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Permalink

<https://escholarship.org/uc/item/9rs438zm>

Journal

Sexual Health, 15(5)

ISSN

1448-5028

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Publication Date

2018

DOI

10.1071/sh18057

Peer reviewed

Exploring the preferences of a culturally congruent, peer-based HIV prevention intervention for black men who have sex with men

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Abstract. *Background:* HIV testing, treatment initiation and treatment adherence have been emphasised for Black men who have sex with men (BMSM). However, many BMSM do not get tested, obtain HIV treatment or adhere to treatment. It is essential to highlight barriers to HIV testing, treatment adherence and the ideal components for an intervention: peer mentors, socioeconomic resources and participant incentives. *Methods:* Five focus groups ($n=24$) were conducted among HIV-negative and HIV-positive BMSM aged ≥ 18 years in Los Angeles, California, USA to explore motivations and barriers to testing and treatment and the components of an ideal, culturally competent HIV testing intervention for BMSM. *Results:* Barriers to HIV testing included fear and stigma associated with discovering a HIV-positive status and drug use. Motivations for testing included experiencing symptoms, beginning new relationships, perceptions of risk and peer mentors. *Conclusions:* Future HIV prevention and treatment efforts should consider these components to improve health outcomes among BMSM.

Additional keywords: Black men who have sex with men, culture, intervention, preferences.

Received 29 March 2018, accepted 31 May 2018, published online 6 September 2018

Introduction

If current infection rates in the USA continue, an estimated one in two Black men who have sex with men (BMSM) will contract HIV in their lifetime.^{1,2} At current incidence rates, 40% of young BMSM will acquire HIV by the age of 30 years.³ Consequently, emphasis has been placed on HIV testing and engagement in healthcare for HIV-negative BMSM to increase awareness of personal HIV status and uptake of pre-exposure prophylaxis (PrEP). For HIV-positive individuals, antiretroviral therapy and treatment adherence is emphasised to reduce individual and community viral load and subsequent transmission risk.^{4,5}

However, many BMSM do not get tested at recommended rates (i.e., every 3–6 months), and those who are diagnosed with HIV have lower rates of HIV treatment access and adherence.^{6,7} Given the importance of HIV testing on entry into both the HIV treatment and prevention continua of care, it is

essential to understand the motivations and barriers associated with HIV testing and treatment adherence among BMSM. It is also important to explore perceptions of ideal components for behavioural interventions to increase HIV testing and reduce the 20% of HIV seropositive BMSM who are unaware of their status.⁸

Part of the barriers to HIV testing and treatment adherence among BMSM include structural factors such as racism, perceived discrimination and homophobia in healthcare settings.^{6,9,10} Experiences of racism and discrimination in the context of the predominantly white gay community discourages HIV testing, HIV treatment and sexual health care among BMSM.^{6,11,12} Similarly, the intersection of HIV-related stigma, homophobia within the black community and racism from the white community are related to reluctance to obtain HIV testing and care, lower treatment adherence and non-disclosure of a positive HIV status to sexual partners.⁶ Bias

and stereotyping towards BMSM among medical providers have also been documented.^{13,14}

In Los Angeles County (LAC), 31% of BMSM had not been tested in the previous 12 months and 31% of HIV-seropositive BMSM were unaware of their infection.¹⁵ Moreover, linkage to care within 3 months of HIV diagnosis was lowest among BMSM compared with white and Latino MSM¹⁵. Efforts to reduce the racial disparity in the HIV prevention and care continuum between MSM groups require new interventions that address motivations and barriers to HIV testing and linkage to care and prevention services among at-risk and undiagnosed BMSM.

While studies have documented the role of perceptions of racism, stigma and homophobia as barriers to HIV testing and treatment adherence among BMSM,^{6,10,16} few have explored ways to circumvent these barriers. We sought to inform the development of an intervention involving peer mentorship, small incentives and customised referral plans for promoting HIV and STI testing, prevention and treatment among BMSM in LAC. Uncovering the ideal components of an intervention to increase HIV testing and engagement in care could reduce HIV seropositivity among BMSM, ultimately reducing HIV disparities in the USA.

Methods

Five focus groups ($n=24$) were conducted in Los Angeles, California, USA, to obtain in-depth information on the components for an ideal, culturally competent, peer-based intervention for BMSM. Participants were recruited through outreach at settings known to be frequented by BMSM, along with substance abuse treatment centres, community-based AIDS health and service organisations and African-American-focussed or serving organisations throughout Los Angeles and through the Los Angeles Centers for Drug Abuse (LACADA). Eligibility to participate included self-identification as a man, being aged ≥ 18 years, self-identification as Black or African American and self-reported sex with a man in the previous 12 months. The target focus group populations included two groups of individuals newly diagnosed with HIV (within the last 3 years) and three groups of HIV-negative BMSM in the following age cohorts: 18–29, 30–49 and ≥ 50 years. Interested participants were screened for eligibility at the study site and provided written informed consent.

Focus groups included a brief survey followed by a directed conversation covering the following domains:¹ words and self-labels used by BMSM to describe themselves;² motivations and barriers to preventive care and treatment;³ identification of reliable and unreliable providers and agencies;⁴ opinions about potential logos to represent the program being developed;⁵ attitudes about incentive methods to promote preventive care and treatment seeking;⁶ preferences for peer mentors; and⁷ community strengths among BMSM. Focus groups were conducted by two experienced African-American facilitators. Focus groups were intended to refine these specific elements of the intervention. Study procedures were reviewed and approved by the human subjects' protection committees at the University of Southern California, Charles R. Drew University of Medicine and Science and the University of California Los Angeles.

Data Analysis

Focus groups were audio-recorded and transcribed verbatim. Transcripts were coded using *Atlas.ti* software (Scientific Software Development GmbH, Berlin, Germany). Thematic analysis was conducted using a grounded theory approach to provide guidance on the intervention components and details. Themes were identified as patterns repeated across interviews that were associated with specific research questions, comments related to a specific question or comments that provided a detailed example^{17,18} of the ideal components of the intervention. Team members reviewed all text, examined the most frequent and outstanding comments related to the research questions, and then selected these to identify themes.¹⁸ Findings presented in this article represent the range of themes related to identifying the components of a culturally congruent, peer-based intervention to improve HIV testing and treatment adherence among BMSM.

Results

The age of participants ranged from 18 to 58 years; 13 (of 24) participants had a total monthly income of less than US\$1000 per month. Ten participants reported their highest level of education was some high school, four reported a high school diploma or equivalent and the remaining reported some college or more. Five participants self-reported their HIV status as positive, and 15 self-reported their HIV status as negative; the remaining participants were not aware of their status or declined to state (Table 1).

Barriers to HIV and STI testing: fear, stigma and drug use

Fear and stigma

Across all focus groups, men reported that fear of finding out that they were HIV positive was a barrier to HIV testing. Participants shared specific fears: of dying from AIDS, of losing social support from family and friends and of rejection from sexual partners if they learned that they were HIV positive. When asked to describe the barriers to HIV testing among BMSM, participants in one of the newly diagnosed groups said, '*Fear that they might actually be HIV-positive and die.*' Another mentioned, '*Afraid that things going to get leaked out and people is going to find out, being judged by people.*' One of the youngest participants (aged 18–29 years) said, '*A lot of people don't want to know their status because they're scared.*'

Drug use

Drug use was also considered a barrier to testing and prevention. Participants in the group aged ≥ 50 years and one participant from the newly diagnosed group expressed that drug use affected their desire to test. One newly diagnosed participant said,

'...back in my time, like around 2011 before I got diagnosed, I was living that life in Santa Monica and Highland and getting high, so I wasn't thinking about no test. And the only reason what, reason why, the only reason why I got tested was because I was with somebody

Table 1. Demographic characteristics of Black men who have sex with men in focus groups (n=24)

Age ^A	n (%)
Mean (range)	37.7 (18–58)
Housing status ^A	
Permanent housing	14 (58.3)
Transitional housing	3 (12.5)
An emergency shelter	3 (12.5)
Other	3 (12.5)
Total monthly income(USD) ^A	
<\$1000	13 (54.2)
Between \$1000 and \$1499	4 (16.6)
Between \$2000 and \$2499	2 (8.3)
Between \$2500 and \$3000	1 (4.1)
Between \$3500 and 3999	1 (4.1)
Highest education completed ^A	
Some high school	10 (41.7)
High school graduate, diploma or GED ^C	4 (16.7)
Some college credit, no degree	5 (20.8)
Trade/technical/vocational training	2 (8.3)
Associate degree	2 (8.3)
Self-reported HIV status ^A	
HIV negative	15 (62.5)
HIV positive	5 (20.8)
Not sure	1 (4.1)
Decline to state	2 (8.3)
Ever heard of pre-exposure prophylaxis	
Maybe – not sure	9 (37.5)
No	7 (29.1)
Yes	8 (33.3)
Services used in the previous 12 months ^B	
Substance abuse services	4 (16.7)
Sexually transmissible infection testing or treatment	10 (41.6)
Health insurance enrolment	9 (37.5)
Job training	5 (20.8)
Mental health	6 (25.0)
Spiritual assistance/counselling	5 (20.8)
Education assistance (e.g. college enrolment)	4 (16.6)
Housing assistance	6 (25.0)
Legal	2 (8.3)
None	1 (4.2)

^ATotals do not add to 100% due to missing data.

^BTotals are over 24 using multiple services.

^CGeneral Education Diploma.

and we were about to go out of state, so wanted to get tested before that. [inaudible] found out I was positive and he was negative.'

He and other participants indicated that drug use shifted their focus away from HIV testing and self-care. Statements like the quote above also suggest that life transitions could be related to HIV testing.

Motivations for HIV/STI testing: symptoms, new relationships, perceptions of risk, community HIV prevalence and peer navigators

Despite highlighting barriers to HIV and STI testing, focus groups also shared factors that motivated them to test, including experiencing health symptoms, beginning new relationships,

assessing their own personal risk and incentives from organisations.

Symptoms

Participants in the youngest HIV-negative group and in the newly diagnosed group mentioned that the onset of potential disease symptoms encouraged men to test for HIV or STIs. When asked what some reasons would be to visit a healthcare facility to get tested, others agreed with this participant who said, *'To check, maybe some itching or it's burning when they pee or something like that, you know, might have a bump here, a bump there'* (group ages 18–29 years). Another in the peer navigator group mentioned, *'Because they got a burning sensation and they're dripping some green, yellow stuff, and they don't know what it is.'*

New relationships

Men in focus groups who were aged 18–29 and 30–49 years mentioned that entering a new relationship was a motivation for HIV testing. For example, when asked to comment on reasons for HIV testing, participants in the group aged 18–29 years agreed, *'Because their partner said to go do it.'* One participant in the group aged 30–49 years mentioned, *'... [one reason why Black MSM get tested] if they're wanting to get involved in a serious relationship with someone, wanting to get tested so they know their status before they get involved with someone.'* The period during which casual relationships develop into deeper relationships is an important reason that begs the question of whether potential HIV infection or transmission could have happened before the HIV testing or whether partners consider window periods.

Perceptions of risk

Across groups, men noted that their perceptions of personal risk influenced their decision to test for HIV. Following up on the discussion about motivations to test for HIV, one participant in one of the newly diagnosed group said, *'I think it's our own promiscuity sometimes, we know what we're doing, we're aware so we know the possibility is out there.'* In another group (participants aged 30–49 years), participants shared that they had been involved in 'unprotected sex, multiple partners' and 'risky behaviours'. Of note, one participant in the newly diagnosed group mentioned that awareness of risk could also inhibit BMSM from testing. He said,

'...they know that they've been having promiscuous sex and so they're scared to get the knowledge that they might be positive.'

Community HIV prevalence

Men in one of the newly diagnosed groups and the men in the youngest group mentioned that testing for HIV was also related to knowing the high incidence of infection among friends and people they knew. One participant in the newly diagnosed group mentioned,

'A lot of guys, young guys, that are being infected and just word-of-mouth, you know, having friends that are affected, infected, I'm

sorry, with the virus, calling them to go, you know, for testing because they're afraid, some are afraid, some are afraid to find out, some don't want to know. I was one that didn't want to know, you know...'

Participants also said things like *'one of their friends get it'* (group aged 18–29 years) as a motivation to test for HIV; however, the barriers of fear and stigma could overshadow this motivation. Despite the fact that participants shared that HIV prevalence in their peer network was a motivator to test for HIV, many still did not test and were not likely to share their positive status. This suggests somewhat of a broken feedback loop among BSM of wanting to test for HIV but not testing due to fear and stigma, while knowing that HIV prevalence is high within the community.

Peer navigators

Of note, one participant in the oldest group mentioned that being approached by a representative of an HIV outreach team, along with other comforts offered by the testing site, motivated him to test for HIV. He said, *'...yeah, because like one of the reasons I got tested, because somebody talked to me, and you know, he didn't even mention the incentive but said it's a good thing, you know, and it's a good place to go eat food and stuff and different things...'* While it was not clear whether the outreach team was culturally congruent with BSM, having team members who are culturally competent and able to help clients navigate testing and other social services is an important facilitator of HIV testing.

Barriers to HIV treatment initiation

Participants in the group of men aged 30–49 years suggested, *'they have the mentality 'I'm going to die anyways, so what's the point?'* as a factor that prevented individuals who found out that they were HIV-positive from seeking treatment. This might confirm earlier comments about the fears of getting HIV, AIDS and dying that lead to a sense of futility once infected. Additionally, men in both newly diagnosed groups shared that experiencing relief from HIV-related symptoms was a barrier to treatment initiation. They said that not having symptoms decreased the immediacy of seeking HIV treatment. They also mentioned how people discovering they were HIV positive was a barrier for treatment initiation. Men in the age groups of 18–29 and 30–49 years also mentioned denial and men who *'don't want to deal with it'* as barriers, which could relate to earlier themes of fear and stigma that dissuade HIV testing at all.

Barriers to treatment adherence

Participants in the youngest group mentioned that mental health, particularly depression, was a barrier to treatment adherence for newly diagnosed BSM. They suggested that struggling with mental health issues impeded the ability to prioritise treatment adherence. However, participants did not clarify whether mood issues were a struggle because of a recent HIV-positive test or were pre-existing comorbidities that further affected newly diagnosed BSM. Among the men in the group aged 30–49 years and the newly diagnosed group

both shared that not experiencing symptoms from HIV contributed to treatment non-adherence. Of note, participants in the group aged 30–49 years added that treatment non-adherence was also related to fear of side-effects from HIV medications. One mentioned,

'Yeah, I had a friend actually, who found out he was positive and he was like, 'Well, until I get sick I'm not taking that medicine because I'm afraid I'll start deteriorating,' you know. Some people are afraid of their life, you know, deteriorating and their organs being affected.'

Additionally, participants in the 18 to 29- and 30 to 49-year age groups and one of the newly diagnosed groups mentioned that drug use impaired treatment adherence for newly diagnosed BSM. The men discussed not only how substance abuse was a general problem, but also how drugs were used as a coping mechanism for newly diagnosed BSM. For example, participants in the group aged 18–29 years said, *'Because like, it makes you-that's like your medicine, it's like it make you forget about everything, you know.'* Others agreed, *'Yes. It makes you have something to look forward to...where you cover all the pain with that shit.'*

Participants in the 18 to 29- and the ≥ 50 -year age groups also mentioned how treatment adherence was challenging for some because some newly diagnosed BSM sell their HIV medications for money to buy drugs, to pay for housing or to purchase other things. They said that because many newly diagnosed BSM are on a low income and/or use substances, selling their medications was one way they could gain other things they needed or wanted, which created a barrier to treatment adherence.

Ideal components for intervention: preference for peer mentors, socioeconomic resources and incentives

Preference for peer mentors

Across groups, men preferred peer mentors who were older, mature and who had gone through many of the trials that some BSM experience, including homelessness, substance abuse and being 'out' as gay, but who had currently achieved stability and a measure of life success. Participants affirmed experiences, *'...Yeah, like drug use, you know, homelessness, stuff like that. Because somebody never been homeless, they can't, they probably won't [understand]'* (group aged 18–29 years). Similarly, others noted, *'The people that he's mentoring, he should be...like compatible with the dude...so he's had similar life experiences.'* Participants felt that similarities in life experiences were important to being able to understand the challenging and complex circumstances of BSM clients.

Socioeconomic resources

Across the focus groups, participant mentioned how an HIV intervention program for BSM that provided additional social and economic support resources would be the most beneficial and attractive for people to want to participate. For example, participants in the youngest and oldest groups mentioned resources such as support with counselling and mental health services, housing, health insurance and job training. For housing

support, one participant in one of the newly diagnosed groups said, *'I don't know if it's possible but probably temporary shelter assistance...Probably stuff like that because a lot of people come here homeless, no place they could [go]...'*

Incentives

All groups endorsed the use of incentives to encourage HIV testing. Although many conceded that testing due to incentives would not lead to pro-active, help-seeking behaviours, incentives were endorsed as important partly because the economic status of the target population is often poor. They also suggested that incentives should be not only financial with *'\$10 and \$20 gift cards,'* but also provide acknowledgement of participants as a way to measure their development and personal progress. When asked to provide examples of how a program could support someone in feeling that he is advancing, participants agreed with an example of 'colored belts' similar those indicating karate progression. They agreed on something that *'makes you feel good about yourself'* and *'gives them a sense of pride'* (group aged 30–49 years) was necessary in addition to monetary compensation. Groups mentioned that tangible markers of success would encourage their participation and adherence in an HIV testing and treatment intervention and was good for overall morale for BMSM.

Discussion

This study identified the intricate and multifaceted issues that affect HIV testing and treatment among BMSM. Beyond issues of HIV prevention and treatment access, feelings of futility and shame are crucial factors to consider in intervention development. Feelings of futility are an important yet understudied barrier to HIV treatment and prevention for BMSM. Future research, prevention and intervention efforts should consider this salient theme and uncover ways to overcome feelings of futility and shame among BMSM. Given the high HIV prevalence and overwhelming estimated lifetime risk of infection,^{1,2} it is important to begin to explore ways to overcome these feelings for BMSM who justifiably feel hopeless about preventing poor health outcomes.

Other HIV testing and treatment barriers included fear, HIV stigma from family, friends and potential partners, and substance abuse. Motivations for HIV and STI testing included experiencing symptoms; entering new relationships; understanding personal risk and community HIV prevalence; and the support of peer outreach navigators. Mental health issues and selling medications for money for other needs were barriers to HIV treatment adherence. HIV treatment and prevention programs should incorporate multiple components to address the barriers of stigma, mental health, financial stressors and substance use simultaneously.^{19,20}

It is crucial to provide interventions that include culturally competent peer mentors who identify as Black gay men and who have had similar experiences as the target population. Funding should be allocated for peer mentors to be an integral part of HIV treatment and prevention programs. Of note, having social support is associated with lower risk of delayed HIV testing and higher levels of ever testing among BMSM.^{21,22}

Social networks have been utilised among BMSM to increase HIV testing,²³ but more information is needed on the social lives of BMSM and the ways in which new strategies can utilise peer support to increase HIV testing, treatment uptake and adherence. Peers could be helpful in providing education, mitigating fear of HIV testing and reducing medical mistrust among BMSM.

Providing incentives was also identified as helpful. The BMSM in this formative research had low incomes. They welcomed both positive acknowledgement of actions taken and incremental, small incentives for key activities (i.e. HIV testing) or related help-seeking (i.e. attending doctor's appointments). Participants also indicated that this approach might facilitate larger behaviour change. Contingency management approaches that use incentives to motivate behaviour changes have been found to be effective with a wide variety of populations, and could be effective with this population.^{24,25} Adding incentives and other financial support to HIV prevention interventions could also partly relieve the socioeconomic stressors that many low-resource BMSM experience, given that selling medications for money is a barrier to treatment adherence.

Limitations should be considered. This study included a convenience sample of BMSM and is not representative of BMSM in Los Angeles. Focus groups can inhibit disclosure of sensitive information; however, the focus group guide did not address individual risk behaviours directly. Still, participants were informed that information shared in the group should be regarded as confidential and were asked not to share information that might cause them embarrassment. Given our purposes of identifying terminology and intervention approaches that BMSM might find acceptable, the focus group approach is well suited to discovery of widely held views.^{26–28}

However, overall, this study provided important considerations for the issues facing BMSM and the development of a culturally tailored, peer-based intervention for BMSM. Given the misinformation and futility about HIV infection and the efficacy of HIV treatment evident in the comments, HIV and STI education should be continued and emphasised. Lack of education among this population can also be contextualised given the lack of support for social and sexual minority health services in the current political climate. In interventions, peer mentors can support this role. Considerations for new relationships among BMSM should also be made given the incidence of HIV infections that result from main partners.²⁹ HIV testing and counselling services should confirm new partners' knowledge of the time between potential HIV exposure and the point at which the test will give an accurate result, and encourage repeated HIV testing so that risk of infection is more adequately managed. Future treatment and prevention efforts should carefully consider these important components affecting HIV testing and treatment among BMSM to reduce the significant disparity among this population.

Conflicts of interests

The authors declare no conflicts of interest.

Acknowledgements

This work was supported by the California HIV/AIDS Research Program under Grant # TL13-LACA-576. N. Harawa received additional support through grants from NIH/NIMH P30 MH 58107 and the California HIV/AIDS Research Program OS17-LA-003.

References

- Centers for Disease Control and Prevention. Lifetime risk of HIV diagnosis in the United States. Atlanta, GA: US Centers for Disease Control (CDC); 2016. Available online at: <http://www.cdc.gov/nchstp/newsroom/docs/factsheets/lifetime-risk-hiv-dx-us.pdf> [verified 28 February 2016].
- 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(4): 238–43. doi:10.1016/j.annepidem.2017.02.003
- Koblin BA, Mayer KH, Eshleman SH, Wang L, Mannheimer S, del Rio C, Shoptaw S, Magnus M, Buchbinder S, Wilton L, Liu T-Y, Cummings V, Piwowar-Manning E, Fields SD, Griffith S, Elharrar V, Wheeler D. HPTN 061 Protocol Team Correlates of HIV acquisition in a cohort of black men who have sex with men in the United States: HIV Prevention Trials Network (HPTN) 061. *PLoS One* 2013. 8(7): doi:10.1371/journal.pone.0070413
- Bunnell R, Opio A, Musinguzi J, Kirungi W, Ekwaru P, Mishra V, Hladik W, Kafuko J, Madraa E, Mermin J. HIV transmission risk behavior among HIV-infected adults in Uganda: results of a nationally representative survey. *AIDS* 2008; 22(5): 617–24. doi:10.1097/QAD.0b013e3282f56b53
- Centers for Disease Control and Prevention. HIV Testing | HIV/AIDS. Atlanta, GA: US Centers for Disease Control (CDC); 2015. Available online at: <http://www.cdc.gov/hiv/testing/index.html> [verified 2 February 2016].
- 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(6): 710–22. doi:10.1080/13691058.2014.905706
- Bogart LM, Wagner GJ, Green HD, Mutchler MG, Klein DJ, McDavitt B, Lawrence SJ, Hilliard CL. Medical mistrust among social network members may contribute to antiretroviral treatment nonadherence in African Americans living with HIV. *Soc Sci Med* 2016; 164: 133–40. doi:10.1016/j.socscimed.2016.03.028
- Centers for Disease Control and Prevention. African American | Gay and Bisexual Men | HIV by Group | HIV/AIDS. Atlanta, GA: US Centers for Disease Control (CDC); 2015. Available online at: <http://www.cdc.gov/hiv/group/msm/bmsm.html> [verified 12 January 2016].
- Bogart LM, Landrine H, Galvan FH, Wagner GJ, Klein DJ. Perceived discrimination and physical health among HIV-positive Black and Latino men who have sex with men. *AIDS Behav* 2013; 17(4): 1431–41. doi:10.1007/s10461-012-0397-5
- Irvin R, Wilton L, Scott H, Beauchamp G, Wang L, Betancourt J, Lubensky M, Wallace J, Buchbinder S. A study of perceived racial discrimination in Black Men Who Have Sex with Men (MSM) and its association with healthcare utilization and HIV testing. *AIDS Behav* 2014; 18(7): 1272–8. doi:10.1007/s10461-014-0734-y
- Eaton LA, Driffin DD, Kegler C, Smith H, Conway-Washington C, White D, Cherry C. 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* 2014; 105(2): e75–82. doi:10.2105/AJPH.2014.302322
- Eaton LA, Driffin DD, Smith H, Conway-Washington C, White D, Cherry C. Psychosocial factors related to willingness to use pre-exposure prophylaxis for HIV prevention among Black men who have sex with men attending a community event. *Sex Health* 2014; 11(3): 244–51. doi:10.1071/SH14022
- Frye V, Nandi V, Egan J, Cerda M, Greene E, Tieu HV, Ompad DC, Hoover DR, Lucy D, Baez E, Koblin BA. Sexual orientation- and race-based discrimination and sexual HIV risk behavior among urban MSM. *AIDS Behav* 2015; 19(2): 257–69. doi:10.1007/s10461-014-0937-2
- Johnson RL, Saha S, Arbelaez JJ, Beach MC, Cooper LA. Racial and ethnic differences in patient perceptions of bias and cultural competence in health care. *J Gen Intern Med* 2004; 19(2): 101–10. doi:10.1111/j.1525-1497.2004.30262.x
- Los Angeles County Department of Public Health Division of HIV and STD Programs. National HIV Behavioral Surveillance among Men Who Have Sex with Men (MSM) NHBS – MSM4, 2014. Atlanta, GA: US Centers for Disease Control (CDC); 2015. Available online at: <http://publichealth.lacounty.gov/dhsp/Reports/HIV/NHBS-MSMReport2014.pdf> [verified 12 September 2017].
- Cloete A, Kalichman SC, Simbayi LC. Layered stigma and HIV/AIDS: experiences of men who have sex with men (MSM) in South Africa. In Liamputtong P, editor. *Stigma, discrimination and living with HIV/AIDS*. Dordrecht, Netherlands: Springer; 2013. pp. 259–69. Available online at: http://link.springer.com.libproxy1.usc.edu/chapter/10.1007/978-94-007-6324-1_15 [cited 21 December 2016].
- Denzin NK, Lincoln YS. *The SAGE Handbook of Qualitative Research*. Thousand Oaks, CA: Sage Publications; 2011.
- Ryan GW, Bernard HR. Techniques to identify themes. *Field Methods* 2003; 15(1): 85–109. doi:10.1177/1525822X02239569
- Maulsby C, Millett G, Lindsey K, Kelley R, Johnson K, Montoya D, Holtgrave D. A systematic review of HIV interventions for black men who have sex with men (MSM). *BMC Public Health* 2013; 13(1): 625–638. doi:10.1186/1471-2458-13-625
- Sullivan PS, Carballo-Diéguez A, Coates T, Goodreau SM, McGowan I, Sanders EJ, Smith A, Goswami P, Sanchez J. Successes and challenges of HIV prevention in men who have sex with men. *Lancet* 2012; 380(9839): 388–99. doi:10.1016/S0140-6736(12)60955-6
- Lauby JL, Marks G, Bingham T, Liu K-L, Liao A, Stueve A, Millett GA. Having supportive social relationships is associated with reduced risk of unrecognized HIV infection among Black and Latino men who have sex with men. *AIDS Behav* 2011; 16(3): 508–15. doi:10.1007/s10461-011-0002-3
- Mashburn AJ, Peterson JL, Bakeman R, Miller RL, Clark LF. Influences on HIV testing among young African-American men who have sex with men and the moderating effect of the geographic setting. *J Community Psychol* 2004; 32(1): 45–60. doi:10.1002/jcop.10080
- Fuqua V, Chen Y-H, Packer T, Dowling T, Ick TO, Nguyen B, Colfax GN, Raymond HF. Using social networks to reach Black MSM for HIV testing and linkage to care. *AIDS Behav* 2011; 16(2): 256–65. doi:10.1007/s10461-011-9918-x
- Davis DR, Kurti AN, Skelly JM, Redner R, White TJ, Higgins ST. A review of the literature on contingency management in the treatment of substance use disorders, 2009–2014. *Prev Med* 2016; 92(Supplement C): 36–46. doi:10.1016/j.ypmed.2016.08.008
- Meredith SE, Jarvis BP, Raiff BR, Rojewski AM, Kurti A, Cassidy RN, Erb P, Sy JR, Dallery J. The ABCs of incentive-based treatment

- in health care: a behavior analytic framework to inform research and practice. *Psychol Res Behav Manag* 2014; 7: 103–14. doi:[10.2147/PRBM.S59792](https://doi.org/10.2147/PRBM.S59792)
- 26 Davidson P, Halcomb E, Gholizadeh L. Focus groups in health research. In P. Liamputong, editor. *Research Methods in Health: Foundations for Evidence-Based Practice*. Melbourne, Vic.: Oxford University Press; 2013. pp. 54–72.
- 27 Morgan DL. *Focus groups as qualitative research*. Thousand Oaks, CA: Sage Publications; 1996.
- 28 Patton M. *Qualitative evaluation and research methods*, 3rd edn. Thousand Oaks, CA: Sage Publications; 1992.
- 29 Sullivan PS, Salazar L, Buchbinder S, Sanchez TH. Estimating the proportion of HIV transmissions from main sex partners among men who have sex with men in five US cities. *AIDS* 2009; 23(9): 1153–62. doi:[10.1097/QAD.0b013e32832baa34](https://doi.org/10.1097/QAD.0b013e32832baa34)