

# Peer-driven Interventions to Increase Prep Uptake among Men who have Sex with Men in the United States

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## Abstract

HIV continues to be a significant health challenge in the United States, disproportionately affecting Black/African American (B/AA) and Hispanic/Latino (H/L) Men who have Sex with Men (MSM). Pre-Exposure Prophylaxis (PrEP) is an effective HIV prevention pharmaceutical strategy, but its uptake among these populations has been suboptimal. Peer-Driven Interventions (PDIs) have demonstrated promise in increasing HIV prevention engagement, including PrEP services. This paper shares insights from a study aimed at promoting PrEP uptake among MSM using a PDI approach. The study recruited 39 peer educators through clinical outreach, LGBTQ+ community organizations and local nightlife venues, email outreach and collaboration with Community Health Workers (CHWs). Despite moderate success in peer educator recruitment, challenges arose in motivating peer educators to refer social network members for PrEP counseling sessions with our study team. Factors such as low referral incentives, time constraints, and lack of consistent engagement were identified as barriers. To address these challenges, future PDIs may benefit from integrating Artificial Intelligence (AI)-based tools to extend outreach and support both peer educators and their social networks. Additionally, hiring part-time peer educators and providing them with more in-depth training could improve recruitment and retention. The authors also emphasize the importance of a comprehensive approach to promoting PrEP uptake, combining peer support with professional services and care to improve PrEP outcomes, such as long-term adherence. These findings highlight the need for innovative solutions to optimize HIV prevention efforts in disproportionately affected populations.

**Keywords:** PrEP • Peer-Driven Interventions (PDIs) • MSM • HIV prevention • AI • Peer support • Peer education

## Introduction

HIV continues to be a significant cause of morbidity and mortality in the United States (US) and worldwide. Disproportionate increases are observed among Black/African American (B/AA) and Hispanic/Latino (H/L) men who have sex with men (MSM) [1]. Pre-Exposure Prophylaxis (PrEP) is an effective HIV prevention approach, but uptake has been suboptimal, especially among B/AA and H/L MSM [1]. Newer approaches are needed to reach these populations for PrEP and HIV prevention interventions.

Peer-Driven Interventions (PDIs) have emerged as an effective strategy for promoting HIV prevention, particularly among populations at higher risk of HIV infection, including People Who Inject Drugs (PWID), Men who have Sex with Men (MSM), sex workers, transgender individuals, and racial and ethnic minorities [2-6]. PDIs have demonstrated significant impact on behavioral change, especially in low- and middle-income countries, by leveraging social networks to disseminate HIV prevention information and encourage engagement with essential services (e.g. HIV testing and antiretroviral therapy) [7]. PDIs based on Respondent-Driven Sampling (RDS) use a

chain-referral approach, recruiting and training community members as peer educators who share HIV prevention resources and promote behaviors such as regular testing, counseling, and PrEP initiation [8,9].

Recently, we conducted two qualitative studies to explore the perspectives of MSM regarding a PDI approach to promote PrEP, with a focus on B/AA and H/L MSM perspectives, and to identify the most critical components of an effective PDI to increase PrEP uptake and improve retention [10,11]. Through 43 qualitative interviews (44% B/AA, 56% H/L), we found significant enthusiasm among MSM in southern New England for adopting PDIs to enhance PrEP use. Building on these insights, we launched a study in 2022 that involved a PDI aimed at increasing PrEP adoption and disseminating HIV/AIDS education among MSM communities. In this commentary, we share key lessons learned from employing a PDI approach that could inform and improve future PDI strategies for HIV prevention in the US.

## Description

### Peer educator recruitment

During implementation of a PDI to increase PrEP uptake among MSM, we successfully recruited 39 peer educators using a variety of strategies, including clinical outreach at a sexually transmitted infections and HIV/PrEP clinic, targeted social media campaigns, local LGBTQ+ and graduate student electronic mailing lists, collaboration with Community Health Workers (CHWs) specializing in HIV prevention, and outreach at local LGBTQ+ nightlife venues (i.e., gay bars and clubs). Peer educators were required to be at least 18 years old, currently on PrEP, willing to participate in the PDI, to self-identify as MSM, and to have at least one individual in their social network who is not currently taking PrEP.

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The most successful recruitment strategies were clinical outreach and engagement through local LGBTQ+ and graduate student electronic mailing lists. These approaches likely benefited from established trust within the community and participants' interest in promoting PrEP within their social networks. These methods yielded the highest number of peer educators (approximately 80 percent of the total sample). Email outreach to national CHW organizations also proved effective, underscoring the value of involving trusted professionals. In contrast, our social media campaigns did not produce any convertible leads despite launching across multiple platforms such as Grindr, Facebook, Instagram, and Google ads. A 'bot attack' during one campaign further complicated matters, generating over 2,000 false entries in our questionnaire. Although moving the eligibility screener from REDCap to Qualtrics resolved bot attacks, further social media advertisements did not contribute to additional participants. Similarly, collaboration with a local Facebook influencer did not increase enrollment numbers. Moderate success was achieved with in-person outreach at LGBTQ-oriented bars and clubs using coasters, flyers, and direct engagement by research assistants. However, stronger partnerships with venue staff may be needed to boost peer educator recruitment through this approach.

### Education for peer educators

Our team developed a one-hour educational module aimed at providing peer educators with foundational knowledge about HIV, AIDS, PrEP, Post-Exposure Prophylaxis (PEP), and available resources, including financial assistance programs for PrEP. Drawing from previous qualitative interviews, the educational content was tailored to address specific gaps in knowledge identified within the target population. Peer educators attended a one-on-one Zoom session with a member of the study team, in which the educational module was delivered via a PowerPoint presentation. During the Zoom session, peer educators were also provided with template language to facilitate communication about PrEP when approaching members of their social networks. Peer educators received electronic referral cards, each containing a QR code that linked to an eligibility screener. They were asked to distribute these cards to interested social network members and encourage them to participate in a compensated PrEP counseling session conducted by our study team. If PrEP counseling session attendees were interested in further discussing PrEP with a healthcare professional or initiating PrEP, we connected them to local PrEP resources.

To ensure peer educators had retained key information, we included a brief quiz at the end of each session. Research assistants reviewed the quiz results with the educators, providing feedback and clarification when necessary. Most peer educators were able to correctly answer over 80% of these questions. This iterative process helped ensure that peer educators were fully equipped to disseminate accurate information.

### Challenges with recruiting social network members

Despite our numerous efforts, we faced significant challenges in obtaining social network member referrals for PrEP counseling sessions from peer educators. To address these barriers, we implemented several strategies: 1) increasing the referral incentive from \$25 to \$50 per referral, with a maximum of five referrals; 2) providing additional referral cards if the initial set did not yield recruits; 3) maintaining consistent communication with peer educators to offer ongoing support; 4) collaborating with a trusted community-based organization to assist those with limited access to technology; and 5) offering flexible hours for the counseling sessions, including options outside of normal working hours. However, enrollment of social network members remained low, with only 13 MSM successfully recruited from the 39 enrolled peer educators.

During follow-up discussions, peer educators reported challenges such as being too busy with personal and work commitments to recruit members from their social networks, as well as discovering that potential participants they had identified were either already on PrEP or not interested in attending a PrEP counseling session. Additionally, some peer educators stopped responding follow-up communications from research assistants.

### Addressing recruitment challenges with new approaches

These recruitment challenges for a research study on a PDI to promote PrEP may arise from several factors. First, many MSM in the United States are not living below the poverty line [12], which may make the relatively small-value financial incentives offered less appealing to both peer educators and potential social network members of peer educators. Second, self-motivation plays a critical role in seeking HIV prevention care in this context rather than financial incentive [13], as consistent engagement often requires frequent interactions. Third, the time-consuming nature of interactions with their social network members may not be sustainable for volunteer peer educators who lack sufficient incentive or capacity to maintain consistent outreach.

During PrEP counseling sessions with social network members recruited by peer educators, we observed that while most peer educators effectively shared information about the research study, the PrEP educational component was often lacking. Based on results from a brief PrEP knowledge quiz administered at the beginning of the PrEP counseling sessions, many social network members likely had not discussed PrEP in depth with the peer educator who had recruited them. This suggests that some peer educators may have been more motivated by factors other than a passion for HIV prevention per se or were unaware that the referral process should've included sharing what they learned during the educational module. Additionally, the one-hour Zoom educational module may not have adequately addressed strategies for navigating sensitive discussions about sexual health and PrEP with social network members.

To enhance engagement among both peer educators and social network members in a PDI, we propose exploring alternative and integrated approaches that promote more frequent interactions—such as between PDI architects and peer educators, and between peer educators and their social network members—that ultimately encourage individuals at elevated risk of HIV to seek prevention care. One such promising alternative approach is integrating an Artificial Intelligence (AI)-based chatbot, specifically trained for HIV prevention, into the PDI to complement the education provided by peer educators [14,15]. The integration of a PDI with an AI-based chatbot could extend outreach efforts to MSM currently not on PrEP, especially to individuals who might otherwise be overlooked in traditional research studies or who feel uncomfortable discussing HIV-related topics directly with other MSM in their communities. By providing a guaranteed confidential platform, the AI-based chatbot could engage individuals who may prefer anonymity. Additionally, the chatbot could offer continuous support to both peer educators and the MSM they recruit, sharing up-to-date PrEP information and new resources for HIV prevention, and reinforcing messages from peer educators. This combination of human interaction and AI-driven support could increase the reach and impact of the intervention, leading to more sustained engagement and amplifying the overall effectiveness of the program.

Another proposed key strategy is to hire part-time peer educators instead of offering \$50 incentives. These peer educators would receive more comprehensive training as part of the hiring process—going beyond a single one-hour Zoom session. Hiring part-time peer educators would address many of the time and resource constraints reported by participants in our study, while also ensuring that they are committed to raising awareness about PrEP and possess strong knowledge of HIV prevention. Additionally, they could be assigned to local community events, such as Pride celebrations, and use social media to further promote PrEP. This approach would broaden the recruitment pool, extending beyond social network members to include larger MSM communities. Furthermore, tailoring recruitment strategies to the specific needs and dynamics of the targeted communities—such as hiring or recruiting peer educators with similar backgrounds—could lead to more effective outcomes.

Future PDIs should also adopt a more selective process for choosing peer educators. Research indicates that the effectiveness of peer education is significantly influenced by the passion and commitment of those involved [16].

Peer educators without demonstrated interest in public health initiatives may be less likely to dedicate the necessary time and effort to educate their peers, even when compensation is provided [17]. Furthermore, peer educators who are motivated by the mission of improving community health are more likely to foster trust and rapport with social network members, which is crucial for effective engagement in PDIs [18]. As part of this process, potential candidates should be asked to confirm whether they can commit to a specific number of volunteer hours per week, if hiring part-time peer educators is not a feasible option. Economic circumstances, such as full-time employment or other financial responsibilities, may prevent some peer educators from volunteering their time and expertise effectively. On the other hand, peer educators without these constraints—or those whose schedules allow for more flexibility—may be better suited to meet the time demands of the role. Ensuring that peer educators can realistically balance their volunteer responsibilities with other obligations will increase the likelihood of sustained engagement, ultimately improving the success of the intervention.

Finally, our research suggests that CHWs may be more effective in engaging individuals in a PDI than peer educators recruited in clinical settings. Among participants trained as peer educators in our study, one of the CHWs emerged as the most successful, referring four peers to the study, three of whom were ultimately enrolled. This may be due to their extensive experience and training in their profession, as well as their established network of clients, which perhaps allows them to approach sensitive health topics more confidently than our recruited peer educators. In contrast, peer educators and research participants recruited in clinical settings often face constraints such as limited time, which can hinder their ability to effectively connect with and support the community [19]. CHWs have a strong understanding of their community's needs, which helps them build trust that is essential for encouraging health-seeking behaviors [20-26].

## Conclusion

Our real-world implementation of a PDI study to promote PrEP uptake among MSM has provided valuable insights into the opportunities and challenges of this approach. While we encountered significant barriers in recruitment and retention of study participants, the lessons learned from this process point to the need for innovative solutions, such as integrating AI-based tools, to complement traditional peer-driven approaches. Moving forward, combining the strengths of both well-trained peer educators and AI technology could improve the reach and impact of HIV prevention efforts, particularly among populations disproportionately impacted by HIV. As we refine these strategies, future PDIs may benefit from a hybrid model that leverages both human and technological resources to address the complex dynamics of HIV prevention in diverse communities.

Furthermore, while PDIs have proven efficacy in increasing engagement with HIV prevention services, they are not sufficient on their own. Research indicates that while PDIs can be effective in raising awareness and providing initial access to services like PrEP, sustained engagement and retention often require more comprehensive support. Peer support can help individuals overcome barriers to accessing HIV prevention services, such as stigma and lack of information, yet peer educators may lack the clinical expertise needed to address complex health needs that could arise during long-term care. The sense of community and safety offered by peer support is particularly vital for populations experiencing high levels of stigma or marginalization, such as MSM and communities of color. However, professional support is critical to address more technical aspects of HIV prevention, including regular clinical monitoring, prescription management, and behavioral health counseling, which are essential to maintaining PrEP adherence. An integrated and comprehensive approach can help address the diverse needs of individuals, including psychological support, health education, and access to medical care, leading to improved health outcomes and higher rates of PrEP retention. A combination of peer-driven interventions and professional support is likely to be the most effective strategy for connecting individuals to HIV prevention

services, including PrEP, and ensuring they remain engaged in care.

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## Conflict of Interest

None.

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