The Right People, Right Places, and Right Practices: Disparities in PrEP Access Among African American Men, Women, and MSM in the Deep South

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Abstract: Disproportionate rates of HIV are observed in Black women and men, especially in the Southern United States. We observed limited uptake of preexposure prophylaxis (PrEP) services in our Southern community among these groups, particularly Black men who have sex with men relative to new HIV cases in Birmingham, AL; 18% accessed PrEP services compared with 50% of new HIV cases. Further research is needed to understand PrEP access and uptake in high-risk populations.

Key Words: HIV, preexposure prophylaxis, uptake

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INRODUCTION

More than 30 years into the HIV epidemic, advances in antiretroviral therapy and public health initiatives have turned a universally fatal illness into a manageable chronic disease.[1–3] Despite these advances, HIV infection rates are rising among racial and sexual minority groups. Although men who have sex with men (MSM) account for only 2%–3% of the US population, MSM represent 62% of incident HIV infections in 2011.[4] Most of these infections occur in young, Black MSM with recent Centers for Disease Control and Prevention (CDC) data forecasting that 1 in 2 Black MSM will be infected with HIV in their lifetime.[5] This health disparity is most pronounced in the Southern United States where the epidemic is expanding, especially in minority populations.[6] Biomedical interventions, such as preexposure prophylaxis (PrEP), have proven efficacious in decreasing the risk of acquiring HIV by up to 92% with consistent use.[7–9] Despite the Food and Drug Administration approval of daily oral Truvada for HIV PrEP and the release of guidelines for utilization by the CDC, reported uptake has been slow and uneven among MSM populations.[10] We conducted a retrospective analysis of a university-affiliated PrEP clinic in Birmingham, AL, aimed toward understanding what types of individuals are accessing PrEP services, with particular interest in use among Black men, women, and MSM. During the study period, this single clinic was the only location in Birmingham providing PrEP as part of comprehensive HIV prevention services.

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METHODS

Study Design, Setting, and Sample

We conducted a retrospective analysis of data collected from a cohort of patients presenting to a single university-based PrEP clinic, located within a Ryan White HIV Clinic that also provides HIV testing services, to be screened for initiation of PrEP. We then compared demographics of PrEP clinic attendees with demographics for new HIV cases in Jefferson County (consisting of the Birmingham, Hoover metropolitan area) to evaluate the concordance of early PrEP uptake relative to groups at greater HIV risk. The PrEP clinic operates 2 half days out of the week and functions as an interdisciplinary practice providing clinical care, social work services, and prevention education. Clinic sessions include a group educational session, laboratory work, and a provider visit with self-administered surveys evaluating adherence, sexual risks, mental health, and substance abuse. To be enrolled in PrEP services, clients must either have insurance or qualify for financial assistance provided by the university. Referral for the clinic was primarily through organizations that provide HIV testing, including HIV clinics, the local health department, and community-based organizations, and was not targeted toward high-risk populations. All patients interested in PrEP services presenting to the clinic completed a screening visit to confirm HIV risk, perform baseline HIV and sexually transmitted infection testing, and complete a behavioral questionnaire. We included data from patients at least 18 years of age who were screened for PrEP services between March 2014 (when the clinic opened) to February 2016. Variables were compiled from the University of Alabama 1917 PrEP clinic electronic medical record, and aggregate demographics for new HIV cases occurring in Jefferson County in 2014, the most recent surveillance data available for the state, were retrieved from the Alabama Department of Public Health (ADPH) HIV Surveillance System. Independent variables that could be compared across both databases included gender, race, sexual behavior, and

age classified dichotomously as adolescent (<25 years) and adult (≥25 years). Age cutoffs reflected reporting of HIV among youths by the ADPH and CDC HIV surveillance report.[6,11]

Statistical Analyses

We summarized demographics and risk behavior (ie, sexual behavior) using frequencies and percentages. Race was categorized into Black, White, and Other, with other designating Hispanic and Asian persons given small numbers (n = 8 for the PrEP clinic and n = 5 for ADPH). Intake forms for all persons screened for PrEP services at the clinic contain questions to assess risk behavior. Sexual behavior on this intake form was defined by sex and self-reported same- or opposite-sex sexual behaviors (ie, MSM, men who have sex with women, and women who have sex with men). These categories were mutually exclusive, and men reporting any same-sex behaviors were categorized as MSM. Chi-square tests were done to compare variables using SAS 9.4 (Cary, NC). This study was approved by the University of Alabama Institutional Review Board.

RESULTS

Between March 2014 and February 2016, 120 patients were screened for PrEP services at the clinic. Of those, 84% were men, 80% were MSM, and 44% of those who presented were in serodiscordant relationships. Most persons screened reported condomless sex (n = 103) and were referred by a partner (34%). Seventy-nine percent of persons screened reported having health insurance (Table 1). Thirty-two (27%) were Black, and only 18% (n = 22) were Black MSM. Young Black MSM (classified as being Black and <25 years of age at the time of screening) represented 8% (n = 9) of patients screened at the PrEP clinic. For Jefferson County, in 2014, 159 new diagnoses of HIV were reported. One hundred twenty-five incident cases (79%) were Black, and 133 (84%) were men. Although 99 cases (62%) occurred in MSM, 80 (50%) were among Black MSM. Of new cases among Black MSM infected, over a third (n = 30, 38%) were youths.

When evaluating demographic characteristics of PrEP clinic attendees compared with new HIV cases in Jefferson County, no statistically significant differences were seen by gender and age. However, there were statistically significant differences when comparing the following variables: sexual behavior, race, race × sexual behavior, and when evaluating services provided to young Black MSM. Overall, the PrEP clinic screened a smaller percentage of Black patients (27% patients screened compared with 79% new cases), Black MSM (18% patients screened compared with 50% new cases), Black men who have sex with women (2% patients screened compared with 15% new cases), Black women (7% patients screened compared with 13% new cases), and young, Black MSM (8% patients screened compared with 19% new cases) (Table 2). No significant interactions were found between race and sexual behavior. Of persons screened, only 63 are currently engaged in care, of which 58% are White and 80% are MSM (data not shown).

DISCUSSION

Biomedical prevention strategies, such as PrEP, are crucial to reduce new HIV infections in populations most at risk. Indeed, the National HIV/AIDS Strategy updated to 2020 highlights the importance of addressing the right people, in the right places, with the right practices. However, our data indicate that patients initially accessing PrEP clinic services are not necessarily the populations most greatly affected by the HIV epidemic in our community. Currently, the Birmingham-Hoover metropolitan area has the highest HIV infection rates for the state of Alabama. Although most infections are occurring in Black populations, particularly Black MSM, most patients screened for PrEP services at the clinic were White MSM. Some research suggests that uptake of PrEP by MSM has been slow, but our results indicate that in Alabama uptake has been scarce among Black women, men, and Black MSM.[10,12] Demonstration projects to improve uptake of PrEP have begun to address potential factors contributing to low uptake, including lack of knowledge among potential eligible clients and health care workers,

TABLE 1. Baseline Characteristics of Patients Screened at PrEP Clinic

Characteristics	PrEP Clinic (N = 120), n (%)
Median age, yrs (Q_1–Q_3)	33 (26–44)
Race	
Black	32 (27)
White	80 (67)
Other	8 (6)
Risk factors*	
MSM	96 (80)
Serodiscordant relationship	57 (48)
Multiple sexual partners	63 (53)
Exchange sex for money or drugs	3 (2)
Condomless sex	104 (87)
Receptive anal sex	93 (78)
IVDU†	0
Sex while drunk or "high"‡	55 (46)
Health insurance	
Yes	95 (79)
No	25 (21)
Self-reported motivation	
HIV-positive partner	56 (47)
HIV prevention	64 (53)
Referred by§	
Community-based organization	7 (8)
Internet	16 (18)
Health department	4 (4)
Partner	31 (34)
Health care provider	19 (21)
Friends	14 (15)

*Clients could respond affirmatively and be included in more than one risk group category.
†Frequency missing = 2.
‡Frequency missing = 2.
§Frequency missing = 29.
IVDU, intravenous drug use.

TABLE 2. Demographics of Patients Screened at PrEP Clinic Compared With Incident HIV Cases in Jefferson County

Characteristic	PrEP Clinic (N = 120), n (%)	Jefferson County (N = 159), n (%)	*P*
Male gender*	101 (84)	133 (84)	0.9
Sexual behavior			**0.0002**
MSM	96 (80)	99 (62)	
Men who have sex with women (MSW)	5 (4)	34 (22)	
Women who have sex with men	19 (16)	26 (16)	
Race			**<0.0001**
Black (B)	32 (27)	125 (79)	
White (W) and Other (O)	88 (67)	34 (16)	
Other (O)†	8 (6)	9 (5)	
Race* sexual behavior			**<0.0001**
BMSM	22 (18)	80 (50)	
BMSW	2 (2)	24 (15)	
BF	8 (7)	21 (13)	
WMSM	67 (56)	16 (10)	
WMSW	2 (2)	6 (4)	
WF	11 (9)	3 (2)	
OMSM	7 (5)	4 (3)	
OMSW	1 (1)	3 (2)	
OF	0 (0)	2 (1)	
Adolescent (<25 yrs)	25 (22)	40 (25)	0.5
Young BMSM (<25 yrs)	9 (8)	30 (19)	**0.007**

*Gender information collected by self-report.
†Other includes Hispanic and Asian ethnicity and race.
Values bolded are statistically significant.
BF, black female; OF, females of other race; WF, white female.

structural barriers, and concerns about adherence.[13–18] The current study highlights the need for more demonstration projects in Southern communities, because if similar patterns for PrEP uptake are seen in other Southern states exacerbation of HIV health disparities may be seen in this region of the country.

In this retrospective analysis, we focused on persons screened for PrEP services to identify populations with access to and likely knowledge of PrEP in the community. Our results demonstrate low PrEP uptake among Black MSM in Birmingham. The reason for poor uptake of PrEP services among Black MSM in our community is unknown, but the relatively high uptake of PrEP services among White MSM demonstrates health disparities. Understanding factors that facilitate uptake in this group may conversely elucidate barriers for Black MSM.

Mixed results have been reported as to why HIV health disparities are present for Black MSM, but most studies suggest that structural barriers and cultural factors likely play a role.[19,20] These factors are likely intersectional, with overlapping challenges faced by Black MSM because of poverty, racism, homophobia (external and internalized), and stigma.[20–25] Also, higher perceptions of HIV risks have been shown to correlate with uptake and adherence to PrEP.[26,27] However, self-perceived risk of HIV infection may be lower among some MSM populations.[28] Cultural factors for Black MSM living in the Southern United States are also likely unique, requiring further specialization in prevention interventions to increase awareness of PrEP and other HIV prevention services for Black MSM. Stigma associated with HIV infection, PrEP, race, or sexual practices may be exacerbated in Southern communities leading to delayed uptake of HIV prevention services. Furthermore, structural barriers like lack of insurance and transportation need to be taken into account in many Southern states like Alabama, where Medicaid has not been expanded. Understanding utilization of health care services by Black MSM must be comprehensive, factoring in individual and geography-specific environmental barriers. Research to better understand the contributions of these factors is urgently needed to inform interventions aimed at enhancing uptake and utilization of PrEP and other biomedical and behavioral prevention services among disproportionately affected communities.

Interestingly, racial disparities, although most pronounced for Black MSM, were also present for Black women and the subpopulation of young Black MSM. Unfortunately, in Alabama, which is the sixth poorest state in the nation with one of the largest income gaps, structural barriers are likely similar for minority populations across the state.[29] However, Black women likely face unique individual barriers contributing to marginalization and decreased uptake of HIV prevention services, which would warrant further investigation in this population. Young Black MSM currently have the highest HIV infection rates in the country.[6] On review of the literature, no previous research studies were found evaluating barriers for uptake of PrEP among this population, particularly in the Deep South. Adolescents likely have different perspectives regarding HIV risk and perceptions of stigma. It is likely that prevention messaging will require specificity to reach this high-risk population. Perceived and actual structural barriers for different groups will likely vary and require a targeted approach to be effective. At our clinic, targeted messaging was not used to promote the clinic, which may have contributed to the health disparity found in the number of Black persons screened for services. Also, the financial requirements for PrEP services likely created a significant structural barrier in Alabama, which is currently budgeted to cut $85 million to Medicaid.[30,31]

Promotion of PrEP awareness, access, and acceptance among Southern Black women, men, and MSM faces several challenges, which includes understanding preferences for PrEP in the population and increasing awareness through culturally appropriate targeted messaging and, likely, community-based support systems.[32–34] Our study had several limitations. As this is a cross-sectional analysis of retrospective data, no causality can be established from our results. This study was also done at a university-based PrEP clinic in the Southeastern United States. This limits its generalizability to other clinics. However, the HIV epidemic is currently affecting this part of the United States most severely, and this study may provide some insight into this high-risk population and region.

In summary, if the country is to reach its 2020 goal of rarely seeing new HIV infections, further research is

urgently needed to address uptake and utilization of PrEP among Black MSM in the South by investigating behavioral interventions in combination with biomedical prevention tools to reach the right people, in the right places, with the right practices.

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