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Pharmacy-based pre-exposure prophylaxis support among pharmacists and men who have sex with men

Abstract

Objective: To understand the perceptions and support for pharmacy-based pre-exposure prophylaxis (PrEP) delivery among pharmacists and men who have sex with men (MSM).

Design: A qualitative study from April 2017 to December 2018.

Setting and participants: The researchers used purposive sampling to identify MSM participants and AIDSVu to identify pharmacists in high HIV zip codes in the metro-Atlanta area. Eight MSM and six pharmacists consented to participating in the study.

Outcome measures: Perceptions and support for PrEP delivery in pharmacies.

Results: Both MSM and pharmacists expressed strong support for in-pharmacy PrEP screening and dissemination. MSM reported that pharmacies were more convenient and accessible compared to physician's offices. However, they also noted that privacy and training of pharmacy staff were important for them to consider being screened for PrEP in a pharmacy. Pharmacists also believed training was important and felt comfortable counseling on HIV prevention for their current customers.

Conclusion: These data support early evidence that pharmacies are a promising venue to improve PrEP access for MSM. In order to implement PrEP screening in pharmacies, proper training of pharmacy staff and a designated space to ensure privacy are critical. Future studies should test the feasibility of screening for PrEP in pharmacies for BMSM.

Background

- Black men who have sex with men (BMSM) have the fastest growing HIV rate compared to any other racial or risk behavior group.
- Pharmacies are promising venues to reduce HIV by increasing PrEP access for BMSM.

Black men who have sex with men (BMSM) have the fastest growing HIV rate compared to any other racial or risk behavior group in the United States[1,2]. Although, black populations

Author Contributions

Natalie D. Crawford conceived of the study, oversaw data collection and analysis and wrote the manuscript.
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Henry N. Young contributed to the conception of the study and edited the manuscript.

only account for 10% of the US population, BMSM account for 38% of all new HIV infections[3]. Research suggests that HIV incidence is highly clustered in disadvantaged neighborhoods with fewer resources including a limited number physicians who prescribe pre-exposure prophylaxis (PrEP)[4-7]. Daily oral PrEP can prevent up to 92% of HIV infections[8] and evidence suggests that HIV incidence decreases in areas where PrEP uptake increases[9]. Despite the proven effectiveness of PrEP, uptake among BMSM is low[10,11]. Therefore, in order to reach BMSM and improve PrEP uptake, new venues to promote and provide PrEP must be considered.

Recent studies have highlighted the untapped potential of pharmacies' ability to play a larger role in ending the HIV epidemic[12]. Pharmacists are well positioned in the community to promote health and prevent disease through individual pharmacist-patient interactions, population-based activities, and collaborations with healthcare providers and public health agencies[13]. Pharmacies have shown their ability to cost-effectively extend HIV prevention and treatment resources[14] – including HIV testing for people who inject drugs[15-18], standard dispensing and counseling for antiretroviral therapies[19,20], and some preliminary models show that they can screen for and administer PrEP[21,22]. Moreover, pharmacists are a trusted source of health information, who are generally more accessible than physicians[23]. However, there is limited data on how MSM – particularly BMSM who are at the greatest need for HIV prevention resources – view pharmacy-based PrEP screening and delivery. Previous studies have shown that pharmacy-based PrEP is feasible and can reach MSM[24], white[24,25] and Latinx populations[26], however, it is unclear if BMSM show the same interest. Likewise, while PrEP is being offered in some pharmacy settings, it is unclear if pharmacists located in high HIV risk neighborhoods with high proportions of black residents[27], show support and are capable of PrEP screening and provision in their pharmacy. This is especially important in light of evidence showing limited PrEP knowledge among some pharmacists[28,29].

Theory suggests that expanding PrEP in an easily accessible setting such a pharmacy will improve behavioral uptake of this therapy. Specifically, Cohen's structural model of health argues that physical availability of health services and one's neighborhood structure can facilitate health-promoting behaviors[30]. Therefore, making PrEP more accessible via pharmacies should increase PrEP uptake. However, uptake may be limited if individuals do not believe they can access those services. Particularly since PrEP screening includes testing for HIV and relevant sexually transmitted infections (STIs)[21]. In line with the Health Belief Model, these perceptions inform the individual's assessment of their self-efficacy and what personal cues may motivate them to adopt the health behavior of interest[31]. Therefore, the goal of this study was to better understand willingness and barriers to obtain PrEP in a pharmacy setting among MSM and pharmacists.

Objective:

Qualitative interviews from MSM and pharmacists in high HIV Zip codes were performed to understand the perceptions and support for pharmacy-based PrEP delivery.

Methods

Design

Semi-structured, in-depth interviews were conducted with individuals of two key stakeholder groups to understand their experiences with PrEP: MSM and pharmacists. Researchers created separate interview guides for MSM and pharmacists. The Emory University Institutional Review Board approved all study activities.

Sampling

Researchers used purposive sampling to identify MSM for recruitment. MSM who reported being willing to participate in future studies from an existing HIV prevention study[32] were emailed and asked to contact our study team if they were willing to participate in study seeking to understand their "experiences at pharmacies."

In order to identify pharmacists, high HIV baseline prevalence neighborhoods in Atlanta, Georgia were identified using AIDSVu, a geo-spatial tracking tool used to monitor HIV prevalence by zip code. Pharmacies in neighborhoods with the highest HIV burden were called to determine whether the pharmacists were willing to participate in the research. MSM and pharmacist participants were continuously recruited until saturation was reached in the data.

Data collection and interview guides

All interviews were scheduled by appointment and conducted in safe and private office or pharmacy spaces that were comfortable and convenient for the participants. Interviewers were cis male and female research assistants with Masters-level training in public health and qualitative methods. All interviewers were certified though the Collaborative IRB Training (CITI) Program and had 1-3 years of training conducting qualitative interviews. Interview topics, selected based on the research objective, ranged within four domains for both key stakeholder groups: 1) knowledge of general public health and HIV/AIDS, 2) use/delivery of health services in a pharmacy setting, 3) knowledge of HIV prevention services including STI prevention and, 4) knowledge, beliefs, and attitudes related to the feasibility of sustaining HIV prevention strategies through the collaboration of pharmacies, physicians, and community-based organizations. Interview guides were adapted from previous studies that assessed HIV prevention strategies in pharmacies [21]. Adaptations to the interview guide were targeted to the specific key stakeholder group and informed by the Health Belief model. Interviewers referred to existing qualitative data collection guidelines to ensure rigorous data collection[33] Participants were compensated $50 for participation in a one-hour interview.

Data Analysis

All interviews were audio-recorded for verbatim transcription and data analysis. Audio data was immediately transferred to a secure server following every interview. Interviews were transcribed by research assistants with Masters-level training in public health and qualitative methods. The research team used a thematic approach[33] using code lists that were developed inductively from the literature and deductively from the research objective, which aimed to

understand perceptions and support for pharmacy-based PrEP. The code lists were organized by listing codes, definitions, and example quotes from the transcripts. Four MSM and three pharmacists' transcripts were initially coded to capture variations across the data sets. Individual code lists were used to subsequently code all eight MSM and six pharmacist transcripts. To enhance inter-coder reliability, two other researchers re-coded the same transcripts, refined the code lists, and re-coded the transcripts. Conflicts were resolved through discussion with the senior author (NC). Once coded, all texts were reviewed to conceptualize inter-relationship between themes and how they relate to the research questions. The research team used MAXQDA Analytics Pro (VERBI Software, 2018) for data analysis.

Results

- Pharmacists and MSM strongly support PrEP services in pharmacies.
- Privacy and confidentiality in pharmacies should be addressed to improve comfortability to be screened for PrEP.
- Pharmacy staff must be adequately trained to provide PrEP services in pharmacies.

Participant descriptions

Data were collected from eight MSM and six pharmacists. Half of the MSM participants were black and half were white. The participants' age ranged from 25 to 54 years (median= 30.5 years old) and reported being HIV negative. Pharmacists were of varying races and gender. Most were black (n=3) followed by white (n=2) and Asian (n=1). All but one pharmacist was male.

MSM

Common themes across participants included support for in-pharmacy STI, HIV, and PrEP screening, current use and accessibility of pharmacies, health screenings practices in pharmacies and use of physicians versus pharmacists. Themes presented in each section represent those that were the most common to the least.

Support for in-pharmacy STI, HIV, and PrEP Screening—The majority of the participants expressed support for in-pharmacy STI, HIV and PrEP screening because it was more convenient in terms of location. They also believed pharmacy-based HIV prevention would make it more accessible for most people. One participant also acknowledged that HIV testing availability in settings other than doctors' offices may increases the possibility that people would consider pharmacists as a source of HIV prevention screenings.

> "If they offer it at every place [pharmacy] it would be convenient for other people for everybody who wants to get a test. That way I don't have to go to (place) to get a test when there's three or four places in walking distance or even two blocks away that are pharmacies and they can offer that[….]particular screening." (MSM 3)

However, in-pharmacy PrEP screening was conditional. Specifically, all of the participants needed to know that screening was private and confidential.

> "Every pharmacy that offers HIV testing to have a separate closed off room where results would be discussed" (MSM 5).

One participant elaborated that pharmacies need to create a safe place for screening. Ideally, this safe space would mean improving the comfort level within pharmacies for both clients and employees by having comfortable seating and showing adequate representation for all clients.

> "Comfortable seating because it's a waiting room. You have to care about the ergonomics of clients and even your employees. Put posters, messaging on the wall, pictures that have people who look like me and you, pictures that have people that look like our counterparts" (MSM 7).

Participants also expressed specific characteristics that would improve one's ability and comfort talking to a pharmacist. For example, sympathy and/ or empathy was identified as important aspects of delivering HIV status. Previous experience with the LGBT community would also be positive.

> "To be honest [….] I know it is impossible to have a person of the LGBT community at every pharmacy, but I think more so someone that's educated on the experience of being a part of the LGBT community, somebody that can empathize with you and that understands." (MSM 8)

Finally, two participants mentioned that they would go to an organization for screening before going to a pharmacy. For one of them, although he offered suggestions on what would make him feel more comfortable getting screened at pharmacies, he later mentioned that he'd prefer to go to an organization that caters to the LGBT community. The other participant, however, was more motivated to go to an organization for screening because of the cost.

> "The HIV tests aren't necessarily free at pharmacies. And aside from working at an organization that does free testing, I would go to any other organization before I would pay for an HIV test." (MSM 7)

Current use and accessibility of pharmacies—All MSM participants reported using pharmacies at least once a month; primarily for prescriptions, over the counter medications, condoms and other store products (e.g., soft beverages and small groceries). All MSM also perceived pharmacies to be easily accessible, regardless of their method of transportation since pharmacies are located within a few miles of their residence and they often have multiple pharmacies within close proximity of each other.

> "It's pretty easy. I drive. But even if I did not have my car, I think the pharmacy is [train station] accessible" (MSM 7)

Almost all MSM said a pharmacy would be more feasible than a physician's office to obtain HIV prevention services since there are more pharmacies to choose from and there is a shorter wait time.

> "… because pharmacies are much more prevalent than I think doctor's offices are…I'd consider the wait time would probably be a lot less than if you had to schedule an appointment. I think even finding a new PCP in the Atlanta area could be really difficult […] last time it was like a two-month waiting list just to get on like, your first appointment so yeah." (MSM 2)

Low uptake of health screenings in pharmacies—None of the participants reported currently utilizing pharmacies for health screenings. Most (n=6) indicated that they typically complete health (e.g., blood pressure and vaccinations) and HIV prevention (HIV testing screenings with their physician). Physicians (n=6) and community organizations (n=1) were the primary sources for STI and HIV testing, which everyone reported obtaining regularly (4-6 months). However, only two participants had ever been screened for PrEP. Both participants were screened for and prescribed PrEP at community organizations. Unfortunately, one participant requested PrEP from his doctor and was discouraged.

> "Interesting experience. I don't think that they had many gay men that came into the office […] the doctor that I talked to was a pretty young doctor. I mentioned that I might be interested in getting PrEP and he seemed really nervous and brought his supervisor in, who then strongly discouraged it." (MSM 2)

Use of physicians versus pharmacists—Health screening practices appeared to differ among participants based on their perception of the role of pharmacies and physicians. The majority of participants utilized their physicians for general health and STI/HIV screenings primarily because pharmacies were not considered a health care source.

> "I just don't have that mindset that a pharmacist should be doing any- or a pharmacy technician should do any type of health screening." (MSM 3)

Moreover, many participants (n=5) expressed that they preferred getting tested for HIV at a physician's office because of existing relationship with their doctors and because their doctor has all their health information.

> "Well I think cause I already have a relationship with my primary doctor I don't, I think it would be easier to go to my primary doctor cause "hey this is what I need", they know more about me, me going to them year after year or how often as I need to versus somebody, if I'm going to a pharmacy they don't know so they are going to ask me a whole slew of questions that my primary doctor already know." (MSM 1)

Nevertheless, the majority of participants (n=6) were willing to get tested for HIV at a pharmacy if conditions such as privacy and confidentiality are met.

> "If there was a place that we could get away from other people… as long as I was not at a window, and perhaps have seen the pharmacists a couple of times before that would make me feel a bit more comfortable." (MSM 2)

Pharmacists

Three broad themes were identified across the pharmacist interviews including: STI, HIV, and PrEP screening and support, customer-pharmacist interactions, and physician-pharmacist collaboration.

STI, HIV, and PrEP screening practices and support—None of the pharmacists currently conducted STI, HIV or PrEP screenings, and only one pharmacist sold in-home STI/HIV screening kits. All of the pharmacists stated that they worked with other community organizations and physicians to refer customers to testing services. Only half of the pharmacists in this study stated that they currently distribute PrEP to customers, and they also educate and counsel patients on PrEP. One pharmacist who caters to a large percentage of HIV positive customers also counsels those customers' intimate partners. Pharmacists noted that over time, they formed relationships with their customers which has facilitated their experience dispensing PrEP to customers.

> "Very often. Yes. And I think one of the reasons we did it so often is the fact that we have so many patients that have HIV, that they're partners, come in and get the PrEP… We develop a good relationship because they're in here month after month after month. They're not the kind of patients that they're going to come in one month to get an antibiotic, and then you never see them again. These patients I see once a month regardless. I know when they're coming in. I know them by name. I almost know exactly which drugs they're on. We have a good patient-pharmacist relationship." (Pharmacist 4)

Although STI, HIV and PrEP services were not currently available, all of the pharmacists expressed considerable support for providing those services within their pharmacies. They also expressed strong willingness to sell in-home STI and HIV tests. While all of the pharmacists felt comfortable with their ability to link customers with physicians or community organizations if they needed additional resources, only one of them was aware of payment assistance programs to reduce the cost of PrEP. However, they all had experience linking patients to payment assistance programs for other medications and helping patients understand their insurance coverages.

> "We [would] get in touch with Gilead that will help subsidize so that they can get their medication at a much lower price. In fact, sometimes when Gilead gets involved, their copay comes to zero. Their copay can go from around $50 a month to 0 with the use of a supplemental card from a company like Gilead. Yes, we do that very actively." (Pharmacist 5)

Customer-pharmacist interactions—All of the pharmacists reported being willing to educate customers about sexual health. However, many pharmacists noted that customers were often uncomfortable during these interactions. Most pharmacists only offered sexual health information to customers who asked, while a few other pharmacists felt comfortable doing so without the customers' request. One pharmacist assessed non-verbal cues to decide whether or not to speak to customers about safe sex practices.

> "Well, when I do talk to them some people are really uncomfortable talking about it, and I kind of watch the body language and determine whether somebody wants to talk about it. I may start the conversation, but if there is not much response, I will just assume they don't want to talk about it." (Pharmacist 5)

Another pharmacist expressed that customers accept pharmacists as a source of sexual health information. The pharmacist explained that they promote sexual health by catering the messages to the customers and emphasizing the importance of protecting themselves and their partners from STIs.

> "I do offer-- because we get a lot of young men in here from child support. So, I'll offer that to them that you need to be protecting yourself as well as the female. If you don't want any future more children, then you need to take some form of protection for yourself and for her. I mean, without being too graphic, it's the same, without posing any STD trouble for you or a future baby, so." (Pharmacist 2).

Physician-Pharmacist Collaboration—All but one of the pharmacists stated that they collaborated and formed partnerships with PrEP prescribing physicians and other healthcare organizations. These collaborations made it easier for pharmacists to refer customers for sexual health services – including PrEP. The inter-professional relationship also seemed to improve care for pharmacy customers. For example, the majority of the pharmacists mentioned that they have previously called physician's offices for their customers. One participant specifically talked about ongoing phone conversations with one of his customer's physicians.

> "I was just on the phone with a patient when you came in trying to get—she saw the doctor on Tuesday. They told her they were going to send her a prescription for ---. Since Tuesday, we still haven't received it, we've called three days in a row." (Pharmacists 2)

Another pharmacist noted his collaboration with a mobile doctor group that visits the patients, prescribes them medications, and has the pharmacist fill and deliver the medications to them. Although that pharmacist did not fill PrEP prescriptions specifically, he vocalized that his business model would enhance privacy for customers needing PrEP while also improving adherence.

Discussion

This study explored perceptions of and support for pharmacy-based PrEP screening among MSM and pharmacists in an urban area with a high HIV prevalence. A number of studies have noted the potential of pharmacies to provide HIV prevention services[14,22,34], including PrEP[24,35]. As the possibilities expand for pharmacy-based PrEP services[12], it is critical to understand the barriers and facilitators to ensure its successful implementation, uptake, and sustainability among key stakeholders.

In our study, both MSM and pharmacists noted strong support for PrEP screening in pharmacies. However, both groups also identified barriers that could hinder pharmacy-based PrEP screening. Specifically, MSM did not perceive pharmacists as a main source for HIV

prevention services and noted that privacy and training of pharmacists to perform HIV prevention services would be critical for their willingness to use these services in pharmacies.

Pharmacist perspectives echoed the importance of training for pharmacy staff. While all of the pharmacists were knowledgeable and felt comfortable providing HIV prevention counseling for their patients, only one pharmacist stocked in-home STI and HIV kits, and only one of them knew how to help patients pay for PrEP if they were prescribed. Therefore, existing pharmacist HIV prevention trainings may need to be expanded to include concerns of specific subpopulations (e.g., low income) at high risk for HIV[28,36]. In general, pharmacists in our study had tremendous experience providing education and referral information to their customers, which is supported by the literature[37]. Several studies have noted that the general public perceives pharmacists only as medication experts, although their roles also involve preventive health practices[38,39]. Therefore, to improve the acceptability of pharmacy-based PrEP, marketing may be needed to shift MSM's perceptions of pharmacists and their role in providing HIV prevention services. Finally, in order to support the implementation and uptake of pharmacy-based PrEP, attention should be given to rearranging or repurposing pharmacy space to provide private areas that support open discussions of health concerns[40].

Both MSM and pharmacists highlighted the accessibility and convenience of pharmacies for obtaining HIV prevention services in comparison to physician's offices. Specifically, pharmacies are often conveniently located, have short -- if any –wait times, and do not require appointments and planning[23]. In line with Cohen's structural access theory, increased accessibility of PrEP could improve the uptake of PrEP.[30] Moreover, since pharmacies serve patients for a host of health outcomes, they are relatively neutral settings that can reduce HIV-related stigma. Importantly, we assessed willingness to be screened for PrEP among both black and white MSM in order to elucidate racial differences that might have led to lower uptake among BMSM. We also assessed willingness to provide PrEP among pharmacists who are located in neighborhoods with a high baseline HIV prevalence that have high proportions of black residents. However, there were no differences in willingness by racial group and our data overwhelmingly showed that pharmacists in the highest risk, largely black areas are willing to provide these services suggesting that existing pharmacy-based PrEP approaches in black communities can be increased to better reach this population.

The findings of this study must be discussed in light of a number of limitations. The research team used qualitative methods to identify barriers and support for in-pharmacy PrEP screening. Due to the study design the results from this study cannot be generalized. The shared experiences and perspectives of the study participants may likely be different from other risk populations and key stakeholder groups. However, the qualitative nature of this study allowed the research to achieve saturation with a small number of participants in each key stakeholder group and use inductive and deductive analytical techniques to develop comprehensive, thematic codes for a robust qualitative analysis.

Conclusions and Implications for Practice

This study identified that there is strong support for pharmacy-based PrEP screening among MSM and pharmacists. This support is driven by the accessibility of pharmacies. Important barriers include privacy and staff training. Pharmacists interested in enhancing their pharmacies HIV prevention services should seek HIV prevention training courses, some of which are offered through the Centers for Disease Control[41]. Moreover, they should ensure that state legislative barriers do not prohibit their ability to expand HIV prevention services. In these cases, collaborative practice agreements with physicians can be established to provide HIV prevention services in pharmacies. While these services may cost time and money on the front end, some research points to adequate compensation via medication dispensing and counseling/ medication therapy management. Pharmacists in high HIV risk areas can also partner with researchers to properly test the feasibility of implementing pharmacy-based PrEP in their pharmacy and provide evidence of their ability to reach populations at the highest need.

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