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Intervention Messaging About Pre-Exposure Prophylaxis Use Among Young, Black Sexual Minority Men

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Abstract

Approximately 1.1 million individuals in the United States are living with HIV/AIDS. HIV disproportionately affects young, black men who have sex with men (YBMSM). Recent biomedical advances, including the use of antiretroviral therapy as pre-exposure prophylaxis (PrEP), hold promise for preventing HIV infections. However, PrEP uptake remains slow among those most at-risk. To develop and test an intervention to address HIV disparities in YBMSM, we conducted qualitative interviews with 29 YBMSM from Jackson, Mississippi, to learn more about their views of PrEP. Twenty-nine PrEP-eligible YBMSM were enrolled and participated in either semistructured interviews or focus groups. They were asked about PrEP use, messaging, and promotion. Data were coded based on an iteratively developed coding scheme and entered into NVivo to facilitate thematic analysis. Our analysis identified the following three main themes: (1) the role of setting, context, and stigma in health care, (2) targeted PrEP messaging is further stigmatizing, and (3) recommendations for PrEP messaging and care. YBMSM in our sample felt highly stigmatized in their current environment and felt that PrEP messaging targeting YBMSM only enhanced their sense of marginalization. They concluded that broad and inclusive messaging would be just as relevant and cause less stigma. Our findings were somewhat surprising, as several prior studies benefited from using targeted materials to engage YBMSM in HIV prevention and PrEP uptake. The study's location may explain this difference in findings, which suggests the importance of considering local conditions and opinions when developing interventions for HIV prevention among minority populations.

Keywords: pre-exposure prophylaxis, HIV, men who have sex with men, black

Introduction

There are ~1.1 million individuals in the United States (US) living with HIV/AIDS, and HIV disproportionately affects communities of color and men who have sex with men (MSM).[1] Despite only comprising 12.6% of the US population, black individuals account for nearly 45% of all new HIV infections. Black men make up a larger proportion of people living with HIV than men of any other ethnic/racial group in the US. Among black men aged 15–64, HIV/AIDS is among the top 10 leading causes of death.[2] There were over 700,000 men living with HIV in 2015, and among these, 71% of new infections were attributed to male-to-male sexual contact.[3] Young, black MSM (YBMSM) are at high risk for HIV infection in the US, and represent ~10,000 out of the 26,000, or slightly more than 1/3 of all new HIV diagnoses annually.[3]

One possible HIV prevention intervention that could be used to address this growing HIV health disparity is the use of emtricitabine 200 mg/tenofovir disoproxil fumarate 300 mg (Truvada®; Gilead Science, Foster City, CA) for pre-exposure prophylaxis (PrEP), or antiretroviral therapy as prevention. PrEP is a highly efficacious HIV prevention strategy and has been proven effective in all HIV-affected risk groups.[4] However, much like the HIV care continuum,

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the HIV prevention and PrEP care continuum have not equally provided referral or linkage to care. In fact, in a study by Zucker et al. in a predominately, underserved, low-income, ethnic/racial minority clinic, there were lower than optimal rates of primary and secondary prevention of HIV (60% of patients had at least one missed opportunity for HIV prevention). Approximately 36% of clinic patients had a ''missed opportunity'' for HIV testing and 42% had a ''missed opportunity'' to be referred to and linked to PrEP clinical care based on their sexual behavior and risk status.[5] This study likely reflects average clinical referral and care, and ''missed opportunities'' for engagement in clinical HIV prevention services can further amplify existing HIV health disparities in underserved clinical settings.

Consistent with this study, public health data indicate that adoption of PrEP has been slow, especially by BMSM in the South who paradoxically are at high risk for contracting HIV.[6–11] The reasons why BMSM in the South have been slow to initiate PrEP are multifaceted. Studies have found that southern black MSM, especially youth, are more likely to be uninsured, experience barriers in talking to medical providers about sexual health, and feel less empowered to make medical decisions, all of which reduce their likelihood of asking providers for PrEP and receiving a prescription.[12] Medical providers may also be subject to implicit bias that may influence their prescribing practices. Calabrese et al. conducted a study that included a vignette and a race manipulation and showed that medical providers were less willing to prescribe PrEP to black MSM than white MSM given the same sexual history and medical conditions.[13]

Intersectionality theory offers a perspective from which to view the lives of young, black MSM and their risk for HIV. Intersectionality theory posits that multiple, intersecting identities (e.g., race, poverty, gender, and sexuality) influence a person's lived experience, including exposure to discrimination, access to health care and related services, opportunities for education and economic advancement, interpersonal relationships, and identity formation. Thus, intersectionality theory offers a way to examine these multiple systems of power and oppression within an individual person.[14] Black MSM, particularly those living in the southern US, not only face racial discrimination but also deal with stigma due to their sexual orientation, which limits their access to quality care and places them at higher risk for HIV. In the southern US, where policies and attitudes toward racial, sexual, and gender minorities are discriminatory, existing health disparities are exacerbated.[15–20]

Previous studies have also highlighted ways in which holding multiple, stigmatized identities impacts BMSMs trust of the medical system, interactions with medical providers, and initiation of HIV preventative services such as PrEP.[15,16,21,22] Eaton et al. surveyed and analyzed data from 544 black MSM (157 of whom were HIV positive) collected at a Black Gay Pride festival in a southern city that included questions on health care access, health care-related stigma, global medical mistrust, and mistrust in health care providers. With regard to stigma, HIV-positive and HIV-negative black MSM reported similar rates of stigma from health care providers that they attributed to sexual orientation or race. Specifically, when it came to assessing health care they received, 15% endorsed the statement ''my health care isn't as good as others' because of my race'' and 12% endorsed the statement ''my health care isn't as good as others because of my sexual orientation.'' Regarding perceived mistreatment due to their identity, 12% endorsed the statement, ''I have been mistreated by health care providers because of my race,'' and 13% endorsed ''I have been mistreated by health care providers because of my sexual orientation.'' Several individuals also held more global mistrust of medical providers. About half (51%) agreed with the statement, ''When health care providers make a mistake they usually cover it up.'' A similar amount (49%) agreed with the statement, ''Health care providers have sometimes done harmful things to patients without their knowledge.''[22] These findings highlight the lasting impact of historical stigma and mistreatment toward black Americans and sexual minorities on patients' perceptions of judgment, safety, and trust. These experiences of discrimination may influence decision-making related to sexual health, HIV prevention, and PrEP initiation among BMSM. Therefore, it is important to consider patient perceptions of the medical establishment, along with the historical roots of these beliefs, within each community.

Community level and structural factors also impact BMSMs lived experiences and health outcomes. Structural barriers that drive the significant health barriers in the southern US include inadequate health insurance and lack of culturally and clinically competent providers as well as pervasive poverty.[23] Six of the 10 states with the highest poverty levels are located in the southern US.[24] In addition, southern states have the most restrictive Medicaid eligibility criteria and provide fewer Medicaid benefits than other regions in the country, thus limiting access for lower income residents.[24]

The combination of race, sexual minority status, and poverty and the resulting social milieu intersect to create a ''perfect storm'' for BMSM in the South to be at risk for HIV. These conditions have led some small urban areas, such as Jackson, Mississippi, to be labeled as ''hotspots'' due to the clustering of new HIV infections. A recent study that utilized Geographic Information System and Spatial Analysis to map ''hotspots'' for HIV infection in Mississippi identified the Jackson area as a prime hotspot.[25] In 2015, the HIV infection rate in Jackson was 25.0 per 100,000, ranking 6th out of 108 US cities for most new HIV infections.[1] A recent study found that Jackson had the highest rate of new HIV infections among urban MSM in the country.[26] This hotspot could be driven by smaller and more exclusive sexual networks, lack of awareness about HIV status, and a host of structural issues, including socioeconomic factors.[3] Given existing available data, Jackson, Mississippi is a place where intervention is needed to prevent future infections. To treat this city-level data as solely epidemiological would be to overlook the structural, community, and interpersonal factors that create the circumstances for HIV risk. As such, this data must be interpreted in the larger sociocultural context.

Previous studies have examined approaches to reaching young, minority MSM. One study conducted by Freese et al. identified the following four ''real-world'' strategies for engaging young, racial/ethnic minority MSM in HIV prevention: using peers, providing holistic care, making prevention services fun, and technology.[27] In response to these strategies, one approach to address this health disparity in HIV acquisition and PrEP uptake among YBMSM is the use of media messaging or public service announcements.

Mass communication strategies have been effective in changing health behavior by capitalizing on social cognitive theory, and specifically, the ways in which symbolic communication, through media, influences thought, emotion, and behavior.[28]

Communication systems directly inform participants about the health behavior and link viewers to community and social influences to reinforce the healthy behavior.[28] Designing messages that include a group's specific cultural values, tastes, or preferences has been posited to enhance the effectiveness of social cognitive theory as it eases the viewers' ability to see themselves in the position of the person in the message and relate to the content, emotion, and behavior conveyed in that message. Targeted messaging strategies can include matching messages to audience characteristics (e.g., using black men to send messages to other black men), using familiar and comfortable language, and appealing to the group's cultural values. This last approach builds health messaging around existing cultural paradigms and intentionally designs messages that enhance and build upon cultural values.[27,29]

Applying what we know about existing health disparities and targeted approaches to messaging, it is important to identify whether targeted messaging (e.g., messaging focused on black, sexual minority men) in this context would be acceptable and effective in improving PrEP uptake. To that end, we conducted qualitative interviews with 29 YBMSM from Jackson, Mississippi, to generate content for a media-based HIV prevention intervention. As part of these interviews, we specifically examined participants' thoughts and feelings about PrEP as an HIV prevention strategy and elicited their opinions on specific videos and websites, some of which specifically targeted YBMSM. The following research questions guided our analyses: *(1) What explains the low rates of PrEP initiation? (2) What facilitators of PrEP use could be leveraged for future interventions? and (3) What is the most effective form of messaging for reaching young, Black MSM in Jackson, Mississippi, to encourage PrEP use?*

Methods

Study design and participants

Interviews were conducted in February and April of 2018 with YBMSM recruited from a health care clinic in Jackson, Mississippi, that serves individuals at-risk for or living with HIV. The clinic largely serves LGBTQ+ individuals of color and is known in the community for providing affirming health care services. Approximately 85% of patients identify as African American, 60% identify as men, and 75% of men identify as MSM. In addition, the clinic serves 90 transgender patients and nearly 260 people living with HIV/AIDS.[30]

Participants were eligible to enroll in the study if they were English speaking, identified as black, reported having sex with men in the past 12 months, were between the ages of 18 and 35, had indications for PrEP based on CDC guidelines, were not currently enrolled in other PrEP-related studies, and were able to give consent. A total of 29 PrEP-eligible YBMSM were enrolled in the study. Participants took part in either individual qualitative interviews ($n=15$) or focus groups ($n=14$, one group of 6 and one group of 8). All research procedures were approved by the Institutional Review Boards at Rhode Island Hospital (RIH) and University of Mississippi Medical Center (UMMC).

Recruitment

Investigators and clinic staff collaborated to determine the best recruitment strategy for the target population. Recruitment methods included flyers, word-of-mouth, and doctor referral.

Data collection

Participants recruited and enrolled in the study completed a demographics questionnaire before the interview. They were then interviewed by one of the two M.D. investigators (L.W. and L.K.B.). Interviewers were unknown to participants in the study. Interviews were guided by a semi-structured interview guide that asked about barriers and facilitators of PrEP use and thoughts on publicly available online content (e.g., brief, YouTube videos, websites) to promote PrEP use. For example, questions included the following: ''What are the things that make it hard to talk about sex, protect yourself from HIV, and use medications (like PrEP) that can protect you from HIV?''; ''What are the things that make it easier or harder to talk to a doctor about PrEP?''; and ''What is your reaction to a website that gives you information about PrEP and HIV and skills to protect yourself?'' Interviews were conducted in private rooms at the health care clinic. All interviews were audio recorded. Following the completion of the interview, participants completed the Client Satisfaction Questionnaire, which asked about their experience participating and satisfaction with the study procedures.[31] They each received a $50 gift card as compensation for their time and participation.

Data analysis

Using methods of thematic analysis,[32] members of the research team (L.B., L.W., B.G.R., and K.H.) developed a preliminary coding scheme based on the study questions and prior research and used it to review all transcripts. The first four transcripts were coded individually by all team members, who then compared and resolved their codes. The remaining interviews were independently coded by three team members (L.W., B.G.R., and K.H.). Agreement among the first two coders (L.W. and B.G.R.) was calculated by randomly selecting 20% of all interviews. The kappa value was calculated to be 0.79, indicating strong agreement before consensus coding. The third reviewer (K.H.) then checked for agreement between coders and identified discrepancies in coding. Discrepancies were brought to full team meetings and were resolved by consensus. All codes generated at meetings were iteratively added to the coding scheme. Then, one team member (K.H.) revised previously coded transcripts with the updated codes. Codes were then entered into a qualitative software package, NVivo 11 (QSR International, 2019), to facilitate analysis of overarching themes. Finally, the collaborating researcher at the data collection site (L.M.) reviewed codes and analyses. Codes are presented in the online Supplementary Table S1. Themes and representative quotes are presented below.

Results

Participants were 29 YBMSM. One participant did not complete the demographic questionnaire. Of the 28 individuals providing data, ages ranged from 19 to 35; the mean age

was 25.1. Two men (7.1%) identified as Hispanic/Latino. All participants had finished high school or a G.E.D. program; some had attended college for a few semesters ($n=10$; 35.7%); several had completed an associate's degree ($n=7$; 25.0%); and some had attended and completed a bachelor's degree ($n=4$; 14.3%). There was also a wide range in annual household income, with amounts ranging from <$10,000 to $90,000. Most men stated their annual household income as somewhere between $20,000 and $50,000. Most participants had some form of health insurance ($n=24$; 82.1%), and the remaining individuals ($n=5$; 14.8%) were uninsured. Additional demographic information is presented in Table 1.

Our findings contained three main domains. The first domain described participants' experiences holding multiple stigmatized identities (e.g., black, sexual minority) in Jackson, Mississippi. Participants saw living in Jackson as related to their sense of self, stigma, and access to private and quality health care. The second domain captured their reactions to existing PrEP messaging, including their feelings of mistrust and stigmatization about such messaging. The third domain offered suggestions for modifying PrEP messaging and health care in the future. When examining these overarching domains—it is clear that identity, context, and messaging are deeply and inextricably linked with one another. In addition, we identified specific types of messaging that are preferred by black, sexual minority men in the South.

Domain 1: role of setting, context, and stigma in health care

Theme 1a: participants felt stigmatized based on their race and sexual orientation. A major theme was the *overwhelming sense of stigma* associated with having multiple, marginalized identities (e.g., black, sexual minority). They felt that as black men, they already faced many hardships, and being gay added another layer of stigma. Many attributed this stigma to living in Jackson, Mississippi, a small city, nestled in the deep South, with notably conservative views (often defended by long-standing religious values) on social issues such as same sex relationships. As one participant stated:

> *Not to sound biased, but it's hard already being a person of color, and then to come on top of that, oh, you're queer or you're gay. It's just like certain places down South being so behind the times, kind of based on old school morals, you know, that this isn't supposed to be, depending on your beliefs or religious, you know, beliefs it can get kind of worse sometimes.*

Another participant echoed this sentiment,

> *Here in the South, especially when you are Black in Mississippi because of the way we were brought up, you don't want to be gay by association especially if you are not 100% comfortable in your own skin about it.*

Participants contrasted their experience in Jackson, with how they might feel in larger or distant cities based on the belief systems of the people in those areas. As one participant said, ''There are people who leave Jackson and go to a bigger city, and they are more comfortable being who they are.'' Another recognized that ''…larger cities are going to have a larger gay population and also be more of an, um, accepting vibe.'' Another suggested that the mindset of the people in the city influenced marginalization and stigma, ''People here are so different than from other places. People here are so closed minded. They think that because a person is HIV positive, just like, back away.''

Theme 1b: familiarity among residents led to concerns around privacy and HIPAA protection. The small size of Jackson also led to *concerns about anonymity and the ability for health care providers to keep HIPAA protected information private*, since many see Jackson as a city where ''everybody knows everybody.'' While discussing privacy concerns, one participant noted that these worries can create a barrier to seeking medical services,

> *So those with that can fall into place, it makes you not want to go [to the clinic] because you don't know who you might run into or who will know you or who will criticize you or who may work at the clinic and call somebody else or talk to somebody else or that privacy notice is not a sudden sign or it's a sign but unfortunately words get back.*

As one participant stated, ''it's a small area. They know what you are taking, so they are talking. I know it would violate HIPAA, but who knows, people might go home and tell their significant other.'' Another participant also stated his concern: ''you know people in the town that you are from you know people know each other and they're worried about going to the clinic 'John works there and he may tell Sally that I came in blah blah…'''

The fear of being seen by acquaintances was deeply linked to fears of disclosure around sexual identity, health behaviors, and health risks. As one participant explained, if individuals are spotted at LGBTQ+ focused health clinics or receive specific types of medication (e.g., PrEP for HIV prevention) this could raise questions among their family and partners.

Table 1. Sample Characteristics ($N=28$)

Age in years (mean)	*25.1 (SD = 4.0)*
Male, %	100.0
Hispanic/Latino, %	7.1
Education, %	
High school/GED	25.0
Some college	35.7
Associates degree	25.0
Bachelor's degree	14.3
Employment status, %	
Employed	81.5
Unemployed	14.8
Unable to work	3.7
Health insurance status, %	
Uninsured	17.9
Private insurance	50.0
Medicaid	25.0
Private+Medicaid	7.1
Household income, %	
<$10,000	7.1
$10,000–19,999	17.9
$20,000–29,999	3.6
$30,000–39,999	32.1
$40,000–$49,999	27.6
$50,000+	10.8

SD, standard deviation.

The community here is so small, everybody knows everybody and you've seen everybody before, you might not know who they is at the time but eventually you will know who they are, basically. So, that comfort zone is out the box because that person they might know this person and that person might…they may not know that person but that person might know them, but they don't know that that person know them, and they'll go back and say 'well I saw so and so in the clinic.' Then what if that gets to your spouse? They'll be like 'what you go to the clinic for?' or 'why you went the clinic, what's your results' and things like that.

Theme 1c: lack of provider knowledge led participants to question quality of care. The *quality of health care services was also questioned* by several participants, who noted that other larger cities had more advanced hospitals and technologies and that their families sought health care elsewhere. To explain this, one participant shared that when his family had major medical concerns, such as cancer, they sought care outside of the state. This only furthered his mistrust of the medical care available to him in Jackson:

My grandmother before she passed, it had nothing to do with HIV, but her cancer doctors were not in Mississippi, they were in Georgia. My auntie now, her cancer doctor is not in Mississippi, they are in Nebraska. She goes every month to get her treatments there… So people don't trust Mississippi services.

Participants also were concerned about the quality of PrEP health care due to encountering providers who were unaware of PrEP and its medical uses. One participant specifically mentioned that primary care doctors lacked the information he felt was necessary to appropriately prevent or treat infectious diseases, like HIV:

Most people go to like their family medical doctor…or places like that. But a lot of those places do just colds and flu kind of stuff, they don't know anything about the infectious diseases stuff like that. I feel they don't go to school to become a doctor or nurse to know all of it, in my opinion. But that is how they have everything set up.

Participants also shared specific examples of failed attempts to ask medical providers and pharmacists for PrEP. In most cases, participants were unable to access the medication because the medical staff was unaware of the product or its uses: ''One time I went to ask at a pharmacy, a pill for everyday-let me try to get on it. They didn't know. They said, 'sorry, we can look PrEP up.' They need to go to a class.'' Another participant had a similar experience: ''Where I used to go for PrEP… I tried to demonstrate to them, what it's for. I still had doctors ask me, 'do you have HIV'? I'm like, 'No, I don't. It's just PrEP, a pill I take to prevent it.''' During an appointment, another participant's primary care doctor was admittedly unaware of PrEP: ''The doctors ask you, 'are you on any type of medication?' You pulling out PrEP. A lot of doctors don't know what PrEP means.''

Domain 2: targeted PrEP messaging is further stigmatizing

This mistrust of the health care system was linked to PrEP messaging. Individuals were skeptical of PrEP messaging; and, in particular, targeted messaging that was aimed at sexual minority black men. When participants were shown videos of targeted messages, most had negative reactions to them. As a group, they felt *targeted messaging is further stigmatizing* and unhelpful. They felt as though the ''targeting'' insinuated that their HIV risk was their own fault, adding to further negative feelings about themselves and their identities. In reference to a video about HIV rates in Jackson, Mississippi, in which a female health official uses language targeting black, gay, and bisexual men, one participant responded:

She [the female health official in the video] came across as Black, gay men are the only ones that have to deal with this. That's what she was saying, but the way she said, 'Black, gay men or bisexual men,' and I know that the high risk are the gay men and the bisexuals, but don't make it seem like it's our fault.

Another shared how constant messaging about HIV prevention to the young, black, sexual minority male population feels overwhelming, especially when it is added onto existing daily stressors:

We got this HIV episode on our backs. It's like, 'you're Black, you're gay, you live in the South, HIV.' It is like we cannot escape the conversation… I have bills, I cannot keep wondering about HIV every single day of my life.

One man felt that the messaging around PrEP has been overly focused on black men, making it seem as though other races were not at risk.

It's like you categorize-not you but- if you come up with categories for just specific types of men…Black men, you make us stick out, you know…It may make some feel like why Black men? White people can get AIDS too, Asian people can get AIDS too, you know…

A similar point was made by another participant regarding the focus on sexual minority men and the queer community more broadly, even though everyone is at risk for HIV:

They more so related PrEP to the LGBTQ community verses people as a whole, so not just for gay, you know. It's for anybody; nobody is safe when it comes to HIV. Well it is getting so bad with saying LGBTQ community verses the people as a whole. It's a human being thing not a gay thing.

Domain 3: recommendations for PrEP messaging and health care

Theme 3a: more diverse PrEP messaging may reduce stigma and appeal to broader at-risk populations. Given the specific sociocultural context of Jackson and the unique barriers black sexual minority men face, participants had suggestions of ways to improve PrEP messaging to make it less stigmatizing and more acceptable for their peers. Namely, they recommended that *messaging be made more inclusive of different races, ethnicities, and individuals across the gender and sexual continuum*. Participants expressed a desire for more diverse and inclusive messaging that promoted PrEP as a medication for everyone. They even suggested having community wide events to help increase awareness and acceptance of this medication among all community members. They enjoyed videos that already included this approach and recommended continuing to present PrEP as a medication acceptable for everyone:

I guess just from here from a standpoint of living in this particular area, I only know other African American males around my age, you know, taking it and in this lifestyle and stuff like that. So, to see that other people are doing it as well…it just I don't know, it makes me feel more comfortable. It makes me feel like it's not something that's just targeted to me or people like me. It just…I don't know, it makes me feel comfortable like everybody is doing it.

Another participant echoed this sentiment: ''There were people on [the video] that I could, personally identity with. I'm pretty sure it's…people from different backgrounds can watch this and see something, someone, that they can identify with and grab something from that person.''

One participant acknowledged both the benefits and drawbacks of targeted messaging:

Black on Black, it can be a pro and it can be a con. Black on Black, you can relate, but in reality, that's not going to make the video move. It's not going to move to the next level to reach out to people than sticking with one race, because HIV don't have a race name on it.

Videos that already included individuals from diverse backgrounds were seen as appealing: ''It was a great video. It shows the different ethnicities. It has the subtitles. I liked the different ethnicities, the guys speaking Spanish. I think there should be more of that, like Chinese, Japanese…'' And, of the same video, another participant said, ''I like the brunch video [which included men of different races and ethnicities talking about PrEP experiences in Spanish and English], the different perspectives, the language, the culture. I liked that it made PrEP seem really international so I like that one.''

In line with the appreciation of cultural diversity, participants gave recommendations to make other videos that were inclusive of individuals across the gender and sexuality spectrum: ''have different sexual continuums like gay, straight, female, like probably have that, since y'all already have your ethnicities videos.''

Theme 3b: having PrEP informed and welcoming health care workers may help individuals feel comfortable seeking PrEP care. In addition to modifying messaging campaigns, they also made suggestions to *improve care delivery so it can be more affirming*. This included having health care workers who were more knowledgeable about PrEP and more personable and attentive: ''I think if we had more doctors that'd be more involved, it'd make more people come to them and understand.'' Another individual agreed, ''this is something you need a little bit more compassion…you need to be….talk, make people aware and be personable.'' In line with this, one participant felt that positive and warm medical staff could make young men feel more comfortable, ''I feel like the nurses could really encourage them… You know opening up with a positive attitude and smiling; I was like 'you nice' so those may be some of the things.''

Another participant suggested that medical providers could seem more attentive and approachable by including telemedicine as part of their practice:

If you are going for a checkup (inaudible)…there are a lot of innovations going on. Try to keep in contact with them like be on social media, Skype and Oovoo and FaceTime, just as long as we get the chance to see you, get a chance to talk to them doctors, instead of having to come here, I think that might make them feel like more comfortable.

Discussion

Our results demonstrate several important domains that help explain PrEP use disparities among YBMSM in the South. Specifically, the three domains that emerged from our study were (1) role of setting, context, and stigma in health care, (2) targeted PrEP messaging is further stigmatizing, and (3) recommendations for PrEP messaging and health care settings. Each of these themes is discussed in the context of the existing literature, below.

Domain 1: role of setting, context, and stigma in PrEP health care

Participants shared their experiences as black, gay/bisexual men living in the South, and the intense stigma they felt holding these marginalized identities. Overall, our findings were similar to the qualitative study of Elopre et al. with YBMSM in the South (Birmingham, Alabama area). Specifically, they identified themes related to being black, gay, and living in the South, as well as additional stigma related to PrEP use.[33] Also similar to our sample, they identified medical distrust through themes concerning privacy and LGBTQ+ affirmative providers. Participants' awareness of personal difficulties navigating social and health care settings shows the impact of having intersecting identities. Again, intersectionality theory offers perspective on how these identities impact the experience of living in the South and navigating stigma and health care. Although ostensibly socioeconomic status, including education and income, impact these experiences, few of the men mentioned this as impactful. Some men did comment on videos being more ''relatable'' for men who had a college education versus not, but none made reference to their household incomes. We did collect data on income (Table 1). Most of the samples had an income below $40,000, and nearly all were below $50,000. Therefore, it may not have been a central topic because of relative homogeneity and a ''floor effect'' where most participants had relatively low income.

Our participants were much attuned to the impact their sexual orientation had on the perceptions of others' in the community, particularly within the black community and their families. Importantly, previous research has suggested racial and sexual identities for YBMSM may be at odds with one another. Specifically, Fields et al. suggested that ''black maleness'' is associated with hypermasculinity, while gay/bisexual men may be more likely to display gender nonconforming behavior. This dynamic may lead young men to develop internalized homophobia, and/or attempt to conceal their sexual minority status for fear of social and cultural repercussions.[34] Given this, having health care privacy was extremely important to participants regarding PrEP use, as they feared taking PrEP could identify them as gay and impact their reputation.

Participants were also concerned that the scarcity of PrEP-knowledgeable, affirming providers around Jackson would hinder their ability to find adequate preventive sexual health care. Local PrEP-knowledgeable medical providers are infectious disease specialists, who work in HIV care settings.

Unfortunately, there are not enough infectious disease providers to meet with all individuals seeking PrEP. Many who do ask for PrEP likely do so through a primary care provider, who may be less knowledgeable about PrEP and its fit for their patient.[35] Therefore, it is possible that this perception is accurate in that there are few, accessible providers who are knowledgeable and comfortable prescribing PrEP. However, in cases where primary care providers received PrEP training, they felt comfortable prescribing and monitoring PrEP health outcomes.[36] This suggests that similar approaches can be taken more broadly to increase access to PrEP. However, this may not fully alleviate their mistrust of the health care system; YBMSM may remain hesitant to reveal their sexual behavior or identity to providers due to stigma.

Domain 2: targeted PrEP messaging is further stigmatizing

The most novel finding was that contrary to results from studies implemented in other urban settings, messaging that was ''targeted'' by factors of race and sexual identity were seen as off-putting and detrimental by participants in Jackson, Mississippi. Cahill et al. also found similar results from their focus group conducted with black MSM in Mississippi compared to MSM in Boston.[37] This was somewhat surprising given that several large-scale studies, including HPTN 061 and HPTN 073, were successful in engaging BMSM in HIV preventive care and PrEP using a targeted approach.[38,39] The reason that our participants found this targeted messaging less effective may be due to living in a small, southern city as opposed to an urban metropolis in other parts of the country. There is also need for additional work with MSM beyond major urban centers in the southern US, as several of the privacy and quality of care concerns would also be highly relevant, and perhaps even exacerbated, in more rural settings. Exploration of privacy concerns and quality of care in these small cities and towns is also needed. Because YBMSM in the South have intersectional, marginalized identities and live in highly stigmatized contexts, it is imperative to consider these sociocultural contexts, in comparison to other cities or regions of the country, in developing and delivering HIV prevention messaging and care.

Previous public health theory and research have posited that targeted messaging is helpful in increasing health behaviors and reducing health disparities, as it appears more relevant and can be processed and enacted more readily than general messaging.[28] Within HIV prevention, this has also been the case. Culturally targeted messaging was effective in reducing HIV risk behaviors among African American youth.[40] However, emerging theory and research suggests that this framework may not always apply. In particular, health disparities information for sexual and gender minorities may further stigmatize groups and result in reactive responses.[41] Several participants felt the targeted content blamed them for their behavior and HIV risk. Almost all men in our study preferred messaging that was general and inclusive of all identities and thought general messaging was just as relevant. This finding could be due to multiple cognitive and emotional factors, including their conflicted sexual and racial identities, shame, internalized homophobia, anger about marginalization, suspicion about health care, and cognitive misperceptions about PrEPs utility. Alternatively, it is possible that basic demographic factors such as race and sexual orientation were seen by participants as ''surface-level.'' Perhaps, there were other characteristics of the videos, such as conversations with friends, which were ''targeted'' to the demographic in more subtle, and arguably more important, ways. This also serves as a reminder that content that is racially homogenous or unified in sexual orientation, identity, or gender may not be perceived as a good fit by the audience based on those characteristics alone. This finding, we hope, can help inform how we develop PrEP messaging for at-risk, YBMSM in the South.

Domain 3: recommendations for PrEP messaging and health care

Participants had recommendations to improve future PrEP health care and promotion. First, they felt that showing greater diversity in advertisements would be more helpful than targeted messaging campaigns. Again, this may be a reactive response to feeling increased stigma from targeted messaging.[41] Given the multiple layers of stigma our participants faced, many found messages directly targeting ''Black gay or bisexual men'' to be offensive and did not feel they were helpful in motivating PrEP use. Instead, participants recommended generalized messaging that addressed everyone, and they felt that these inclusive messages would still be relevant to them. Importantly, inclusive messaging emphasizes that HIV can affect anyone, regardless of race or sexual orientation, which may encourage a broader population to seek HIV preventive services.

Second, participants suggested that more health care providers become knowledgeable and comfortable prescribing PrEP. It is possible that the perception of participants is accurate in that there may be fewer providers comfortable prescribing PrEP and/or who provide LGBTQ+ affirming care. Currently, several efforts are underway to apply theoretically based approaches to increase providers' awareness and knowledge of PrEP, especially in nonspecialty care settings.[42] Additional qualitative and quantitative approaches are needed to determine whether LGBTQ+ affirming provider shortages and inadequate provider knowledge of PrEP do, in fact, contribute to lower PrEP utilization in Mississippi and the South more broadly. Hopefully, in the future, there will be more medical providers who are competent and confident in prescribing PrEP.

Limitations, conclusions, and future directions

Limitations of this study include the use of a convenience sample within an LGBTQ-affirming health care clinic. To do a study that could be seen as highly stigmatizing, it was necessary to access a population that would be comfortable participating. However, the resulting sample may have been more open and less fearful regarding privacy than those who chose not to participate. We also are limited in that we did not ask about living with other family members or about being on parents' insurance, which would have been a possibility for men younger than the age of 26 years. Outness to family may have also been a barrier to PrEP uptake (although several mentioned they were eligible through the free Gilead program and other public insurance options) and future research should continue to explore the way outness influences young MSMs access to PrEP through health insurance. In addition, because

the sample was recruited from a clinic that provides PrEP, the majority of participants in the sample (all except two) were currently on PrEP, and only one participant was PrEP-naive. As a result, our participants' views may not be representative of YBMSM living in Jackson who are not on PrEP or hold strong views against PrEP. While most of the samples used PrEP, there was heterogeneity with regard to education level, income, and health knowledge that allowed for a wide range of opinions, values, and concerns.

Overall, the current findings suggest that appropriate messaging plays a critical role in HIV prevention and PrEP use for black sexual minority men. Therefore, those developing PrEP messaging should be mindful of the specific social and cultural forces that exist for black sexual minority men in the South. However, it is important to recognize that while necessary, appropriate PrEP messaging alone is not sufficient to halt the alarming rates of HIV transmission among YBMSM in the South. To adequately address existing HIV-related health disparities, it is critical to also address the systemic issues mentioned by participants—the social determinants of health such as racism, homophobia, poverty, and access to affirming sexual health care.[43]

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Supplementary Material

Supplementary Table S1

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