

Health care access, health care utilisation and sexual orientation disclosure among Black sexual minority men in the Deep South

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Abstract. **Background:** Black gay, bisexual, and other sexual minority men (BSMM) account for 39.1% of new HIV infections among men who have sex with men and 78.9% of newly diagnosed cases among Black men. Health care access, health care utilisation and disclosing sexuality to providers are important factors in HIV prevention and treatment. This study explored the associations among sexual orientation disclosure, health care access and health care utilisation among BSMM in the Deep South. **Methods:** Secondary analysis of existing data of a population-based study in Jackson, Mississippi, and Atlanta, Georgia, was conducted among 386 BSMM. Poisson regression models were used to estimate prevalence ratios (PR) between sexual orientation disclosure to healthcare providers, health care access and health care utilisation. **Results:** The mean ($\pm$ s.d.) age of participants was 30.5 ± 11.2 years; 35.3% were previously diagnosed with HIV and 3.7% were newly diagnosed with HIV. Two-thirds (67.2%) self-identified as homosexual or gay; 70.6% reported being very open about their sexual orientation with their healthcare providers. After adjustment, BSMM who were not open about their sexual orientation had a lower prevalence of visiting a healthcare provider in the previous 12 months than those who were very open with their healthcare provider (PR 0.42; 95% confidence interval 0.18–0.97). **Conclusion:** Clinics, hospitals and other healthcare settings should promote affirming environments that support sexuality disclosure for BSMM.

Keywords: HIV, sexual health, sexually transmissible infection (STI), stigma.

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Introduction

Black gay, bisexual, and other sexual minority men, referred to collectively as Black sexual minority men (BSMM),^{1,2} account for the greatest disparities in HIV-related outcomes in the US.³ Estimates suggest that at current trends in HIV prevention, treatment and care, 50% of BSMM will acquire HIV in their lifetime.⁴ The US South, where most BSMM reside, consistently reports the highest HIV diagnoses and

AIDS-related deaths of any region in the US.^{5,6} HIV incidence among BSMM is highest in the Deep South, in states such as Georgia and Mississippi,^{7–9} where 50% of US BSMM were diagnosed.⁵ Health care access, health care utilisation and disclosing sexuality to providers are important factors for HIV prevention and treatment and in the care of BSMM.^{10–12}

‘Health care access’ generally refers to the feasibility of obtaining needed medical services and includes having health

insurance, affordable copayments and primary care providers.¹³ Health care utilisation is the use of services for the treatment of conditions such as HIV and sexually transmissible infections (STIs).¹⁴ For BSMM, health care access, health care utilisation and disclosing sexuality to providers are affected by structural factors such as limited transportation, a lack of health insurance coverage and discrimination based on race and sexual orientation.^{11,15,16} Factors such as younger age, HIV serostatus and gender identity also limit sexuality disclosure for BSMM.^{11,12,15}

In addition, having distrustful attitudes towards the healthcare system contributes to lower utilisation of HIV prevention, treatment and care services among BSMM.^{10,17,18} BSMM report greater negative experiences when receiving care,^{11,15} have higher levels of anticipated discrimination when seeking care¹⁸ and report higher levels of medical mistrust and lack of confidentiality from medical services¹⁹ than heterosexual men. BSMM in urban contexts are less likely than White sexual minority men to disclose their sexual orientation or same-sex sexual behaviours to healthcare providers,²⁰ which creates suboptimal healthcare experiences and facilitates HIV incidence.

Sexual minority men (SMM) who disclose their sexual orientation to their healthcare providers are more likely to be exposed to HIV prevention information and receive HIV prevention services such as HIV testing than those who do not.^{20,21} However, some BSMM avoid disclosing their sexual identity or same-sex sexual behaviours in primary care settings and instead use emergency rooms because they require less engagement with providers than outpatient settings.^{18,22} Healthcare providers who are unaware of the sexual orientation or same-sex sexual behaviours of their SMM patients provide fewer recommended sexual health screening and preventive services for this highly marginalised population.^{20,23} Despite evidence of distrust of healthcare providers among BSMM,^{11,15,16} few studies have quantified the correlates of sexuality disclosure among BSMM in the Deep South.

Although some studies have explored the role of sexual identity disclosure on awareness of HIV prevention methods among BSMM,^{12,24} few have explored the relationship between sexual identity disclosure to healthcare providers on health care access and utilisation among BSMM in the Deep South. To fill this gap, this study examined the prevalence and associations between sexual orientation disclosure to healthcare providers and health care access and utilisation among BSMM in the Deep South.⁵ We hypothesised that openness of sexual orientation with healthcare providers will be associated with greater utilisation of primary care services and greater use of HIV and STI prevention services. Findings from this research could better inform relevant policy and prevention strategies for this vulnerable population in the US Deep South.

Methods

Study population

Data were derived from a well-documented population-based cohort study locally initiated in Jackson, Mississippi, and Atlanta, Georgia, and known locally as The MARI Study,

from July 2013 and December 2014 to identify multilevel correlates of HIV risk among BSMM. Details of the study design and procedures have been published elsewhere.^{14,25,26}

Briefly, participants were recruited using a combination of active and passive recruitment strategies. Active recruitment included direct contact with individuals at community events, local bars and clubs frequented by BSMM, as well as at community-based activities hosted by the study partner organisations (Open Arms Healthcare Center in Jackson; AID Atlanta and NAESM in Atlanta). Passive recruitment involved posting advertisements on social networking websites such as Facebook and geospatial networking apps (i.e. Jack'd), at local colleges and universities, bars and clubs and community-based organisations that service BSMM. Inclusion criteria required a self-report of Black or African American race, male sex at birth, age ≥ 18 years and engaging in oral or anal sex with another man in the 6 months before study enrolment. Participants who reported being HIV uninfected or unaware of their status at study enrolment underwent rapid HIV testing, after risk reduction counselling, by certified research staff. Participants aware of their HIV infection (previously diagnosed HIV infected) signed a release of health information authorisation form to confirm their serostatus.

The study protocol was approved by the Sterling Institutional Review Board in Atlanta, GA, and all participants provided written informed consent.

Measures

Sexual orientation disclosure

Disclosure of sexual orientation with healthcare providers was assessed using the question, 'When you interact with a healthcare person, how open are you with them about your sexual orientation?' Response options included: (1) 'very open, I tell them about my sexual orientation'; (2) 'somewhat open, I may tell them about my sexual orientation if they ask'; and (3) 'not open at all, I won't tell them about my sexual orientation'.

Health care access

Responses for two items, namely 'During the last 12 months, did you have any kind of healthcare coverage?' and 'In the past 12 months, did you have a primary health care provider?', were used to assess health care access. Responses were dichotomous (yes or no). Participants were also asked about the type of healthcare coverage or insurance used to pay for medical care in the past 12 months. Response options for healthcare coverage or insurance type included public insurance (i.e. Medicare, Medicaid and the military, Civilian Health and Medical Program of the Uniformed Services (CHAMPUS), TriCare or Veterans Affairs (VA)), private insurance (i.e. from employer or workplace, college or school, private health insurance plan purchased directly or parents' insurance plan) or something else.

Health care utilisation

Three domains were used to assess health care utilisation: (1) primary care; (2) STI prevention and testing; and (3) HIV prevention and testing.

Primary care utilisation was assessed using the item, 'During the past 12 months, did you see a doctor, nurse, or other health care provider for any reason?' STI prevention and testing was assessed using the following items: 'During the past 12 months, did a doctor, nurse, or other health care provider ask you about or give you advice regarding prevention of STIs?', 'During the past 12 months, did a doctor, nurse, or other health care provider ask you about or give you advice regarding testing for STIs?' and 'In the past 12 months, were you tested for a sexually transmitted infection?'. HIV prevention was assessed using the item, 'During the past 12 months, did a doctor, nurse, or other healthcare provider ask you about or give you advice regarding HIV prevention?' and HIV testing utilisation was assessed using two items, namely 'During the past 12 months, did a doctor, nurse, or other health care provider ask you about or give you advice regarding HIV testing?' and 'Over the past two years, how many times did you get tested for HIV?'. Except for the last question, for which the response options were 'once', 'twice' and 'three or more times', all responses options were dichotomous, yes or no.

Correlates of sexuality disclosure

Age

Participants were asked to self-report age, which was used a continuous variable.

Sexual orientation

Participants were asked to self-identify their sexual orientation from a range of categories and were then were classified as 'homosexual/gay', 'bisexual' or 'other' (for those identifying as straight or heterosexual or as none of the categories listed).

Sexual positioning practice

Participants were asked to indicate their typical sexual position during anal sex with male partners: 'top', 'bottom', 'versatile' or 'other'.

Gender non-conformity

Gender non-conformity was assessed using two items: (1) 'How do you think people would describe your appearance, style, or dress?'; and (2) 'How do you think people would describe your mannerisms?'.²⁷ Response options were scored on a seven-point scale ranging from 1, 'very feminine', to 7, 'very masculine' (Cronbach's $\alpha = 0.93$).

HIV status

Participants who self-reported being HIV negative were given a rapid HIV test at baseline to confirm their HIV status. The HIV status of participants who self-reported living with HIV was confirmed by a review of medical records. Participants were categorised as 'living with HIV', which included previously and newly diagnosed BSMM, or 'HIV negative'.

Statistical analysis

All statistical analyses were performed using SAS 9.3 (SAS Institute, Cary, NC, USA). Chi-squared tests and two-sample *t*-tests were used to explore differences in sexual orientation disclosure by demographic and other selected covariates. Poisson regression models with robust standard errors were used to estimate prevalence ratios (PR) between sexual orientation disclosure to healthcare providers and health care access and utilisation. We estimated distributions of selected covariates across categories of openness of sexual orientation with healthcare providers and estimated *P*-values for trends across ordered categories by including openness of sexual orientation as an ordinal variable (i.e. coded as 1–3) in unadjusted linear and logistic regression models. Multivariable models were adjusted for age, HIV status, ethnicity, transgender identity, sexual orientation, typical position during sex and gender non-conformity. Models related to HIV prevention and testing were limited to HIV-uninfected individuals. There was no evidence of multicollinearity among variables within models (variance inflation factor <5).

Results

In all, 465 BSMM were enrolled in the MARI Study in 2014; 79 were excluded because of unusable audio computer-assisted self-interview data, missing sexual orientation disclosure information or missing information on all healthcare access and utilisation measures, leaving 386 in the analytical sample. The mean ($\pm$ s.d.) age of participants was 30.5 ± 11.2 years; 35.3% were previously diagnosed with HIV and 3.7% were newly diagnosed with HIV. Two-thirds (67.2%) self-identified as homosexual or gay and 70.6% reported being very open regarding their sexual orientation with their healthcare providers. Regarding insurance, 43.8% reported having health insurance and 45.2% reported having a primary healthcare provider in the past 12 months (Table 1).

Bivariate results between sexual orientation disclosure to providers and sociodemographic characteristics among BSMM are given in Table 2. Sexual orientation and typical sexual position during anal sex were significantly associated with sexuality disclosure. Specifically, those who reported being very open about their sexual orientation with healthcare providers had a greater prevalence of identifying as homosexual or gay than those who identified as bisexual or 'other' ($P < 0.001$). In addition, there was a greater prevalence of reporting sexual position during anal sex as 'top' among those who reported not at all disclosing sexuality ($P = 0.049$). There were no significant differences in the prevalence of HIV or any other sociodemographic characteristics relative to sexual orientation disclosure to providers.

Table 3 describes the multivariate regression analyses examining the associations of openness of sexual orientation with healthcare providers with measures of health care access and utilisation. In multivariate models, compared with BSMM who were very open about their sexual orientation, BSMM who were somewhat open or not at all open about their sexual orientation with their healthcare provider had a lower prevalence of visiting a healthcare provider for any reason in the past 12 months (PR 0.48

Table 1. Selected baseline sociodemographic characteristics among Black sexual minority men in the Deep South, 2013–14 (*n* = 386)

Unless indicated otherwise, data are given as *n* (%). Asterisks indicate variables where sample responses contain missing data. STI, sexually transmissible infection

Age	
Mean (±s.d.) age (years)	30.5 (11.2)
Age group (years)	
18–24	160 (41.6)
25–34	109 (28.4)
35–44	51 (13.2)
≥45	64 (16.7)
Sexual orientation*	
Gay or homosexual	258 (67.2)
Bisexual	99 (25.8)
Straight or heterosexual	13 (3.4)
Questioning	6 (1.6)
None of these	8 (2.1)
Latino or Hispanic ethnicity	
Gender non-conformity*^A	
Appearance	
Mean (±s.d.) score	4.75 (1.7)
Appearance	
Somewhat feminine to very feminine	79 (20.7)
Equally feminine and masculine	68 (17.8)
Somewhat masculine to very masculine	235 (61.5)
Mannerisms	
Mean (s.d.) score	4.63 (1.7)
Mannerisms	
Somewhat feminine to very feminine	87 (22.8)
Equally feminine and masculine	76 (19.9)
Somewhat masculine to very masculine	219 (57.3)
Typical sexual position during anal sex	
Top	116 (30.1)
Bottom	96 (25.1)
Versatile	167 (43.5)
Other ^B	5 (1.3)
Sexual partners	
Males only	308 (79.9)
Males and females	48 (12.5)
Other ^C	77 (7.6)
Highest education completed	
High school diploma or less	28 (7.3)
Some college	280 (72.7)
Bachelor and above	77 (20.1)
Annual household income (US\$)	
<5000	154 (40.1)
5000–15 999	112 (29.1)
≥16 000	118 (30.7)
Currently unemployed	217 (56.3)
History of incarceration	145 (37.8)
HIV serostatus	
Previously diagnosed with HIV	136 (35.3)
Newly diagnosed with HIV	14 (3.7)
Health insurance coverage in past 12 months	168 (43.8)
Health insurance type	
Private (through employer, school, parents or directly purchased)	134 (36.2)
Medicare	35 (9.5)
Medicaid	83 (22.5)
Military	12 (3.3)
Had a primary care provider in past 12 months	173 (45.2)
Visited healthcare provider in past 12 months	255 (66.4)

(continued next column)

Table 1. (continued)

Healthcare provider advised about STI prevention	241 (62.8)
Healthcare provider advised about STI testing	249 (64.8)
STI testing in past 12 months	279 (72.7)
Sexuality disclosure to healthcare providers	
Very open	271 (70.6)
Somewhat open	87 (22.7)
Not open	26 (6.8)
Study site	
Jackson, Mississippi	223 (57.8)
Atlanta, Georgia	162 (42.2)

^AGender non-conformity is defined as dressing or behaving in ways considered atypical for one's gender and was rated by participants using a seven-point scale ranging from 1 ('very feminine') to 7 ('very masculine').

^B'Verse top', or no sex with men.

^CFemales only, transgendered women or not currently sexually active.

(95% confidence interval (CI) 0.28–0.80) and 0.42 (95% CI 0.18–0.97) respectively; graded trend $P = 0.006$). In addition, BSMM who were somewhat open and not at all open about their sexual orientation with their healthcare provider were less likely than those who were very open to have a lower prevalence of being advised on the prevention of and testing for STIs in the past 12 months (PR 0.27 (95% CI 0.11–0.66) and 0.28 (95% CI 0.12–0.69) respectively for the not at all open group). In addition, compared with BSMM who were very open about their sexual orientation, BSMM who were somewhat open or not at all open about their sexual orientation with their healthcare provider had a lower prevalence of being advised on the prevention of (PR 0.56 (95% CI 0.33–0.97) and 0.34 (95% CI 0.14–0.80) respectively) and testing (PR 0.40 (95% CI 0.17–0.96 for the not at all open group) for HIV. No consistent associations were observed between openness of sexual orientation with healthcare providers, health care access (health insurance status, type of health coverage or having a primary healthcare provider) and STI or HIV testing.

Discussion

This study explored the prevalence and correlates of sexuality disclosure to healthcare providers among BSMM in the Deep South. Sexual orientation and typical sexual position during anal sex were associated with level of openness of sexual orientation to healthcare providers. Sexuality disclosure to healthcare providers was also associated with health care utilisation, STI prevention healthcare services and HIV prevention healthcare services. Contrary to our hypothesis, level of openness was not associated with health care access. Improved patient–provider communication in the healthcare setting could mitigate the HIV epidemic among BSMM in the Deep South.

We found that typical sexual position during anal sex was associated with sexuality disclosure among BSMM in the Deep South. This is a notably novel finding and calls for future research into this association, because risks for HIV and STIs vary by sexual positioning practices.^{28,29} Specifically,

Table 2. Selected baseline sociodemographic characteristics by categories of sexual orientation disclosure with healthcare providers among Black sexual minority men (BSMM)Unless indicated otherwise, data are given as percentages. †, Marginally statistically significant; *, $P < 0.05$; ***, $P < 0.001$

	Very open	Sexuality disclosure Somewhat open	Not at all open	P-value
No. BSMM (%)	271 (28.9)	87 (22.6)	26 (6.8)	
Mean ($\pm$ s.d.) age (years)	30.2 $\pm$ 10.9	30.3 $\pm$ 11.7	34.2 $\pm$ 12.4	0.215
Latino or Hispanic	1.8	2.3	3.8	0.781
Sexual orientation				<0.001***
Homosexual or Gay	73.4	54.0	46.2	
Bisexual	22.1	34.5	34.6	
Other ^A	4.4	11.5	19.2	
Mean ($\pm$ s.d.) gender non-conformity ^B scores				
Appearance	4.63 $\pm$ 1.72	4.98 $\pm$ 1.69	5.23 $\pm$ 1.73	0.088†
Mannerisms	4.52 $\pm$ 1.45	4.81 $\pm$ 1.68	5.19 $\pm$ 1.70	0.090†
Typical sexual position during anal sex				0.049*
Top	26.0	35.7	53.8	
Bottom	26.8	21.4	19.2	
Versatile	46.1	41.7	23.1	
Other ^C	1.1	1.2	3.8	
Sexual partners				0.080†
Males only	82.7	74.7	69.2	
Males and females	10.0	16.1	26.9	
Other ^D	7.4	9.2	3.8	
Education				0.534
High school diploma or less	8.1	6.9	0	
Some college	72.0	71.3	84.6	
Bachelor and above	19.9	21.8	15.4	
Annual household income (US\$)				0.429
<5000	39.2	41.2	46.2	
5000–15 999	27.8	35.3	23.1	
$\geq$ 16 000	33.1	23.5	30.8	
Currently unemployed	55.7	54.0	69.2	0.370
History of incarceration	36.9	37.9	46.2	0.649
HIV status				<0.001
HIV negative	124	62	56	
Living with HIV	95	23	16	
Study site				0.252
Jackson, Mississippi	59.0	58.6	42.3	
Atlanta, Georgia	41.0	41.4	57.7	

^AStraight, questioning or not identified with any sexual orientation.^BGender non-conformity is defined as dressing or behaving in ways considered atypical for one's gender and was rated by participants using a seven-point scale ranging from 1 ('very feminine') to 7 ('very masculine').^C'Verse top', or no sex with men.^DFemales only, transgender women or not currently sexually active.

SMM who practice receptive anal intercourse are at greater risk for HIV and rectal STI infection than those who only practice insertive anal intercourse.²⁸ Because background HIV and STI prevalence is high among BSMM,^{30–32} discussing sexual orientation and sexual positioning practices with providers is crucial to ensuring proper screening and treatment for potential infections.^{33–35} Sexual positioning practices could be an added source of stigma for some BSMM^{36–39} and an important factor related to disclosure in the context of healthcare settings. In the US Deep South, where same-sex attraction is very stigmatised,^{5,40} stigma related to sexual positioning practices could exacerbate suboptimal communication between healthcare providers and BSMM.

BSMM who self-identified as gay were more likely to report being very open about their sexual orientation to healthcare providers than those who self-identified as bisexual or other. This finding is consistent with prior research that found that gay men are more likely to disclose their sexual orientation to healthcare providers. For instance, Durso and Meyer found that gay men and lesbian women were more likely to disclose their sexual orientations to healthcare providers than bisexual men and women.⁴¹ Similarly, a study containing a racially diverse sample of SMM in New York City found that most who identified as gay reported disclosing their sexual orientation to healthcare providers, whereas no SMM who identified as bisexual or straight reported disclosing their sexual orientation to healthcare providers.²⁰

Table 3. Multivariable prevalence ratios of the associations between sexual orientation disclosure with healthcare providers and health care access and utilisation among Black sexual minority men (SMM) after adjusting for age, ethnicity, transgender identity, sexual orientation, position during sex and gender non-conformity (the MARI Study, 2013–14)

Unless indicated otherwise, data show prevalence ratios with 95% confidence intervals in parentheses. The 'very open' group was used as the reference group throughout. * $P < 0.05$, ** $P < 0.01$ compared with very open. STI, sexually transmissible infection

	Prevalence (%)	Categories of openness			P_{trend}
		Very open	Somewhat open	Not at all open	
Health care access					
Health insurance, past 12 months	43.8	–	0.93 (0.56–1.56)	0.64 (0.26–1.56)	0.575
Public or private healthcare coverage, past 12 months	49.2	–	0.82 (0.43–1.55)	0.50 (0.18–1.41)	0.390
Primary healthcare provider, past 12 months	45.2	–	0.60 (0.35–1.03)	0.61 (0.25–1.50)	0.100
Health care utilisation		–			
General health care					
Visited a healthcare provider, past 12 months	66.4	–	0.48 (0.28–0.80)**	0.42 (0.18–0.97)*	0.006
Healthcare provider advised on the prevention of STIs, past 12 months	62.8	–	0.73 (0.43–1.22)	0.27 (0.11–0.66)**	0.008
Healthcare provider advised on testing for STIs, past 12 months	64.8	–	0.86 (0.50–1.48)	0.28 (0.12–0.69)*	0.021
Tested for a STI, past 12 months	72.7	–	0.81 (0.46–1.41)	0.72 (0.30–1.75)	0.655
HIV prevention and testing (HIV-infected and -uninfected MSM)					
Healthcare provider advised on the prevention of HIV, past 12 months	70.3	–	0.56 (0.33–0.97)*	0.34 (0.14–0.80)*	0.012
Healthcare provider advised on testing for HIV, past 12 months	69.7	–	0.64 (0.37–1.10)	0.40 (0.17–0.96)*	0.049
Tested for HIV, past 24 months	81.7	–	0.83 (0.43–1.59)	0.86 (0.30–2.40)	0.835
HIV prevention and testing (HIV-uninfected SMM)					
Healthcare provider advised on the prevention of HIV, past 12 months	67.9		0.91 (0.74–1.13)	0.44 (0.19–1.03)	0.027
Healthcare provider advised on testing for HIV, past 12 months	69.3		0.94 (0.76–1.15)	0.66 (0.36–1.20)	0.136
Tested for HIV, past 24 months	91.2		1.08 (1.00–1.77)	1.08 (0.92–1.27)	0.091

Sexual orientation disclosure was also associated with accessing and using HIV and STI prevention services among BSMM in the Deep South. These findings are consistent with other research showing that disclosing sexual orientation to primary care physicians is associated with screening recommendations targeted towards SMM, such as HIV testing, hepatitis A vaccinations and hepatitis B vaccinations.⁴² In addition, a study by Ng *et al.* found that, among a sample of SMM in Vancouver, Canada, participants who had disclosed their sexual orientation to healthcare providers were more likely to have been tested for HIV, hepatitis C virus, gonorrhoea and syphilis, and were more likely to have ever been vaccinated against hepatitis A and hepatitis B.²³

Although there is a burgeoning body of research regarding disclosure of sexual orientation in healthcare settings, most studies include samples of predominately White men. In addition, few studies have evaluated the associations of disclosure to healthcare providers among BSMM in the Deep South, where HIV is the most concentrated. Findings from the present study offer essential preliminary data regarding the associations of disclosure of sexual orientation to healthcare providers for this marginalised population. The findings suggest that the healthcare setting is a multidimensional experience that could potentially mitigate the HIV epidemic among BSMM. Our results also suggest that special interventions targeting subpopulations of BSMM may be essential in the treatment, care and prevention of HIV. For example, our results suggest there are differences in disclosure to healthcare providers by sexual orientation and sexual position.

The present cross-sectional study is not without limitations. This study is not generalisable to BSMM throughout the Deep South or the US. In addition, this study did not assess medical

mistrust, perceived discrimination in healthcare settings and past healthcare experiences. This study did not assess healthcare provider characteristics, such as sex, age and race, which are known to affect Black patients' comfort.¹¹ Third, this investigation did not examine differences between rural and urban areas. Finally, we did not assess traditional barriers to health care access and utilisation, such as lack of transportation, distance between residence and healthcare providers and a perceived lack of quality of health care. Although these are potential limitations, the focus of the MARI Study was to identify multilevel correlates of sexual behaviours among BSMM in the Deep South.

To the best of our knowledge, this is one of the first investigations to examine the associations between disclosure of sexual orientation to healthcare providers and multiple measures of health care access and utilisation among BSMM in the Deep South. Clinics, hospitals and other healthcare settings should promote affirming behaviours and environments that welcome all people, regardless of race, ethnicity, sexual orientation or sexual behaviours. Equally, healthcare providers should directly ask participants about sexual behaviours and provide culturally appropriate services.

Conflicts of interest

The authors report no conflicts of interest.

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References

- 1 Dangerfield DT II, Harawa NT, McWells C, Hilliard C, Bluthenthal RN. Exploring the preferences of a culturally congruent, peer-based HIV prevention intervention for black men who have sex with men. *Sex Health* 2018; 15: 424–30. doi:10.1071/SH18057
- 2 Young RM, Meyer IH. The trouble with ‘MSM’ and ‘WSW’: erasure of the sexual-minority person in public health discourse. *Am J Public Health* 2005; 95: 1144–9. doi:10.2105/AJPH.2004.046714
- 3 Rao S, Song W, Mulatu MS, Rorie M, O’Connor K, Scales L. HIV partner service delivery among Blacks or African Americans – United States, 2016. *MMWR Morb Mortal Wkly Rep* 2019; 68: 81–6. doi:10.15585/mmwr.mm6804a2
- 4 Hess KL, Hu X, Lansky A, Mermin J, Hall HI. Lifetime risk of a diagnosis of HIV infection in the United States. *Ann Epidemiol* 2017; 27: 238–43. doi:10.1016/j.annepidem.2017.02.003
- 5 Reif S, Safley D, McAllaster C, Wilson E, Whetten K. State of HIV in the US Deep South. *J Community Health* 2017; 42: 844–53. doi:10.1007/s10900-017-0325-8
- 6 Watson M, Johnson SD, Zhang T, Oster AM. Characteristics of and trends in HIV diagnoses in the Deep South region of the United States, 2012–2017. *AIDS Behav* 2019; 23: 224–32. doi:10.1007/s10461-019-02659-6
- 7 Centers for Disease Control and Prevention. HIV surveillance report, vol. 28: diagnoses of HIV infection in the United States and dependent areas, 2016. 2017. Available online at: <https://www.cdc.gov/hiv/pdf/library/reports/surveillance/cdc-hiv-surveillance-report-2016-vol-28.pdf> [verified 20 May 2020].
- 8 Centers for Disease Control and Prevention. Sexually transmitted diseases surveillance 2017: gonorrhea. 2018. Available online at: <https://www.cdc.gov/std/stats17/gonorrhea.htm> [verified 16 October 2018].
- 9 Centers for Disease Control and Prevention. Sexually transmitted disease surveillance 2016. 2017. Available online at: https://www.cdc.gov/std/stats16/CDC_2016_STDS_Report-for508WebSep21_2017_1644.pdf [verified 5 October 2017].
- 10 Cahill S, Taylor SW, Elsesser SA, Mena L, Hickson D, Mayer KH. Stigma, medical mistrust, and perceived racism may affect PrEP awareness and uptake in black compared to white gay and bisexual men in Jackson, Mississippi and Boston, Massachusetts. *AIDS Care* 2017; 29: 1351–8. doi:10.1080/09540121.2017.1300633
- 11 Quinn K, Dickson-Gomez J, Zarwell M, Pearson B, Lewis M. ‘A gay man and a doctor are just like, a recipe for destruction’: how racism and homonegativity in healthcare settings influence PrEP uptake among young Black MSM. *AIDS Behav* 2019; 23: 1951–63. doi:10.1007/s10461-018-2375-z
- 12 Yang C, Krishnan N, Painter JE, Latkin C. The association between disclosure of same sex behavior to healthcare providers and PrEP awareness among BMSM in Baltimore. *AIDS Behav* 2019; 23: 1888–92. doi:10.1007/s10461-019-02401-2
- 13 Gulliford M, Figueroa-Munoz J, Morgan M, Hughes D, Gibson B, Beech R, *et al.* What does ‘access to health care’ mean? *J Health Serv Res Policy* 2002; 7: 186–8.
- 14 Heidari O, Dangerfield DT II, Hickson DA. Sexual risk and sexual healthcare utilization profiles among Black sexual minority men in the U.S. Deep South. *AIDS Care* 2020; 32: 1602–9. doi:10.1080/09540121.2020.1772455
- 15 Arnold EA, Rebchook GM, Kegeles SM. ‘Triply cursed’: racism, homophobia, and HIV-related stigma are barriers to regular HIV testing, treatment adherence, and disclosure among young Black gay men. *Cult Health Sex* 2014; 16: 710–22. doi:10.1080/13691058.2014.905706
- 16 Quinn K, Bowleg L, Dickson-Gomez J. ‘The fear of being Black plus the fear of being gay’: the effects of intersectional stigma on PrEP use among young Black gay, bisexual, and other men who have sex with men. *Soc Sci Med* 2019; 232: 86–93. doi:10.1016/j.socscimed.2019.04.042
- 17 Dale SK, Bogart LM, Wagner GJ, Galvan FH, Klein DJ. Medical mistrust is related to lower longitudinal medication adherence among African-American males with HIV. *J Health Psychol* 2016; 21: 1311–21. doi:10.1177/1359105314551950
- 18 Eaton LA, Driffin DD, Kegler C, Smith H, Conway-Washington C, White D, *et al.* The role of stigma and medical mistrust in the routine health care engagement of Black men who have sex with men. *Am J Public Health* 2015; 105: e75–82. doi:10.2105/AJPH.2014.302322
- 19 McKirnan DJ, Du Bois SN, Alvy LM, Jones K. Health care access and health behaviors among men who have sex with men: the cost of health disparities. *Health Educ Behav* 2013; 40: 32–41. doi:10.1177/1090198111436340
- 20 Bernstein KT, Liu K-L, Begier EM, Koblin B, Karpati A, Murrill C. Same-sex attraction disclosure to health care providers among New York City men who have sex with men: implications for HIV testing approaches. *Arch Intern Med* 2008; 168: 1458–64. doi:10.1001/archinte.168.13.1458
- 21 Wolitski RJ, Jones KT, Wasserman JL, Smith JC. Self-identification as ‘down low’ among men who have sex with men (MSM) from 12 US cities. *AIDS Behav* 2006; 10: 519–29. doi:10.1007/s10461-006-9095-5
- 22 Malebranche DJ, Peterson JL, Fullilove RE, Stackhouse RW. Race and sexual identity: perceptions about medical culture and healthcare among Black men who have sex with men. *J Natl Med Assoc* 2004; 96: 97–107.
- 23 Ng BE, Moore D, Michelow W, Hogg R, Gustafson R, Robert W, *et al.* Relationship between disclosure of same-sex sexual activity to providers, HIV diagnosis and sexual health services for men who have sex with men in Vancouver, Canada. *Can J Public Health* 2014; 105: e186–91. doi:10.17269/cjph.105.4212
- 24 Watson RJ, Fish JN, Allen A, Eaton L. Sexual identity disclosure and awareness of HIV prevention methods among Black men who have sex with men. *J Sex Res* 2018; 55: 975–83. doi:10.1080/00224499.2017.1375452
- 25 Hickson DA, Truong NL, Smith-Bankhead N, Sturdevant N, Duncan DT, Schnorr J, *et al.* Rationale, design and methods of the Ecological Study of Sexual Behaviors and HIV/STI among African American Men Who Have Sex with Men in the Southeastern United States (the MARI Study). *PLoS One* 2015; 10: e0143823. doi:10.1371/journal.pone.0143823
- 26 Dangerfield DT, Johnson D, Hamlin-Palmer S, Browne DC, Mayer KH, Hickson DA. Prevalence and correlates of rectal douching and enema use among Black sexual minority men and Black transwomen in the Deep South. *Arch Sex Behav* 2020; 49: 1915–22.
- 27 Wylie SA, Corliss HL, Boulanger V, Prokop LA, Austin SB. Socially assigned gender nonconformity: a brief measure for use in surveillance and investigation of health disparities. *Sex Roles* 2010; 63: 264–76. doi:10.1007/s11199-010-9798-y
- 28 Baggaley RF, Owen BN, Silhol R, Anton P, McGowan I, van der Straten A, *et al.* Per act HIV transmission risk through anal intercourse: an updated systematic review and meta-analysis. In: HIV Research for Prevention Conference; 21–25 October 2018; Madrid, Spain. 2018. Available online at: http://www.natap.org/2018/HIVR4P/BaggaleyEtAlPosterR4P_2018.pdf [verified 21 November 2018].
- 29 Dangerfield DT II, Smith LR, Williams J, Unger J, Bluthenthal R. Sexual positioning among men who have sex with men: a narrative

- review. *Arch Sex Behav* 2017; 46: 869–84. doi:10.1007/s10508-016-0738-y
- 30 Amirkhanian YA. Social networks, sexual networks and HIV risk in men who have sex with men. *Curr HIV/AIDS Rep* 2014; 11: 81–92. doi:10.1007/s11904-013-0194-4
 - 31 Tieu H-V, Liu T-Y, Hussen S, Connor M, Wang L, Buchbinder S, *et al.* Sexual networks and HIV risk among Black men who have sex with men in 6 U.S. cities. *PLoS One* 2015; 10: e0134085. doi:10.1371/journal.pone.0134085
 - 32 Centers for Disease Control and Prevention. HIV and African American gay and bisexual men. 2017. Available online at: <https://www.cdc.gov/hiv/group/msm/bmsm.html> [verified 7 December 2017].
 - 33 Centers for Disease Control and Prevention. Taking a sexual history. 2020. Available online at: <https://www.cdc.gov/hiv/clinicians/transforming-health/health-care-providers/sexual-history.html> [verified 16 October 2020].
 - 34 Hui B, Fairley CK, Chen M, Grulich A, Hocking J, Prestage G, *et al.* Oral and anal sex are key to sustaining gonorrhoea at endemic levels in MSM populations: a mathematical model. *Sex Transm Infect* 2015; 91: 365–9. doi:10.1136/sextrans-2014-051760
 - 35 Bernstein KT, Marcus JL, Nieri G, Philip SS, Klausner JD. Rectal gonorrhea and chlamydia reinfection is associated with increased risk of HIV seroconversion *J Acquir Immune Defic Syndr* 2010; 53: 537–43. doi:10.1097/QAI.0b013e3181c3ef29
 - 36 Johns MM, Pingel E, Eisenberg A, Santana ML, Bauermeister J. Butch tops and femme bottoms? Sexual positioning, sexual decision making, and gender roles among young gay men. *Am J Mens Health* 2012; 6: 505–18. doi:10.1177/1557988312455214
 - 37 Hoppe T. Circuits of power, circuits of pleasure: sexual scripting in gay men's bottom narratives. *Sexualities* 2011; 14: 193–217. doi:10.1177/1363460711399033
 - 38 Dangerfield DT II, Ober AJ, Smith LR, Shoptaw S, Bluthenthal RN. Exploring and adapting a conceptual model of sexual positioning practices and sexual risk among HIV-negative Black men who have sex with men. *J Sex Res* 2018; 55: 1022–32. doi:10.1080/00224499.2018.1433287
 - 39 Fields EL, Bogart LM, Smith KC, Malebranche DJ, Ellen J, Schuster MA. HIV risk and perceptions of masculinity among young Black men who have sex with men. *J Adolesc Health* 2012; 50: 296–303. doi:10.1016/j.jadohealth.2011.07.007
 - 40 Geter A, Crosby RA, Mena L. Young Black men who have sex with men and women: to disclose or not to disclose, what's the risk in the South? *J Black Sex Relatsh* 2016; 2: 57–66. doi:10.1353/bsr.2016.0015
 - 41 Durso LE, Meyer IH. Patterns and predictors of disclosure of sexual orientation to healthcare providers among lesbians, gay men, and bisexuals. *Sex Res Social Policy* 2013; 10: 35–42. doi:10.1007/s13178-012-0105-2
 - 42 Petroll AE, Mosack KE. Physician awareness of sexual orientation and preventive health recommendations to men who have sex with men. *Sex Transm Dis* 2011; 38: 63–7. doi:10.1097/OLQ.0b013e3181ebd50f