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Receipt of HIV Prevention Interventions is More Common in Community-Based Clinics than in Primary Care or Acute Care Settings for Black Men Who Have Sex with Men in the District of Columbia

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Abstract

Characterization of structural barriers that impede the use of HIV prevention and care services is critical to addressing the HIV epidemic among Black men who have sex with men (BMSM). This study investigated the utilization of HIV prevention services and general care services among a non-clinic-based sample of BMSM who reported at least one structural barrier to engagement in care. We recruited BMSM in the District of Columbia metropolitan area via incentivized peer referral to complete a computer-assisted self-interview on health care experiences. Proportions of participants who had received HIV prevention services and general care services in different settings were compared using Fisher's exact test and correlates of service receipt were assessed using logistic regression. Among 75 BMSM with at least one barrier to care, 84% were <30 years old, 11% were HIV-positive, and 75% had health insurance. In the last six months, 60% had accessed a community-based clinic, 21% had accessed a primary care setting, and 36% had accessed an acute care setting. Greater proportions of participants who had accessed community-based clinics received HIV prevention services during these visits (90%) compared to those who had accessed primary care (53%) and acute care (44%) settings ($p=0.005$). Opportunities for BMSM to receive HIV prevention interventions differed by care setting. Having access to health care does not necessarily facilitate the uptake of HIV prevention interventions for BMSM. Further investigation of the structurally rooted reasons why BMSM are often unable to access HIV prevention services that would reduce racial disparities in HIV incidence is warranted.

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Keywords

Black men who have sex with men; HIV; prevention; health care; structural barriers

INTRODUCTION

Black men who have sex with men (BMSM) experience the highest HIV incidence in the United States (US), with yearly cumulative incidence estimates of 3.0 to 5.1% and rates of infection that are six times that of White MSM (Balaji et al., 2013; Koblin et al., 2013; Purcell et al., 2012). Epidemiologic research, however, continues to inadequately explain factors contributing to high rates of HIV among BMSM. Although HIV disparities are largely driven by racial disparities in outcomes of the HIV care continuum (Rosenberg, Millett, Sullivan, del Rio, & Curran, 2014) as opposed to differences in sexual risk behaviors (Millett et al., 2012), studies investigating HIV among BMSM have mostly focused on individual-level, behavioral factors. The evaluation of structural factors is a critical link to addressing the epidemic, as there is growing evidence that BMSM experience structural barriers to accessing HIV prevention and care services. Such barriers include experiences of homophobia during health care visits, discomfort and distrust with disclosing sexual behavior to providers, low cultural competency of providers, and stigmatization of voluntary HIV testing (Levy et al., 2014).

In response to the need for a better understanding of structurally rooted reasons why BMSM are often unable to access interventions that would reduce racial HIV disparities, we investigated the uptake of HIV prevention interventions among a non-clinic-based sample of BMSM who reported at least one barrier to engagement in care. After examining the types of health care settings that men in the study sample had accessed in the last six months, we assessed differences in proportions of participants who had received HIV prevention services and general care services by setting. We also assessed correlates of having accessed HIV prevention services and general care services in the last six months.

METHODS

Study Design, Sampling, and Procedures

Self-reported, cross-sectional data were collected at a university research clinic in the District of Columbia (DC) as part of the PRISM (*Pursuing Real and Innovative Ideas to Remove Structural Barriers for Men*) project (Levy et al., 2015). Study staff recruited participants using a mixture of seed (i.e., initial participant) recruitment – with seeds identified via online recruitment and word of mouth – and incentivized chain peer referral (similar to respondent driven sampling, but without the complexity of weighting) (Wei, McFarland, Colfax, Fuqua, & Raymond, 2012). In order to be eligible, participants had to: (1) be 18 years of age or older, (2) live in the DC metropolitan statistical areas, (3) self-identify as Black and male, (4) report a sexual experience with a male in the last year, and (5) report at least one barrier to engagement in care in the last six months. Criteria representing indicators for barriers to care were developed based on previous pilot work with BMSM in DC: not having accessed HIV testing, prevention, or care services; not having

seen a primary care physician, or not having had one; having been incarcerated; or having been unable to get medical care at a time that he needed it. Participants provided verbal consent and completed a computer-assisted self-interview (CASI) in a private office space between October 2013 and June 2014. Men received \$30 for the study visit, plus \$10 for each eligible participant that they referred (up to three). All protocols and instruments were approved by the George Washington University Institutional Review Board.

Definitions of Key Variables

The survey collected self-reported data on demographics, psychosocial factors, sexual behaviors, health seeking behaviors, and health care experiences. Regarding health care utilization, participants indicated which health care settings they had visited in the last six months and then selected the services they had received in each setting. Dummy variables were created for whether participants received HIV prevention services (HIV testing, HIV counseling, PrEP, or PEP) and general care services (general preventive care or treatment for being a little or very sick) in each setting. Settings were collapsed into three main types: community-based clinics, primary care doctors, and acute care.

Statistical Analysis

Descriptive statistics (frequencies and percentages) were calculated for each variable. We compared proportions of participants who reported having received HIV prevention services (only among HIV-negative participants) and general care services in the last six months by health care setting. Although we were unable to conduct statistical testing among the entire sample due to some participants having accessed more than one type of setting (i.e., comparison groups were not independent), we assessed differences in these proportions using Fisher's exact test only among those who had accessed exactly one type of setting. Correlates of having received HIV prevention services and general care services were assessed using logistic regression. All statistical analyses were completed using SAS Version 9.3.

RESULTS

Descriptive characteristics of 75 participants are summarized in Table I. Most participants (84%) were 18–29 years old (mean=26, range: 18–60). Eight participants had previously tested HIV-positive. In the last six months, participants reported having accessed community-based clinics (60%), acute care (36%), and primary care doctors (21%); about one-fourth (24%) had not accessed any health care.

There were significant differences by health care setting in proportions of participants who reported having received HIV prevention and general care services in the last six months (Table II). While 90% of HIV-negative participants who had accessed community-based clinics had received any HIV prevention services during those visits, 53% of those at primary care visits and 44% of those at acute care visits had received any HIV prevention services in these settings ($p=0.005$). This finding is driven by a greater likelihood of receipt of HIV testing and counseling at community-based clinics. Moreover, a greater proportion of participants received general preventive services ($p=0.040$), but not general treatment

services ($p=0.337$), in primary care settings than in community-based clinics. In sensitivity analyses that excluded data on the 25% of participants who had been involved in previous research studies (to consider only participants who had not received care as part of research) and data on visits at STD clinics (by definition, they provide HIV-specific services), no meaningful differences in results were found.

In logistic regression analyses, having health insurance was associated with having received general care services in the last six months (OR=4.7, 95% CI: 1.5–14.8) (Table III). No additional variables measured were significantly associated with the receipt of HIV prevention or general care services.

DISCUSSION

Among a unique sample of 75 BMSM who reported at least one barrier to engagement in care, the majority of men (76%) had accessed primary care, acute care, or a community-based clinic in the last six months despite barriers to care. However, there were disparities by setting in the provision of services to BMSM, with greater receipt of HIV prevention services at community-based clinics than in primary care or acute care settings. Conversely, general preventive services were obtained more frequently in primary care settings than at community-based clinics. Health care providers often lack awareness of diverse sexual identities and behaviors and fail to recognize the importance of discussing sexual health with patients during routine health care visits, often due to discomfort (Arya et al., 2014; Petroll & Mosack, 2011). BMSM are less likely than other MSM to disclose sexual behaviors to providers (Magnus et al., 2010; Petroll & Mosack, 2011), and those who do not disclose sexual behaviors are less likely to discuss HIV, disclose their HIV status, and obtain HIV testing (Dorell et al., 2011; Petroll & Mosack, 2011). Surprisingly, only half of HIV-negative participants were offered an HIV test the last time he saw a provider, which might be explained by whether they had disclosed their sexual identity; a previous study found that 59% of MSM whose provider knew about their sexual behaviors received HIV testing recommendations, compared to only 13% of those whose physician did not know (Petroll & Mosack, 2011). Universal HIV screening consistent with recommendations issued by the US Preventive Task Force has not yet been achieved (Moyer, 2013).

This study has several key strengths and limitations. By using peer referral sampling methods and restricting inclusion to BMSM reporting barriers to care, the sample consisted of a hard-to-reach group of BMSM, unlike those who have historically participated in HIV research. To minimize social desirability bias, the survey was administered via CASI in a private room. Misclassification of health care setting was possible since response categories were not all necessarily mutually exclusive. Also, since most participants had received some form of health care, statistical power may have been insufficient to detect associations between participant characteristics and the receipt of services. Nevertheless, despite survey limitations and a moderate sample size, we did find meaningful and statistically significant differences in the receipt of services by care setting.

This study is among the first to investigate the extent to which a sample of BMSM who experienced barriers to engagement in care had received HIV prevention interventions. Our

findings suggest that having access to health care does not necessarily facilitate the uptake of HIV prevention services for BMSM. It is critical that culturally appropriate HIV prevention, testing, and care interventions are accessible in all health care settings across the HIV prevention and care continuums.

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Table I

Characteristics of a Sample of Black Men Who Have Sex with Men in the District of Columbia with Barriers to Engagement in Care, 2013–2014 (n=75).

Demographic Characteristics	n (%)
Age	
18–19	6 (8.0)
20–24	38 (50.7)
25–29	19 (25.3)
30–39	7 (9.3)
40	5 (6.7)
Born in the District of Columbia metropolitan area	44 (62.9)
Length of time lived in the DC metropolitan area *	
0–12 months	8 (10.8)
1–4 years	10 (13.5)
5 or more years	56 (75.7)
Times moved in the last six months	
Has not moved	46 (61.3)
1 or 2 times	22 (29.3)
3 or more times	7 (9.3)
Has health insurance	56 (74.7)
Type of health insurance (among those who have health insurance) †	
Private	15 (26.8)
Student	3 (5.4)
Parents	10 (17.9)
Medicaid	23 (41.1)
Medicare	3 (5.4)
DC Alliance	2 (3.6)
Other	6 (10.7)
Had to switch health insurance in the last six months *	10 (13.7)
Had a period of time in the last six months that he did not have health insurance *	20 (27.0)
Psychosocial Characteristics	n (%)
Has Depressive Symptomatology (10-item CES-D score, 10–30) ‡, *	24 (32.9)
Has a family member within an hour's drive whom he could rely on for help in a medical situation	50 (66.7)
Has someone who would go to a medical appointment with him	59 (78.7)
Ever spent one or more nights in a jail, detention center, or prison	19 (25.3)
Spent one or more nights in a jail, detention facility, or prison in the last year *	5 (6.8)
Sexual Behaviors	n (%)
Number of men he had oral or anal sex with in the last six months *	
0	5 (6.8)
1 to 4	50 (67.6)
5 to 9	13 (17.6)

Demographic Characteristics	n (%)
10 or more	6 (8.1)
Used a condom the last time he had anal sex with a man	
Yes	39 (52.0)
No	35 (46.7)
Never had anal sex	1 (1.3)
Number of women he had oral, vaginal, or anal sex with in the last six months [*]	
0	62 (83.8)
1 to 4	10 (13.5)
5 to 9	2 (2.7)
Received money, drugs or other goods from a male sexual partner in exchange for oral or anal sex in the last six months [*]	11 (14.9)
Health Seeking Behaviors and Health Care Experiences	n (%)
Ever been tested for HIV	71 (94.7)
Result of last HIV test (among those who have ever been tested)	
HIV-negative	60 (84.5)
HIV-positive	8 (11.3)
Has not yet received his result because not ready	1 (1.4)
No one ever told him	2 (2.8)
Decided not to get medical care that he needed in the last six months [*]	14 (18.9)
Reasons for not getting medical care that he needed in the last six months (among those who decided not to get medical care that he needed) [†]	
Cost	5 (35.7)
Did not have cash for the appointment	4 (28.6)
Did not have insurance	4 (28.6)
Felt uncomfortable trying to get an appointment	2 (14.3)
Judgmental health care providers	2 (14.3)
Was embarrassed	3 (21.4)
Did not want family to know	1 (7.1)
Was not sure he really needed to go	3 (21.4)
Did not know where to go	3 (21.4)
Was worried about they would say was wrong	2 (14.3)
Was difficult to get there	3 (21.4)
Was offered an HIV test the last time he saw a health provider for any reason [*]	36 (48.7)
Health care settings accessed in the last six months [†]	
Community-based clinic ^b	45 (60.0)
Primary care doctor	16 (21.3)
Acute care setting ^c	27 (36.0)
Dentist	18 (24.0)
Mental health care setting	4 (5.3)

^{*} The sum of response value frequencies is less than 75 due to missing values

[†] Participants could provide more than one value for a response

^aDepressive symptomology was dichotomized as a score >9 on the 10-item Centers for Epidemiologic Studies Depression Scale (CES-D) (Zhang et al., 2012). Cronbach's coefficient alpha for this scale among the sample was 0.86.

^bThe definition of community-based clinics included a clinic he usually goes to, a clinic he doesn't usually go to, community-based organizations, the Department of Health, free health clinics, STD clinics, and mobile units/vans.

^cAcute care was defined as urgent care, the emergency room, or hospital.

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Table II

Proportions of Black men who have sex with men who received different health care services in the last six months by health care setting, 2013–2014 (n=75).

Type of HIV Prevention Services	Community-Based Clinics (n=39)^a	Primary Care Providers (n=15)^a	Acute Care Settings (n=23)^a	
	n (%)	n (%)	n (%)	p-value^b
Any ^c	35 (89.7)	8 (53.3)	10 (43.5)	0.005
HIV Testing	33 (84.6)	8 (53.3)	10 (43.5)	0.075
HIV Counseling	15 (38.5)	0 (0)	0 (0)	0.002
PrEP	2 (5.1)	0 (0)	1 (4.3)	0.663
PEP	0 (0)	0 (0)	0 (0)	---
Type of General Care Services	Community-Based Clinics (n=45)	Primary Care Providers (n=16)	Acute Care Settings (n=27)	
	n (%)	n (%)	n (%)	p-value^b
Any ^d	30 (66.7)	16 (100.0)	22 (81.5)	0.475
Preventive Care	19 (42.2)	15 (93.8)	10 (37.0)	0.040
Treatment	23 (51.1)	11 (68.9)	16 (59.3)	0.337

^aAnalyses for the receipt of HIV prevention services restricted inclusion to participants who had not previously received a positive HIV test result.

^bP-values were obtained using Fisher's exact test only among participants who reported having accessed exactly one type of health care setting in the last six months, so that comparison groups were independent and mutually exclusive. Among the 41 HIV-negative participants who accessed exactly one type of setting, proportions of participants who received any HIV prevention services (95.8%, 50.0%, and 63.6%), HIV testing (87.5%, 50.0%, and 63.6%), and counseling (50.0%, 0%, and 0%) at community-based clinics, primary care settings, and acute care settings, respectively, were comparable to the proportions presented for all HIV-negative participants. Among the 46 participants overall who accessed exactly one type of setting, proportions of participants who received any general care services (70.4%, 100%, 76.9%), preventive care services (44.4%, 100%, and 46.2%), and treatment services (55.6%, 83.3%, and 46.2%) at community-based clinics, primary care settings, and acute care settings, respectively, were comparable to the proportions presented for all participants.

^cAny HIV prevention services was defined as HIV testing, HIV counseling, PrEP, or PEP.

^dAny general care services was defined as general preventive care, treatment for being a little sick, or treatment for being very sick.

Table III

Correlates of having received HIV prevention services and general care services in the last six months among Black men who have sex with men (n=75).

Variable	Outcome 1: Receipt of Any HIV Prevention Services ^a	Outcome 2: Receipt of General Care Services ^b
	OR (95% CI)	OR (95% CI)
Less than 25 years old	0.67 (0.20, 2.27)	2.91 (0.98, 8.67)
Has health insurance	1.90 (0.53, 6.75)	4.70 (1.49, 14.82) **
Had a period of time in the last six months that he did not have health insurance	0.92 (0.25, 3.42)	0.48 (0.15, 1.48)
Has Depressive Symptomatology ^c	0.91 (0.24, 3.49)	1.80 (0.51, 6.33)
Has someone who would go to a medical appointment with him	0.51 (0.10, 2.60)	0.38 (0.08, 1.88)
Ever been incarcerated	1.59 (0.39, 6.46)	0.59 (0.19, 1.88)
Had 5 or more male sex partners (oral or anal) in the last year	2.21 (0.44, 11.14)	2.00 (0.51, 7.86)
Did not use a condom the last time he had anal sex with a man	1.19 (0.36, 3.91)	0.84 (0.29, 2.42)
HIV-positive	---	2.38 (0.27, 20.77)

*
p<0.05;

**
p<0.01;

p<0.001.

^a Any HIV prevention services was defined as HIV testing, HIV counseling, PrEP, or PEP. Analyses for this outcome variable were restricted to participants who had not previously received an HIV-positive test result. Of 67 HIV-negative participants, 50 had received any HIV prevention services.

^b Any general care services was defined as general preventive care, treatment for being a little sick, or treatment for being very sick. Of 75 total participants, 57 had received any general care services.

^c Depressive symptomology was dichotomized as a score >9 on the 10-item Centers for Epidemiologic Studies Depression Scale (CES-D) (Zhang et al., 2012). Cronbach's coefficient alpha for this scale among the sample was 0.86.