An Event-Level Comparison of Risk-Related Sexual Practices Between Black and Other-Race Men Who Have Sex with Men: Condoms, Semen, Lubricant, and Rectal Douching

Sarah K. Calabrese, PhD,¹ Joshua G. Rosenberger, PhD,² Vanessa R. Schick, PhD,³ David S. Novak, MSW,⁴ and Michael Reece, PhD³

Abstract

Black men who have sex with men (MSM) living in the U.S. are disproportionately affected by HIV/AIDS. An online survey of sexual behavior was completed by Black, White, Hispanic/Latino, Asian/Pacific Islander, and other-race MSM (n=11,766) ages 18–87 years. Complete condom use, semen exposure, pre-coital rectal douching (enema use), and lubricant use at last male-partnered sexual event were compared by race, controlling for relevant sociodemographic variables and stratifying by sexual position (receptive, insertive, or both). Across sexual positions, 55–62% of Black MSM reported condom use, 5–8% reported semen exposure, 18–53% reported douching, and 33–43% reported lubricant use. Reported behavioral profiles were not significantly different from other races, except that Black MSM reported greater condom use than White MSM in the insertive position. Although findings argue against disproportionate rates of risk behavior accounting for racial disparities in HIV prevalence, they nonetheless highlight a need for continued behavioral intervention.

Introduction

BLACK MEN LIVING IN THE U.S. are disproportionately affected by HIV/AIDS and other sexually transmitted infections (STIs). Despite comprising less than 14% of the male population, Black men represented approximately 37% of U.S. men living with HIV/AIDS at the end of 2009, and 42% of newly diagnosed cases of HIV among U.S. men in 2010. Moreover, within the Black male demographic, Black men who have sex with men (MSM) account for the vast majority of newly acquired HIV infections (73% estimated in 2009¹) even though a minority of Black men in the U.S. report engaging in partnered activity with other men (e.g., 7% lifetime incidences of performing oral sex and receptive anal sex⁴).

The disparate rate of HIV infection among Black MSM has contributed to popular misconceptions of this subpopulation engaging in greater sexual risk-taking relative to other races. This perceived behavior and associated stigma have been exacerbated by media descriptions of the "down low," a term used to characterize men who have sex with men in secrecy⁵

and a term often linked to high-risk behavior, ⁶ despite a lack of empirical evidence for this association. ^{7,8} Although self-identification with the down low lifestyle has been documented among other racial groups, ⁹ the label is commonly affiliated with Black men in particular and perpetuates stereotypes of Black men's sexuality as excessive, deviant, predatory, reckless, and proximal to disease. ^{10,11} Black MSM, particularly those who also have sex with women, have been regarded as promiscuous and vectors of HIV transmission even by other Black men. ¹²

Multiple studies have documented sexual practices among Black MSM that counter these assumptions. For example, in a 2006 literature review, Millett and colleagues ¹³ found that the vast majority of studies published since 1992 reported comparable or lower rates of unprotected penile—anal intercourse (PAI) among Black MSM versus MSM of other races. Additionally, most studies indicated fewer lifetime male partners, fewer current male partners, and fewer casual male partners relative to White MSM, as well as comparable rates of commercial sex activity among Black MSM and MSM of other

¹Center for Interdisciplinary Research on AIDS, Yale University, New Haven, Connecticut.

²Department of Global and Community Health, George Mason University, Fairfax, Virginia.

³Center for Sexual Health Promotion, Indiana University, Bloomington, Indiana.

⁴OLB Research Institute, Online Buddies, Inc., Cambridge, Massachusetts.

races. 13 A parallel literature review by Feldman 14 that focused exclusively on young MSM generally echoed these same patterns, reporting similar or lower rates of unprotected PAI, similar or fewer sexual partners, and similar rates of commercial sex activity among Black MSM versus MSM of other races. A recent meta-analysis by Millett and colleagues¹⁵ aggregating data from 174 U.S. studies published between 1981 and 2011 indicated that Black MSM report less unprotected PAI with main partners, similar rates of unprotected PAI with casual partners, greater condom use, fewer recent and lifetime male sexual partners, and greater use of pre- or post-exposure prophylaxis than other MSM, but also higher participation in sex work. Taken together, research to date seems to converge on the finding that relative to MSM of other racial groups, Black MSM in the U.S. use condoms equally or more consistently, limit their number of male partners, and engage in similar or higher rates of other preventative activities. Apart from mixed reports regarding commercial sexual activity, these behavioral findings contradict the notion of sexual irresponsibility accounting for disparate rates of HIV infection across races.

Emerging literature suggests a shift in focus from patterns of condom use, partner quantity, and exchange sex to contextual factors such as partner characteristics (e.g., race, serostatus), network characteristics, structural factors (e.g., incarceration, education), presence of other STIs, knowledge of own HIV status and, relatedly, access to care and time to antiretroviral treatment initiation. 13-17 However, dismissal of sexual risk-related behavior as a contributing factor to racial disparities in HIV infection is premature in the absence of evidence derived from more precise and comprehensive behavioral measures. The lack of specificity typically involved in PAI-related risk measures clouds assessment of the actual level of risk averted. Specific nuances of PAI, such as position (receptive/insertive/both) and semen exposure, which are known to influence likelihood of HIV transmission, are commonly neglected.¹⁸ Moreover, documentation of condom use often relies on aggregate retrospective self-reports, which have proven vulnerable to distortion, with MSM more commonly underestimating than overestimating unprotected PAI.¹⁹ Additionally, Black MSM's participation in other behavioral practices known or suspected to influence vulnerability to HIV and other STIs, including lubricant use²⁰⁻²⁴ and precoital rectal douching or enema use, 25-30 has received insufficient attention in the literature.

The purpose of the current study was to conduct an event-level assessment of condom use, semen exposure, lubricant use, and rectal douching using more sensitive and comprehensive measures to confirm previous reports of comparable or superior rates of precaution among Black MSM versus MSM of other races. Last event activities were compared across racial groups (Black, White, Hispanic/Latino, and Asian/Pacific Islander) controlling for relevant sociodemographic and partner characteristics and stratifying by sexual position (receptive/insertive/both). Consistent with previous literature reporting equal or lesser risk-taking among Black MSM, 13,14,18,25 we hypothesized that relative to other races, a higher or not significantly different proportion of Black MSM would endorse condom use and a lower or not significantly different proportion would report semen exposure, rectal douching, and lubricant use.

Method

Participants

Survey participants (n = 11,766) included 3.6% Black MSM, 83.6% White MSM, 6.9% Hispanic/Latino MSM, 2.7% Asian/Pacific Islander MSM, and 3.2% MSM of other racial identities ages 18–87 years (Mean_{Age} = 37.89, SD = 12.39), who were recruited via the Internet. Participants met inclusion criteria if they were male, over the age of 18, HIV-negative, and reported their last sexual event to have been with another male, taken place within the previous year, and involved PAI.

Procedure

This study was conducted in partnership with one the world's largest operators of Internet websites for men who seek social and/or sexual interactions with other men. An electronic e-mail recruitment message was sent to users of two of the company's largest websites at the time if they reported residing in the U.S. The e-mail provided a brief description of the study and included a link to the study website. Individuals who visited the study website were able to read a detailed description of the study and consent form. Those who consented to participate in the study were directed to an anonymous online survey, which included all measures described below and took approximately 20 minutes to complete. All study protocols were reviewed and approved by the university's institutional review board.

Measures

Sociodemographic characteristics. Sociodemographic information was gathered via single-item measures of age, sexual orientation, race/ethnicity, level of education completed, relationship to partner, and perceived STI status of partner. The race/ethnicity item asked participants to select a single response option that indicated the label they felt best described their race/ethnicity: (1) African American/Black, (2) White, (3) Hispanic/Latino, (4) Asian/Pacific Islander, or (5) Other. Response options for the relationship to partner item included "my spouse or domestic partner," "my boyfriend or significant other," "someone I was casually dating/ hanging out with," "someone who paid me or gave me something for sex," "a friend," and "someone I just met." The first two response options were coded as (1) significant relationship, the third was coded as (2) casual relationship, the fourth was coded as (3) transactional relationship, and the last two were coded as (4) other relationship, respectively. The item measuring perceived STI status of partner referred to the participant's partner during his most recent sexual event and was worded as follows: "What do you know about whether this person had a sexually transmitted disease (STD) when the sex act occurred? (STDs are infections that can be passed during sex such as herpes, HPV/genital warts, chlamydia, gonorrhea, syphilis, and HIV)". Response options included "I know that this person did not have an STD at the time," "I know that this person did have an STD at the time," and "I don't know if this person had an STD at the time."

Sexual position. Participants' sexual position during their most recent male-partnered sexual event was coded as follows: (1) receptive (i.e., the participant's sexual partner inserted his penis into the participant's anus); (2) insertive (i.e.,

the participant inserted his penis into his sexual partner's anus); or (3) both insertive and receptive (indicating both (1) and (2) had occurred).

Condom use. Participants were asked to indicate whether they used a condom during their most recent male-partnered sexual event. Men who indicated condom use occurred were asked specifically which partner wore the condom ("I did," "my sexual partner did," or "we both did"). Dichotomous condom use (yes/no) variables were created for (1) receptive PAI (when the participant was the only receptive partner and his sexual partner used a condom during PAI), (2) insertive PAI (when the participant was the only insertive partner and used a condom during PAI), and (3) receptive and insertive PAI (when both the participant and the participant's sexual partner assumed both sexual positions and a condom was used by the insertive partner during PAI).

Semen exposure. Semen exposure was assessed by asking separately where the participant and his sexual partner ejaculated during the sexual event. Dichotomous semen exposure (yes/no) variables were created for (1) receptive PAI (when the participant was the only receptive partner and his sexual partner ejaculated in his anus without a condom), (2) insertive PAI (when the participant was the only insertive partner and he ejaculated inside his sexual partner's anus without a condom), (3) receptive and insertive PAI/self exposure (when both the participant and the participant's sexual partner assumed both sexual positions and the sexual partner ejaculated inside the participant's anus without a condom), and (4) receptive and insertive PAI/partner exposure (when both the participant and the participant's sexual partner assumed both sexual positions and the participant ejaculated inside the sexual partner's anus without a condom).

Lubricant use. Participants were asked to indicate whether they or their partners had used any type of lubricant ("store bought lube or saliva") during their most recent malepartnered sexual event. Response options for participants who reported using a condom were: (1) "Yes, but only the lubricant that was already on the condom," (2) "Yes, we used an extra lubricant regardless of what might have been on the condom," (3) "No," and (4) "Unsure." Response options for participants who reported not using a condom were: (1) "Yes," (2) "No," and (3) "Unsure." Lubricant use was coded dichotomously (yes/no), and participants who stated that they were "unsure" (n=274; 2.3%) were excluded from analyses.

Pre-coital rectal douching. Participants were asked to indicate (yes/no) whether they had used an enema (douche) prior to engaging in anal intercourse. Participants who did not know were excluded from the analyses.

Data analysis

All analyses were conducted using SPSS version 18.0 (Chicago, IL). Significant differences in the sociodemographic characteristics of the sample by race/ethnicity were assessed with an ANOVA for age and logistic regressions for education, sexual orientation, and partner relationship. The sample was stratified by sexual position and a series of logistic regressions were conducted to assess differences in condom use,

semen exposure, pre-coital rectal douching, and lubricant use by race at last event, controlling for all sociodemographic characteristics. Due to the number of comparisons and the large sample size, a Bonferroni correction was applied and the alpha value was set at 0.001.

Results

Age, education, sexual orientation, and relationship characteristics of the total sample are displayed in Table 1. Few participants indicated that they perceived their partner to have an STI at the time of the sexual event (4.3%, n=496), with the majority of participants indicating that they perceived their partner to be STI-free (59.3%, n=6,907) or were unaware of their partner's status (36.4%, n=4,363).

With the exception of perceived partner STI status, all sociodemographic characteristics significantly varied by race/ethnicity. White participants were significantly older than participants from other racial/ethnic groups, F(4, 11721) = 93.67, 4, p < 0.001. Overall, Asian/Pacific Islander participants reported the highest levels of education, with 66.1% (n = 164) reporting a bachelor's degree or higher. Black MSM were less likely to self-identify as homosexual/gay (78.5%, n = 333) than White, Hispanic, or Asian/Pacific Islander participants (p < 0.001) and more likely to report a casual sexual partner at last event than White or Hispanic participants (p < 0.001).

Participants were stratified by sexual position at last event and differences in complete condom use by race/ethnicity were explored (Table 2). Across sexual positions, 55–62% of Black MSM reported condom use at last male-partnered sexual event. Condom use at recent sexual event did not significantly vary based upon race/ethnicity for participants who reported only the receptive position or both positions at last event. Of participants who reported only the insertive position during the last sexual event, the odds of a Black participant reporting condom use were 1.38 higher than they were for a White participant (AOR = 0.62, p < 0.001). There were no other significant differences between Black participants and participants of any other racial/ethnic groups with regard to condom use.

The analyses conducted for condom use were replicated for semen exposure, pre-coital rectal douching, and lubricant use (Tables 3–5). Across sexual positions, 5–8% of Black MSM reported semen exposure, 18–53% reported pre-coital rectal douching, and 33–43% reported lubricant use at last malepartnered sexual event. After stratifying by sexual position and controlling for relevant sociodemographic characteristics, no significant differences in semen exposure, douching, or lubricant by race/ethnicity emerged.

Discussion

Overall, results of this event-level analysis suggest that Black MSM's sexual practices with regard to condoms, semen, pre-coital rectal douching, and lubricants are largely on par with MSM of other races. The only difference in behavior when sociodemographic characteristics were controlled was the greater proportion of reported condom use among Black versus White MSM in the insertive position.

These findings support existing literature contesting sexual risk-taking as an explanation for the disproportionate HIV/STI burden experienced by the Black MSM community

TABLE 1. SOCIODEMOGRAPHIC CHARACTERISTICS BY RACE/ETHNICITY (N=11766)

							R	Race/ethnic	ity			
Caniadamanandria	Total	sample	Blaci	k (ref)	И	Thite	Hispan	ic Latino	Asian/Pacific Islander		Other	
Sociodemographic characteristics	%	(n)	%	(n)	%	(n)	%	(n)	%	(n)	%	(n)
Age*												
18–23	17.2	(2024)	24.8	(105)	15.6	(1527)	25.2	(204)	26.0	(81)	25.9	(97)
24–29	14.7	(1733)	16.7	$(71)^{'}$	14.0	(1371)	18.7	(152)	21.8	(68)	16.0	(60)
30–39	23.0	(2701)	27.6	(117)	21.6	(2116)	30.6	(248)	31.7	(99)	29.4	(110)
40–49	26.1	(3068)	22.4	(95)	27.4	(2690)	18.7	(152)	16.0	(50)	19.5	(73)
50-59	14.4	(1694)	6.8	(29)	16.1	(1577)	5.3	(43)	4.2	(13)	7.5	(28)
60–69	4.1	(482)	1.7	(7)	4.7	(458)	1.4	(11)	0.3	(1)	1.3	(5)
70+	0.5	(64)		, ,	0.6	(62)	0.1	(1)		. ,	0.3	(1)
Education*												
High school or less (Ref)	12.1	(1190)	11.0	(41)	12.1	(983)	15.6	(109)	5.2	(13)	11.8	(38)
Some college/associates	39.4	(3869)	45.2	(168)	39.1	(3180)	41.1	(288)	28.6	(71)	45.5	(147)
Bachelors degree	38.1	(3745)	35.5	(132)	38.7	(3148)	33.7	(236)	50.0	(124)	29.4	(95)
Master's degree or higher	10.3	(1016)	8.3	(31)	10.2	(831)	9.6	(67)	16.1	(40)	13.3	(43)
Sexual orientation*												
Homosexual/gay (ref)	83.7	(9847)	78.5	(333)	84.2	(8251)	85.0	(689)	84.3	(263)	76.2	(285)
Bisexual	14.6	(1712)	19.6	(83)	14.3	(1396)	13.4	(109)	12.5	(39)	19.0	(71)
Heterosexual/straight	0.2	(22)	0.7	(3)	0.2	(16)	0.2	(2)	0.3	(1)		` /
Other	1.5	(177)	1.2	(5)	1.3	(131)	1.4	(11)	2.9	(9)	4.8	(18)
Relationship to most recent p	partner	*										
Significant (ref)	25.5	(2999)	15.6	(66)	26.1	(2549)	26.9	(218)	23.1	(72)	22.7	(85)
Casual	69.1	(8114)	77.1	(326)	68.7	(6714)	68.5	(555)	72.8	(227)	69.3	(259)
Transactional	0.8	(94)	0.9	(4)	0.9	(84)	0.2	(2)	0.0	(0)	1.1	(4)
Other	4.6	(535)	6.4	(27)	4.4	(433)	4.3	(35)	4.2	(13)	7.0	(26)

Note: p value based upon an ANOVA between race/ethnicity and age and a multinomial logistic regression to assess the relationship between education, sexual orientation, partner relationship, and race/ethnicity. *p < 0.001.

relative to their White counterparts. ^{13,14} However, they nonetheless highlight a need for continued promotion of safer sex among MSM of all races. Across our total sample, 50% of MSM reported forgoing condom use altogether at their most recent male-partnered sexual event; further, some who reported condom use reported such use to be incomplete. It is possible that some of these men implemented other risk reduction strategies (e.g., mutual HIV/STI testing and monogamy). However, over two-thirds of partnerings were reportedly casual and many participants did not know their partner's HIV/STI status (36%) or knew it to be positive (4%),

suggesting the existence of men in our sample who engaged in unprotected PAI at last sexual event and who may have been putting themselves at increased risk for HIV/STI acquisition by doing so. Overall, the prevalence of unprotected PAI among our sample speaks to the need to continue efforts to enhance and promote condoms, address barriers to condom use identified in the literature (e.g., "heat of the moment" sex, greater intimacy, and perceived pleasure loss associated with unprotected PAI), 31,32 and establish other methods of prevention (e.g., "female" condoms, microbicides, pre- and post-exposure prophylaxis) as safe, accessible, and affordable

Table 2. Condom Use at Last Event by Race/Ethnicity, Stratified by Sexual Position

		Recept	tive only		Insert	tive only	Both	receptiv	receptive and insertive		
	Condo	om use	Race/ethnicity	Condo	m use	Race/ethnicity	Condom use		Race/ethnicity		
Condom use	% No	% Yes	× condom use ^a	% No	% Yes	× condom use ^a	% No	% Yes	× condom use ^a		
Black (ref)	45.4%	54.6%		37.6%	62.4%		38.3%	61.7%			
White	48.9%	51.1%	0.98 (0.50-1.92)	52.9%	47.1%	0.62 (0.38-1.00*)	56.5%	43.5%	0.52 (0.18–1.51)		
Hispanic	38.3%	61.7%	1.52 (0.69–3.35)	44.9%	55.1%	0.85 (0.46-1.57)	49.7%	50.3%	0.70 (0.22-2.25)		
Asian/Pacific Islander	36.0%	64.0%	1.73 (0.72–4.18)	26.6%	73.4%	1.76 (0.65–4.79)	34.0%	66.0%	1.09 (0.25-4.72)		
Other	37.7%	62.3%	1.32 (0.54–3.21)	38.6%	61.4%	0.96 (0.45–2.05)	48.4%	51.6%	0.96 (0.24–3.76)		

ref, reference group.

^aAdjusted odds ratio between race/ethnicity and condom use controlling for age, education, sexual orientation, partner relationship, and partner's perceived STI status. *p < 0.001.

 TABLE 3. SEMEN EXPOSURE AT LAST EVENT BY RACE/ETHNICITY, STRATIFIED BY SEXUAL POSITION

Semen exposure Race/ethnicity Semen exposure % No % Yes * semen % No % Yes 93.0% 7.0% 95.3% 4.7% 95.2% 4.8% 1.34 (0.36–5.01) 95.1% 4.9% 96.0% 4.0% 1.63 (0.32–8.39) 95.4% 4.6% 98.8% 1.2% 5.16 (0.36–74.70) 96.6% 3.4%	Keceptive only Inser	insertive only	Both rec	Both receptive and insertive	ısertive	Both	receptive	Both receptive and insertive
ref % No % Yes exposure % No % Yes (cref) 93.0% 7.0% 95.2% 4.8% 1.34 (0.36–5.01) 95.1% 4.9% of the confict Islander 98.8% 1.2% 5.16 (0.36–7.70) 96.6% 3.4%	0,	Race/ethnicity	Semen exposure (self)	R	ace/ethnicity	Semen exposure (partner)	posure ter)	Race/ethnicity
93.0% 7.0% 95.2% 4.8% 1.34 (0.36–5.01) 95.1% 4.9% 96.0% 4.0% 1.63 (0.32–8.39) 95.4% 4.6% 98.8% 1.2% 5.16 (0.36–74.70) 96.6% 3.4%	% No	exposure ^a	% oN %	% Yes ev	semen exposure ^a	% No	% Yes	exposure ^a
95.2% 4.8% 1.34 (0.36–5.01) 95.1% 4.9% 96.0% 4.0% 1.63 (0.32–8.39) 95.4% 4.6% 98.8% 1.2% 5.16 (0.36–74.70) 96.6% 3.4%			94.2% 5.8	5.8%		92.2%	7.8%	
96.0% 4.0% 1.63 (0.32–8.39) 95.4% 4.6% 98.8% 1.2% 5.16 (0.36–74.70) 96.6% 3.4%	95.1%	1.06 (0.39–2.93)		. ,	(0.27-16.13)	%6'.26	2.1%	4.46 (0.71–28.22)
98.8% 1.2% 5.16 (0.36–74.70) 96.6% 3.4%	95.4%	1.02 (0.27–3.77)	- '	. ,	2.55 (0.19–33.72)	94.3%	5.7%	1.34 (0.17–10.38)
	%9.96	1.28 (0.15–11.20)	100.0% 0.0	0.0%		96.2%	3.8%	2.13 (0.11–40.48)
96.0% 4.0% 1.58 (0.24–10.41) 96.1% 3.9%	96.1%	1.17 (0.22–6.32)	•		1.37 (0.08–22.18)	94.0%	%0.9	1.30 (0.11–14.98)

^bThe adjusted odds ratio for semen exposure (self) among men who assumed both receptive and insertive positions could not be calculated for this group due to the limited number of ref, reference group. Adjusted odds ratio between race/ethnicity and semen exposure controlling for age, education, sexual orientation, partner relationship, and partner's perceived STI status. participants per cell. p < 0.001. options for MSM. Some men living with HIV report foregoing condom use when having anal intercourse (e.g., 32% at last episode among a sample of young ethnic minority MSM),³³ with several expressing the belief that the onus is on the HIVnegative partner to protect his own health;³⁴ thus, continued promotion of consistent and correct condom use among HIVnegative men is imperative.

Relatively small percentages of men in our sample reported that their partner ejaculated in their anus or that they ejaculated in their partner's anus during their most recent male-partnered sexual event (5-8% of Black men). This could reflect an effort at risk reduction via prevention of semen exposure, given that semen is a known vector for transmission of HIV and other microbes. 35,36 However, while avoiding semen exposure could have reduced risk, transmission of HIV and other STIs transmitted via body fluids would still have been possible (e.g., via pre-ejaculation or blood). 35,36 Moreover, skin-to-skin contact alone would have enabled the spread of some STIs (e.g., genital herpes, human papilloma virus/genital warts), which confer vulnerability to others (e.g., HIV).

As in other studies documenting the popularity of rectal douching among MSM, 25,26,37 such behavior was fairly prevalent (18-53% among Black participants). Unfortunately, several common forms of rectal douching (soapsuds, tap water) have been reported to damage the surface epithelium of the colon or rectum in human²⁹ and animal³⁸ studies, thereby potentially enhancing vulnerability to HIV and other STIs. However, research to date is limited and there is promise that other douching products (e.g., polyethylene glycol electrolyte solution) cause significantly less epithelial damage.²⁹ Given the variety of douching methods reported, ²⁶ further information regarding the least harmful solutions, equipment, and techniques would be helpful.

Lubricant use at last sexual event was commonly reported among participants (e.g., 33-43% among Black MSM). Other studies of lubricant use among MSM, though variable in their definition of lubricant, measurement time frame, and ethnic composition of the sample, have generally demonstrated lubricant to be widely utilized (e.g., 94% lifetime use and 93% past year use among Latino MSM living in NYC).²⁵ Despite the enhanced comfort and pleasure lubricants afford, recent literature has highlighted the enhanced risk they may also confer.²² Laboratory research has shown that many of these agents compromise the integrity of the epithelial lining of the rectum and colon, which could increases susceptibility to infection, 20,21,24,39 and that several products even amplify HIV replication in vitro.²⁰ Notably, research to date exploring lubricant as a mechanism of HIV/STI transmission has largely focused on PAI risk as it pertains to the receptive partner, and it is therefore unknown whether lubricants enhance susceptibility of the insertive partner's penis to infection. Moreover, it is conceivable that by reducing friction between the penis and anus, lubricants may decrease the likelihood of the receptive partner experiencing anal tearing or bleeding, potentially reducing exposure of the insertive partner to blood-borne pathogens (e.g., HIV). In light of the widespread use of lubricants among the MSM community and early evidence linking lubricant use to unprotected PAI,40 increased awareness of the potential risks or protective effects of lubricant use is critical. Additionally, efforts to develop and promote lubricants that do not facilitate HIV/STI transmission and could in fact prevent it (i.e., microbicides) should be continued.

Table 4. Rectal Douching (Enema Use) at Last Event by Race/Ethnicity, Stratified by Sexual Position

		Recept	ive only		Inserti	ve only	Both receptive and insertive			
	Rectal douching		Race/ethnicity ×rectal	Rectal a	louching	Race/ethnicity × rectal	Rectal douching		Race/ethnicity × rectal	
Rectal douching	% No	% Yes	douchinga	% No	% Yes	douchinga	% No	% Yes	douchinga	
Black (ref)	47.0%	53.0%		82.3%	17.7%		59.6%	40.4%		
White	50.7%	49.3%	0.66 (0.34–1.26)	84.7%	15.3%	0.72 (0.40-1.28)	55.1%	44.9%	0.91 (0.34-2.44)	
Hispanic	55.7%	44.3%	0.70 (0.33-1.47)	83.1%	16.9%	0.95 (0.45–1.99)	57.1%	42.9%	1.15 (0.38–3.43)	
Asian/Pacific Islander	55.4%	44.6%	0.74 (0.32–1.69)	88.2%	11.8%	0.60 (0.16–2.18)	51.0%	49.0%	1.27 (0.33–4.95)	
Other	49.7%	50.3%	0.86 (0.37–1.99)	86.6%	13.4%	0.74 (0.28–1.95)	59.1%	40.9%	0.98 (0.27–3.58)	

ref, reference group.

*p < 0.001.

There are several limitations to the current study that warrant mention. First, sample recruitment targeted sexually active, HIV-negative MSM with subscriptions to online social and/or sexual networking sites; thus, findings may not generalize to MSM who are HIV-positive, not recently sexually active, do not use the Internet, cannot afford a subscription to one of the designated sites, and/or are not invested in meeting new partners. Previous research has found great diversity in the sexual identities and activities reported by Black MSM, ¹⁰ and some Black MSM who are not open about their male sexual preference may be particularly difficult to access; thus, it is likely that our data do not capture the full range of HIVnegative Black MSM in the U.S. and do not represent the sexual practices of all. Second, for the sake of analyses, "Black" participants were treated as a homogeneous group and encompassed any participant who self-identified as "African American/Black" based on a list of choices that included an "other" category. Previous research has demonstrated differences in condom use across ethnic subcategories of Black people, 41 and there were likely cultural differences within Black-identified participants in our sample that were unaccounted for. Third, participants did not report partner race, and therefore it is unknown whether reported behavior took place in the context of an intraracial or interracial partnering. This is problematic to the extent that the partner was involved in decision-making surrounding condom use, lubricant use, etc., as the behavior was associated with the respondent's race but may actually have been driven by an individual of another race. Fourth, the sensitive, intrusive nature of the information solicited in our survey (e.g., enema practices) renders our data vulnerable to response bias due to impression management efforts. ⁴² Nevertheless, a large proportion of our sample did acknowledge behavior that might be considered "socially undesirable." Last, our anonymous method of data collection prohibited response verification, such as cross-referencing with partner reports.

In sum, results of this study corroborate previous scientific reports of comparable or superior rates of condom use among Black MSM relative to other races, demonstrating this effect to hold across sexual positions. In addition, our findings suggest that Black MSM do not differ significantly from other races with regard to several other potentially risky sexual behaviors not commonly considered: semen exposure, pre-coital rectal douching, and lubricant use. These results provide further evidence to contradict the negative stereotype of sexual risktaking behavior among Black MSM, which in recent years has been fueled by sensationalized accounts of the down low subculture. Moving forward, more contextualized understanding of the sexual experiences of Black MSM, with consideration given to social and structural influences (e.g., social discrimination, financial hardship), 43,44 is necessary to identify barriers to safety and points of possible behavioral intervention. In addition, research associated with anal douching and lubricant use should be a central priority.

Table 5. Lubricant Use at Last Event by Race/Ethnicity, Stratified by Sexual Position

		Recept	ive only		Insert	ive only	Both	ı receptiv	e and insertive	
	Lubric	ant use	Daga/athuricitu	Lubric	ant use	Daga/athmicitus	Lubricant use		Dago/oblassicity	
Lubricant use	% No	% Yes	Race/ethnicity ×lubricant use ^a	% No	% Yes	Race/ethnicity ×lubricant use ^a	% No	% Yes	Race/ethnicity ×lubricant use ^a	
Black (ref)	56.9%	43.1%		64.5%	35.5%		66.7%	33.3%		
White	53.2%	46.8%	0.98 (0.50-1.94)	50.0%	50.0%	0.64 (0.40-1.02)	45.4%	54.6%	0.46 (0.16-1.34)	
Hispanic	64.4%	35.6%	1.58 (0.71–3.49)	57.9%	42.1%	0.87 (0.48–1.61)	51.8%	48.2%	0.60 (0.18–1.97)	
Asian/Pacific Islander	66.9%	33.1%	1.87 (0.77–4.54)	77.4%	22.6%	1.95 (0.71–5.34)	69.2%	30.8%	1.02 (0.23-4.48)	
Other	63.5%	36.5%	1.29 (0.53–3.15)	63.9%	36.1%	0.99 (0.47–2.09)	53.8%	46.2%	0.86 (0.22–3.40)	

ref, reference group.

^aAdjusted odds ratio between race/ethnicity and rectal douching controlling for age, education, sexual orientation, partner relationship, and partner's perceived STI status.

^aAdjusted odds ratio between race/ethnicity and lubricant controlling for age, education, sexual orientation, partner relationship, and partner's perceived STI status. *p < 0.001.

Acknowledgments

Sarah K. Calabrese was supported by Award Number T32MH020031 from the National Institute of Mental Health. The content of this article is solely the responsibility of the authors and does not necessarily represent the official views of the National Institute of Mental Health or the National Institutes of Health.

Author Disclosure Statement

No competing financial interests exist.

References

- Centers for Disease Control and Prevention. HIV among African Americans. 2011; http://www.cdc.gov/hiv/topics/ aa/PDF/aa.pdf. Accessed July 13, 2012.
- United States Census Bureau. Estimates of the resident population by sex, race, and Hispanic origin for the United States: April 1, 2000 to July 1, 2009. 2012; http://www .census.gov/compendia/statab/cats/population/estimates_ and_projections_by_age_sex_raceethnicity.html. Accessed July 13, 2012.
- 3. Centers for Disease Control and Prevention. HIV surveillance report: Diagnoses of HIV infection and AIDS in the United States and dependent areas, 2010 http://www.cdc.gov/hiv/topics/surveillance/resources/reports/. Accessed 2012, July 13.
- 4. Dodge B, Reece M, Herbenick D, Schick V, Phd SAS, Fortenberry JD. Sexual health among U.S. Black and Hispanic men and women: A nationally representative study. J Sex Med 2010;7:330-=345.
- Lapinski MK, Braz ME, Maloney EK. The down low, social stigma, and risky sexual behaviors: Insights from African-American men who have sex with men. J Homosex 2010; 57:610–633.
- King JLH, K. On the down low: A journey into the lives of "straight" black men who sleep with men. New York: Harlem Moon; 2004.
- 7. Malebranche DJ. Bisexually active Black men in the United States and HIV: Acknowledging more than the "Down Low". Arch Sex Behav 2008;37:810–816.
- 8. Bond L, Wheeler DP, Millett GA, LaPollo AB, Carson LF, Liau A. Black men who have sex with men and the association of down-low identity with HIV risk behavior. Am J Public Health 2009;99:S92–S95.
- 9. 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;10:519–529.
- Ford CL, Whetten KD, Hall SA, Kaufman JS, Thrasher AD. Black sexuality, social construction, and research targeting 'the Down Low' ('the DL'). Ann Epidemiol 2007;17:209–216.
- Saleh LD, Operario D. Moving beyond "the Down Low": A critical analysis of terminology guiding HIV prevention efforts for African American men who have secretive sex with men. Soc Sci Med 2009;68:390–395.
- Bowleg L, Teti M, Massie JS, Patel A, Malebranche DJ, Tschann JM. 'What does it take to be a man? What is a real man?': Ideologies of masculinity and HIV sexual risk among Black heterosexual men. Culture Health Sex 2011;13:545–559.
- Millett GA, Peterson JL, Wolitski RJ, Stall R. Greater risk for HIV infection of black men who have sex with men: A critical literature review. Am J Public Health 2006;96:1007–1019.

- 14. Feldman MB. A critical literature review to identify possible causes of higher rates of HIV infection among young Black and Latino men who have sex with men. J Natl Med Assoc 2010;102:1206–1221.
- 15. Millett GA, Peterson JL, Flores SA, et al. Comparisons of disparities and risks of HIV infection in black and other men who have sex with men in Canada, UK, and USA: A meta-analysis. Lancet 2012;380:341–348.
- 16. Oster AM, Wiegand RE, Sionean C, et al. Understanding disparities in HIV infection between black and white MSM in the United States. Aids 2011;25:1103–1112.
- 17. Clerkin EM, Newcomb ME, Mustanski B. Unpacking the racial disparity in HIV rates: The effect of race on risky sexual behavior among Black young men who have sex with men (YMSM). J Behav Med 2011;34:237–243.
- Rosenberger JG, Reece M, Schick V, et al. Condom use during most recent anal intercourse event among a US sample of men who have sex with men. J Sex Med 2012;9:1037–1047.
- McAuliffe TL, DiFranceisco W, Reed BR. Effects of question format and collection mode on the accuracy of retrospective surveys of health risk behavior: A comparison with daily sexual activity diaries. Health Psychol 2007;26:60–67.
- Begay O, Jean-Pierre N, Abraham CJ, et al. Identification of personal lubricants that can cause rectal epithelial cell damage and enhance HIV Type 1 replication in vitro. Aids Res Human Retrovirus 2011;27:1019–1024.
- Fuchs EJ, Lee LA, Torbenson MS, et al. Hyperosmolar sexual lubricant causes epithelial damage in the distal colon: Potential implication for HIV transmission. J Infect Dis 2007; 195:703–710.
- 22. Gorbach PM, Weiss RE, Fuchs E, et al. The slippery slope: Lubricant use and rectal sexually transmitted infections: A newly identified risk. Sex Trans Dis 2012;39:59–64.
- Messiah A, Bucquet D, Mettetal JF, et al. Factors correlated with homosexually acquired human-immunodeficiency-virus infection in the era of safer sex. Was the prevention message clear and well understood. Sex Trans Dis 1993;20:51–58.
- Phillips DM, Sudol KM, Taylor CL, Guichard L, Elsen R, Maguire RA. Lubricants containing N-9 may enhance rectal transmission of HIV and other STIs. Contraception 2004;70:107–110.
- 25. Carballo-Dieguez A, Bauermeister JA, Ventuneac A, Dolezal C, Balan I, Remien RH. The use of rectal douches among HIV-uninfected and infected men who have unprotected receptive anal intercourse: Implications for rectal microbicides. Aids Behav 2008;12:860–866.
- 26. Carballo-Dieguez A, Bauermeister J, Ventuneac A, Dolezal C, Mayer K. Why rectal douches may be acceptable rectal-microbicide delivery vehicles for men who have sex with men. Sex Trans Dis 2010;37:228–233.
- 27. De Vries HJC, Van der Bij AK, Fennema JSA, et al. Lymphogranuloma venereum proctitis in men who have sex with men is associated with anal enema use and high-risk behavior. Sex Trans Dis 2008;35:203–208.
- 28. Heiligenberg M, Rijnders B, van der Loeff MFS, et al. High prevalence of sexually transmitted infections in HIV-infected men during routine outpatient visits in the Netherlands. Sex Trans Dis 2012;39:8–15.
- Schmelzer M, Schiller LR, Meyer R, Rugari SM, Case P. Safety and effectiveness of large-volume enema solutions. Appl Nursing Res 2004;17:265–274.
- Tinmouth J, Gilmour MW, Kovacs C, et al. Is there a reservoir of sub-clinical lymphogranuloma venereum and non-LGV Chlamydia trachomatis infection in men who have sex with men? Intl J Std Aids 2008;19:805–809.

31. Calabrese SK, Reisen CA, Zea MC, Poppen PJ, Bianchi FT. The pleasure principle: The effect of perceived pleasure loss associated with condoms on unprotected anal intercourse among immigrant Latino men who have sex with men. Aids Patient Care Stds 2012;26:430–435.

- 32. Malebranche DJ, Fields EL, Bryant LO, Harper SR. Masculine socialization and sexual risk behaviors among Black men who have sex with men: A qualitative exploration. Men Masculin 2009;12:90–112.
- 33. Phillips G, Outlaw AY, Hightow-Weidman LB, et al. Sexual behaviors of racial/ethnic minority young men who have sex with men. Aids Patient Care Stds 2011;25:S47–S53.
- 34. VanDevanter N, Duncan A, Burrell-Piggott T, et al. The influence of substance use, social sexual environment, psychosocial factors, and partner characteristics on high-risk sexual behavior among young Black and Latino men who have sex with men living with HIV: A qualitative study. Aids Patient Care Stds 2011;25:113–121.
- 35. Centers for Disease Control and Prevention. HIV transmission. 2010; http://www.cdc.gov/hiv/resources/qa/transmission.htm. Accessed July 13, 2012.
- Centers for Disease Control and Prevention. Sexually Transmitted Diseases (STDs). 2012; http://www.cdc.gov/ std/default.htm. Accessed July 13, 2012.
- 37. Rosenberger JG, Herbenick D, Van der Pol B, Novak DS, Reece M, Fortenberry JD. Exploring enema practices among men who have sex with men in the USA: Implications for sexual health. Sex Trans Inf 2011;87:A63–A63.
- 38. Melo UP, Palhares MS, Ferreira C, et al. Effect of different enema solutions on clinical parameters of equines. Arq Brasil Medi Veterin Zootec 2008;60:525–535.
- Russo JR LC, Moncla B, Ayudhya RPN. et al. Safety and anti-HIV activity of over-the-counter lubricant gels. M2010: Microbicides Conf Pittsburgh, PA2010.

- 40. Kinsler JJ, Galea JT, Peinado J, Segura P, Montano SM, Sanchez J. Lubricant use among men who have sex with men reporting receptive anal intercourse in Peru: Implications for rectal microbicides as an HIV prevention strategy. Intl J Std Aids 2010;21:567–572.
- 41. Villanueva LP, Darrow WW, Uribe C, Sanchez-Brana E, Obiaja K, Gladwin H. Ethnic differences in HIV risk perceptions and behaviors among Black 18–39 year-old residents of Broward County, Florida. Aids Ed Prev 2010;22: 160–171.
- McCallum EB, Peterson ZD. Investigating the impact of inquiry mode on self-reported sexual behavior: Theoretical considerations and review of the literature. J Sex Res 2012; 49:212–226.
- 43. Jeffries WL, Marks G, Lauby J, Murrill CS, Millett GA. Homophobia is associated with sexual behavior that increases risk of acquiring and transmitting HIV infection among black men who have sex with men. Aids Behav 2012; doi: 10.1007/s10461-012-0189-y.
- 44. Ayala G, Bingham T, Kim J, Wheeler DP, Millett GA. Modeling the impact of social discrimination and financial hardship on the sexual risk of HIV among Latino and Black men who have sex with men. Am J Public Health 2012;102:S242–S249.

E-mail: sarah.calabrese@yale.edu