrEP with other healthcare services for TWT patients.

Where we are in my service today, it would be very smooth, right? [...] We would just need to see how they are stored, at what temperature […] If it's every two months, it would be easy to tie in with appointments-

take advantage of the fact that the patient is already there, do it in the vaccination room. It would be an excellent gain (Helena, age 44, cisgender woman, policy/program advisor)

For many stakeholders, RC seemed best prepared to implement PrEP Choice. RC have protocols for routine HIV/STI testing, linkage, and monitoring, that could be expanded to include new modalities. They have a strong reputation in community. However, RCs are limited in number and location, with some clients traveling two to three hours for appointments. One provider noted that most of his clients are transgender men or TWT at low risk of HIV.

[TWT who are most susceptible to HIV] are on the streets, trying to get by. The idea of PrEP hasn't even reached them, because they have no contact with the health service […] I estimate that 90% of people who use transfeminine hormones don't have access to care- (Theo, age 37, cisgender man, PrEP provider)

Implementation Opportunities in Community Settings

Stakeholders- particularly policy and program advisors- stressed the importance of implementing PrEP choice in community settings to reach people currently underserved with clinic-based models. Mobile units, home-based services, or peer-to-peer programs were all suggested as opportunities for non-clinical delivery settings.

If [LAI-PrEP] is linked to the mobile vehicle that goes to certain strategic locations, I think it's very interesting. Because we take the medication to where the person is, they don't have to travel to the clinic and, moreover, they are not required to take that medication every day (Bruno, age 40, cisgender man, PrEP provider)

Advisors suggested "*fully peer-to-peer*" programs could be modeled on silicone injection practices that rely on peer networks. These practices circumvent discrimination in clinical settings and the travel burden to seek specialty care.

If it is to make a little more sense in their daily lives, [a program should] completely leave any type of service […] to offer services directly to them where they live, where they work. Completely peer-to-peer and in pairs, working in protected environments, surrounded by a supportive context […] it may be easy to self-administer (Samuel, age 60, cisgender man, program/policy advisor)

Stakeholders noted peer-to-peer approaches would need to be pilot tested and ensure linkage to pharmacies, UBS, or RC for oversight. One participant suggested that community-based programs should engage leaders in TWT communities like *bombeiras* who inject silicone for body modification or *Candomblé* saints, as a key part of the implementation process.

Participants praised community-based programs for sharing a culture that centered harm reduction and a non-judgmental approach to interacting with clients. Community programs have adaptive learning climates, grounded in a need to provide continuity of care to highly mobile clients. On the other hand,

readiness to implement PrEP choice varied substantially, with most programs requiring immense investment to purchase vans and increase capacity to provide clinical care. A mobile program provider described the complexity of rotating locations, due to policing and frequent relocation of homeless encampments.

Centering Community- Implementation Process Considerations

Findings coalesced around a need to center community perspectives in implementation processes and thoughtfully craft policies to ensure that expanded PrEP choice reaches those who currently lack access. Stakeholders called for SUS guidelines that prioritize dispensation to marginalized populations. Process recommendations converged around the importance of planning to incorporate adjunctive interventions that address community priorities and executing implementation by centering peer staff and providing comprehensive training.

Planning around Community Priorities

Stakeholders identified similar planning considerations for adjunctive interventions needed to improve access. Informants shared that most TWT have unmet foundational needs, making PrEP a low priority. TWT struggle with food insecurity, homelessness, and lack of job opportunities. One provider shared that all her TWT clients, "*have a demand that goes beyond PrEP,*" recommending food and transportation assistance be offered first, before addressing HIV prevention. Providing health education on PrEP choice, including the benefits and considerations for different modalities, came up as a reoccurring planning need. Participants suggested leveraging multiple media platforms- from TikTok to subway advertisements- to educate the public about new modalities. Health education was described as an important way to advertise new modalities and destigmatize use.

I think it would be interesting to spread the word on social media. There are still a lot of people who don't know about [PrEP]. I'll give you an example from TikTok, where I've been following some trans girls who talk about hormones, love, and other stuff. They're really engaging with these issues […] There's been a boom in trans women on TikTok. It would be really cool to try to partner with these people around PrEP- (Lara, age 28, transgender woman, PrEP Consumer)

Stakeholders emphasized the utility of support groups as an entry point to health services. Providers and program advisers described how TWT clients lack family support systems, making groups a critical way to build friendships. One participant recommended offering health education through existing groups.

In terms of awareness being absorbed and people understanding better and wanting to follow up, I believe it's more valid when it's shared in the clinic [TWT] group, because patients look at to group as sharing important information – (Patricia, age 32, *travesti*, PrEP consumer)

TWT PrEP consumers, as well as program advisors, highlighted the need for protocols on pain management and alternate injecting sites. LAI-PrEP users described pain management as critical before injection and to manage soreness afterwards.

It hurts a lot. It bothers me because it's a big injection […] I chose the arm because I didn't want it to come into contact with my pants, since I work sitting down- (Carla, age 39, transgender woman, PrEP consumer)

One advisor who worked in research called for effectiveness studies on alternate injection sites, saying that the standard protocols for CAB are impossible for many TWT.

Executing though Peer Staff and Training

Recommendations converged around the importance of peer staff to effectively execute implementation of PrEP choice. Providers and advisors expressed concern that the longer time between appointments with LAI-products could make follow-up more challenging, due to high population mobility from poverty and housing instability. An advisor who worked in LAI-PrEP research described an example of a participant lost to follow-up.

The last time she came back, she left the project. She said she was going to Paraná […]I asked when she would return for her appointment, and she had no idea…It's the reality of someone who doesn't have a home. Maybe she'll come back, maybe she'll never come back. And there's no phone contact. She always changes her number- (Paula, age 42, *travesti*, Program/policy advisor)

Several informants called for peer staff at all levels - from clinicians to administrators- saying that TWT staff are critical to creating a sense of "*belonging*" and a "*welcoming environment*;" elements needed to engage and retain clients. Peer educators bring unique expertise in health communication, garnering credibility and using plain language to generate open dialogue. For mobile programs, peer staff have insider knowledge essential to identify service locations.

What most connects [vulnerable populations] to the service is belonging, feeling that they belong at that service […] Belonging means that she sees herself reflected in that service, having healthcare professionals who are like her, having people who can dialogue with her needs (Andressa, age 44, *travesti*, Policy/program advisor)

Interviews stressed the need for training on PrEP choice. Topics for clinicians included alternate injection sites, pain management, and integrating PrEP into health consultations. Topics for staff included skills-building in using correct names and pronouns and making referrals for other services. Several participants emphasized that without addressing these planning and executing considerations, new modalities would face the same systemic barriers to access as oral PrEP.

Discussion

Our formative research with diverse stakeholders identified strong support for offering all modalities as a cohesive 'PrEP choice' intervention, differentiated implementation opportunities in three delivery settings, and delineated crucial considerations for implementation processes. By interviewing stakeholders who participated in studies on LAI-PrEP products, we elicited informed perspectives before

their widespread availability in Brazil. Consistent with earlier studies with similar populations in Brazil and the U.S, TWT PrEP consumers described important advantages, interest, and preferences for LAI-PrEP over daily or episodic oral PrEP, citing increased freedom and ease.[37-41] Yet, enthusiasm for LAI-PrEP did not diminish support for choice. Stakeholders advocated for interventions that promoted informed decision-making, adding to evidence that agency and choice may increase overall PrEP use and is essential to rights-based programming.[42-45] Readiness differed substantially across settings, however, participants described learning climates that demonstrated capacity to adapt, suggesting an opportunity to study processes to optimize delivery in different environments.

Perspectives strongly converged that implementation of PrEP choice- including offering LAI-products- still required thoughtful planning and execution to improve access and use. Participants described well documented unmet needs related to housing, income, social support, and gender-affirming care that could continue to limit engagement.[7,46,47] These findings underscored the importance of adjunctive interventions and the critical role of peer staff.[48,49] While longer dosing intervals may alleviate adherence burdens, rather than lending themselves to vertical intervention, LAI-products introduced new considerations around injection sites for TWT with body modifications, heightened need for follow-up, and health information systems that can track highly mobile populations. A few stakeholders advocated for peer-to-peer or self-injection strategies, which could build on existing community-based practices around silicone injections. Community based and peer-to-peer models have been explored in other studies, with mixed results that warrant further investigation.[45,50] Youth in Brazil preferred peers as educators, with nurses administering medications.[51]. Discussion around implementation opportunities in various delivery settings touched on an established health-system debate in Brazil- whether to concentrate investment in specialty services already trusted by TWT or continue the more difficult, long-term work of ensuring that neighborhood UBS are equipped to serve all residents. [23,52] These insights highlighted implementation opportunities for future research piloting delivery in different settings.

Several limitations should be considered when interpreting findings. First, this research was conducted in São Paulo, and implementation opportunities reflect this policy, service-delivery, and community context. The scale and structure of SUS- including its network of neighborhood primary care clinics, specialty referral services, and community programs- may differ from health systems elsewhere.[30] Nevertheless, the implementation questions raised may be transferable to settings with similarly differentiated tiers of primary, specialty, and community-based services, particularly where transgender people experience uneven access to affirming care across those tiers. Second, TWT participants had prior experience with PrEP, including some who accessed LAI-PrEP through research. Their perspectives provided informed insights into the relative advantages of different modalities but may not represent the priorities of TWT who have chosen not to use PrEP or remain disconnected from health services. Although providers and advisors described their experiences working with TWT who are less engaged in care, these perspectives cannot substitute for direct experience. Future implementation research should engage PrEP-naïve and underserved TWT directly to gather their recommendations on expansion.

Our findings shift attention from individual PrEP behaviors toward the services required to facilitate an equitable delivery system, regardless of modality. The intersectionality-supplemented CFIR helped situate narratives within institutional contexts, highlighting that even highly effective innovations will have limited impact if the people who could benefit most cannot safely and consistently access them. Our findings add to evidence calling for implementation strategies that respond to TWT's priorities, strengthen community participation, and address foundational needs to realize the potential of PrEP choice.[48,53-55]Our findings provide a foundation for future implementation research comparing outcomes in different delivery settings, with attention to implementation processes that center community. Together, these approaches can yield evidence to support expansion that reduces, rather than reproduces, existing inequities in HIV prevention.

Declarations

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Author Contributions Statements

SZH led the preparation and revision of the manuscript, designed and conducted data collection, led and conducted data analysis, developed Tables 1 and 2, developed Figure 1, and coordinated contributions from co-authors. GRS coordinated the study research team, recruited participants, conducted interviews, cleaned interview transcripts, contributed to Table 1 and 2, and contributed to data analysis and interpretation. DB recruited participants, conducted interviews, managed and cleaned study data, contributed to Table 1 and 2, and contributed to data analysis and interpretation. AC recruited participants, conducted interviews, and contributed to data analysis and interpretation. PVP developed the artificial intelligence–based program used to transcribe and translate interviews and led data management. JR contributed to data management and analysis. NPM conceptualized study and contributed to interpretation of findings. MAV contributed to study design, served as the Brazil-based principal investigator, and contributed to interpretation of findings. SL conceptualized study, provided senior study mentorship and oversight, contributed to data analysis and interpretation of findings, and conceptualized Table 1 and Figure 1. SZH serves as the corresponding author. All authors provided edits, reviewed and approved the final manuscript.

Competing Interests Statement

The authors declare no competing interests.

Data availability statement

The datasets generated during and/or analyzed during the current study are not publicly available due to the sensitive nature of the in-depth interviews conducted with a small number of participants and the

ethical imperative to protect confidentiality. De-identified datasets are available from the corresponding author on reasonable request.

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Figures

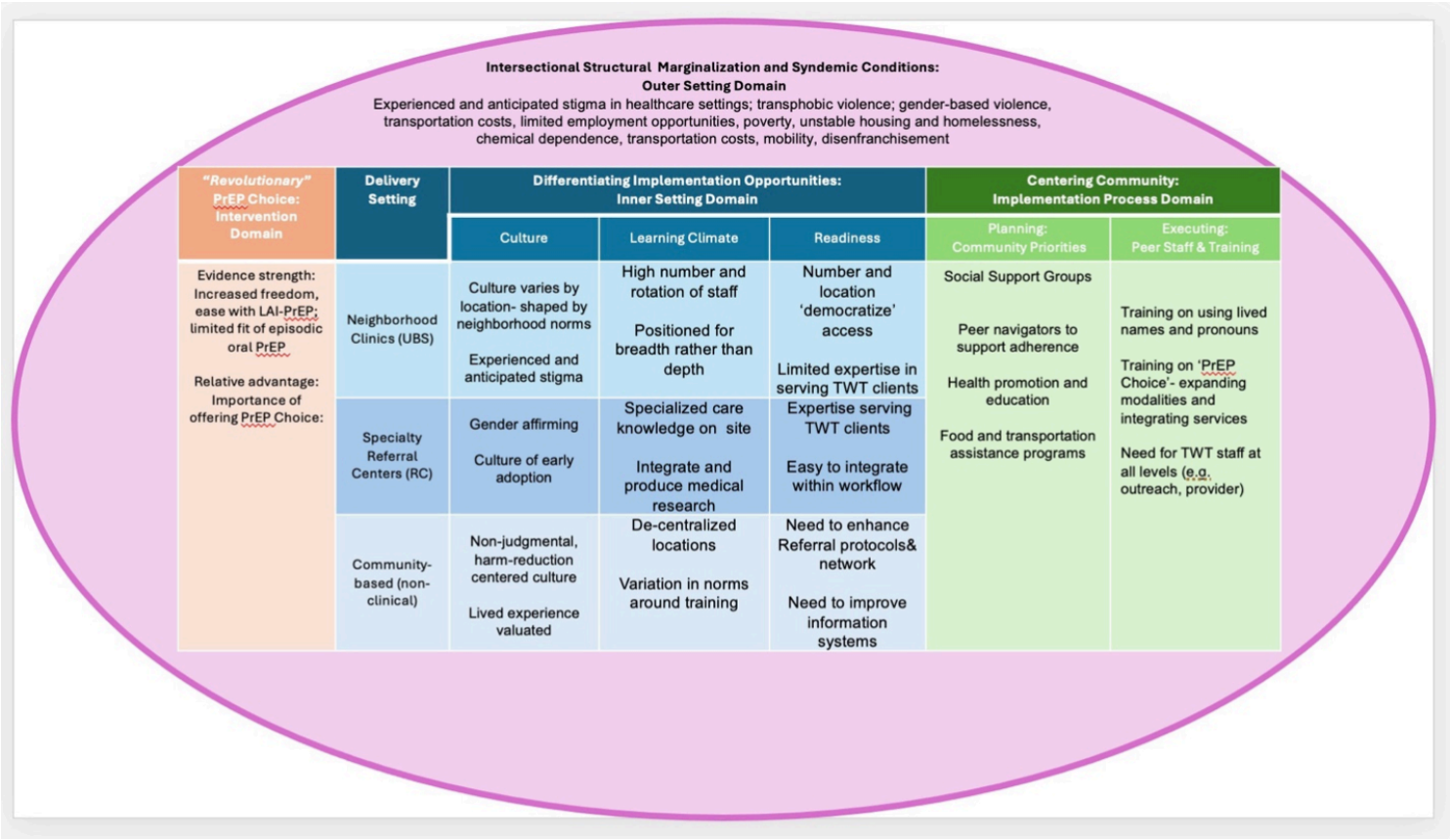


Figure 1

Thematic Findings Organized Around CFIR Domains