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# “That’s Only for Women”: The Importance of Educating HIV-Positive Sexual Minority Men on HPV and High Resolution Anoscopy (HRA)

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## Abstract

Gay, bisexual, and other men who have sex with men (MSM) experience disproportionately high burdens of Human Papilloma Virus (HPV)-associated anal cancers. Recent focus has shifted to anorectal cancer prevention through high-resolution anoscopy (HRA); however, little is known about sexual minority men’s perceptions, attitudes, or beliefs regarding HRA. We conducted 4 qualitative Focus Group Discussions (FGDs) (n = 15) with sexual minority men, focusing on their beliefs, attitudes, and perceptions of undergoing HRA. Participants discussed their experiences of HPV/HRA as influenced by both their gender and sexuality, including *unawareness of HPV disease as a male health issue, challenges relating to female-oriented HPV/HRA language, conception of HPV/HRA as related to prostate health, and connecting their sexual behavior identification as “bottoms” to their need for HRA.* As efforts to improve HRA knowledge, access, and uptake among sexual and gender minority communities increase, special attention should be paid to language and messaging choices around HRA.

## Keywords

human papillomavirus, HPV, human immunodeficiency virus, HIV, anoscopy, high-resolution, HRA, sexual minority, MSM, sexual health, knowledge, attitudes

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## Introduction

Gay, bisexual, and other men who have sex with men (MSM) have borne and continue to bear the brunt of the HIV/AIDS epidemic in the United States.<sup>1,2</sup> Concomitant with high rates of HIV/AIDS in these communities are similarly significant burdens of other sexually transmitted infections (STIs), including high rates of anogenital Human Papilloma Virus (HPV) infection, with associated anorectal, penile, and lower genital tract neoplasms.<sup>3-10</sup> While tremendous progress has been made in extending lifespan and reducing morbidity in persons living with HIV/AIDS, the phenomenon of HIV and HPV co-infection has led to increasing rates of anal intraepithelial neoplasia,<sup>11</sup> anal cancers, and rectal cancers in these groups.<sup>10,12-17</sup> Despite advances in implementing highly active antiretroviral therapy (HAART) among persons living with HIV, reduction in incidences of these cancers has not been observed, and in fact have increased.<sup>18-20</sup> HPV-associated anal,

rectal, and penile cancers carry a significant burden of morbidity in these populations.<sup>21-25</sup>

Recently, researchers have begun to focus on the role of anal HPV screening and secondary prevention for HIV-positive and HIV-negative MSM as a method of reducing anorectal

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### What do we Already know About this Topic?

HPV coinfection with HIV increases the risk of anal cancer in sexual minority men and increased screening for anal dysplasia could reduce the risk of development of anal cancer.

### How Does your Research Contribute to the Field?

Our research gives a voice to the sexual minority men living with HIV and their attitudes and beliefs about anal cancer screening and the barriers to adherence with screening guidelines.

### What are your Research's Implications Toward Theory, Practice, or Policy?

Our paper focuses on the patient perspective around preventative screening and informs providers on how we can better serve this population through thoughtful and inclusive language.

neoplasm morbidity and mortality.<sup>7,9,26-34</sup> Though no national guidelines regarding who should be screened, how often screening should occur, or the optimal treatment modalities for anal dysplasia exist,<sup>14,35-37</sup> the currently accepted approach to anal HPV screening and management is modeled after approaches taken to screening and management for cervical dysplasia, which is accomplished through routine Papanicolaou cytological screening ("Pap smears") followed by colposcopy of the cervix to visualize and treat dysplastic lesions.<sup>38,39</sup> Patients at risk for anal dysplasia are typically first screened through self- or practitioner-collected anal/rectal swabs, and those with abnormal cytological results, including high-grade squamous intraepithelial lesions (HSIL), low-grade squamous intraepithelial lesions (LSIL), or atypical squamous cells of undetermined significance (ASCUS), are referred for further evaluation using high-resolution anoscopy (HRA).<sup>32,33,38</sup> During HRA, the practitioner inserts an anoscope into the anus and a colposcope is used to examine the transformation zone of the anus, including the squamocolumnar junction, using acetic acid and Lugol's solution.<sup>40</sup> Suspicious lesions are then biopsied, and those demonstrating significant dysplasia can be ablated or removed during subsequent HRAs, or treated with topical creams.<sup>40</sup>

While anal cancer screening has recently been shown to be acceptable to persons living with HIV,<sup>26,41</sup> multiple barriers to accessing such care have been documented.<sup>28,42,43</sup> These barriers may also be more significant among lesbian, gay, bisexual, transgender, and queer (LGBTQ) persons.<sup>42</sup> To date, few published studies have focused on the perspectives of sexual or gender minority persons who undergo HRA for HPV-related disease. Previous research has more commonly addressed the

acceptability of HRA, often by using retrospective chart review and patient satisfaction surveys among men and women living with HIV.<sup>5,26,34,41,44-46</sup> These studies have centered around experiences of pain during HRA, need for opioid medications during or after anal cytology and/or HRA, complications from the HRA (e.g., bleeding), and whether or not patients presented for recommended subsequent cytological examinations or HRAs.<sup>5,26,34,41,44-46</sup> When qualitative methods have been used, such as by Apaydin et al. (2018) and Russo et al. (2017), analysis has broadly focused on patient-, system-, and provider-level factors regarding HRA uptake and adherence, such as patient anxiety, provider expertise, and healthcare system inefficiencies.<sup>47,48</sup>

Socially constructed gender roles and performed gender have exacerbated disparities in HPV prevention and screening with the feminization of HPV leading to reduced rates of vaccination and screening.<sup>49</sup> Little consideration has been given to the role of gender and sexual orientation as they pertain to either anal cancer screening or HRA, and less is known about these communities' attitudes, perceptions, and beliefs around HPV-associated cancer care. In this study, we use qualitative methods to examine how a cohort of gay, bisexual, and other MSM living with HIV conceptualize anal cancer care, focusing on relationships between their understandings of gender and sexual orientation.

## Methods

This qualitative cross-sectional study was composed of participants recruited from the Anoscopy Clinic at the Infectious Disease Ponce Clinic of Grady Memorial Hospital. Potential participants were contacted through email, phone calls, and flyers given at the end of their appointments. Recruitment materials led to a secure, web-based screening survey. Electronic waivers of informed consent were obtained before screening. If a potential participant was found to be preliminarily eligible based upon their screening survey results, they could opt to leave their contact information to learn more. If they did, they were contacted by study staff and scheduled for a qualitative Focus Group Discussion (FGD). Participants were eligible if they reported being 18 years of age or older, cisgender male, HIV-positive, had a lifetime history of any sexual contact with cisgender men, and identified with a minority sexual orientation, including but not limited to homosexual/gay, bisexual, same-gender loving, pansexual, or queer.

Before each FGD was conducted, potential participants were provided with informed consent forms individually and informed consent was obtained from each participant. After consent was obtained, the participants were given a brief, baseline enrollment survey conducted on a computer tablet, or on paper if they preferred. This enrollment survey measured characteristics including age, race, gender identity, sexual orientation, HIV status, and history of HPV associated disease and HRA. In order to characterize the study population, descriptive statistics of these measurements, including means, ranges, and proportions, were calculated using STATA 16.0.

**Table 1.** Participant Characteristics, with Matrix Characteristics Preformed by Self-Reported Participant Race (n = 15).

	Group 1, n = 2 %(n)	Group 2, n = 5 %(n)	Group 3, n = 5 %(n)	Group 4, n = 3 %(n)	Total, n = 15 %(n)
<b>Race</b>					
Black/African-American	100.0 (2)	80.0 (4)	60.0 (3)	100 (3)	80.0 (12)
White/Caucasian	0 (0)	20.0 (1)	20.0 (1)	0 (0)	13.3 (2)
Other (i.e. "Colored")	0 (0)	0 (0)	20.0 (1)	0 (0)	6.7 (1)
<b>Educational Level</b>					
Some High School	0 (0)	20.0 (1)	20.0 (1)	0 (0)	13.3 (2)
High School or GED	50.0 (1)	40.0 (2)	0 (0)	33.3 (1)	26.7 (4)
Two-year university degree	50.0 (1)	20.0 (1)	40.0 (2)	66.6 (2)	40.0 (6)
Some college	0 (0)	20.0 (1)	40.0 (2)	0 (0)	20.0 (3)
<b>Sexual Orientation</b>					
Homosexual/gay	100.0 (2)	80.0 (4)	80.0 (4)	66.6 (2)	80.0 (12)
Bisexual	0 (0)	20.0 (1)	20.0 (1)	0 (0)	13.3 (2)
Did not respond	0 (0)	0 (0)	0 (0)	33.3 (1)	6.6 (1)

## Focus Group Discussion Findings

Qualitative research methods were then used to conduct FGDs with the participants.<sup>50</sup> Use of FGDs allows for dynamic discussion within a community in a manner impossible during individual in-depth interviews, including discussion of dissenting opinions and posing of questions by members of the discussion to their peers within the group.

Four focus groups were conducted in a private office building conference room adjacent to the medical center from which participants were recruited. Groups 1 and 2 were conducted by a masters-level facilitator trained in conducting qualitative research, who had no previous interactions with any of the participants. Groups 3 and 4 were conducted by a MD/MPH facilitator, who was known by some of the participants due to previous interaction in the clinical setting. Each facilitator had prior training in qualitative methods at a master's level.

The facilitators moderated the FGDs by using a pre-structured FGD guide. The guide focused on 1) participants' experiences of accessing anal cancer screening and HRA, their experiences of these events, and 2) participants' perceptions of undergoing these forms of medical interventions. In particular, the guide focused on 3) the intersections of these experiences and participants' gender and sexual identities. The structure of the guide additionally allowed for topics not addressed a priori in the guide to be added to the discussion. Each discussion was recorded on multiple audio-recording devices.

At the conclusion of each discussion, the audio recording was transcribed word-for-word (verbatim) into a word processor. During this transcription process, any identifying information spoken by participants during the FGD (such as real names, addresses, and names of their physicians) were omitted from the transcription. These verbatim transcripts were then imported into the qualitative data analysis tool MAXQDA. The audio recordings were then destroyed.

The deidentified transcripts were then analyzed and coded thematically by the primary investigator as informed by framework analysis, a form of qualitative data analysis that focuses on both the elicitation of novel themes and their

contextualization within a given framework of concepts derived from the data. Thematic analysis allows for both inductive and deductive approaches, allowing for a thematic exploration of the data.<sup>51-56</sup> Specifically, multiple passes of close readings of the transcripts by the first author resulted in the generation of a code book of repeated and/or novel themes and domains from the participants. These codes were then applied and reapplied as necessary to all transcripts. Saturation of themes was continually assessed via analysis of thematic data from the FGDs as they were conducted, monitoring for the number of new codes generated by each new FGD.<sup>57,58</sup> These codes formed the anchor points from which concepts were created, and the concepts were then combined into broader categories to inform a deeper analysis focused on codes relating to gender, sexual orientation, experience of anal HPV care, and receipt of HRA.

### Ethical Approval and Informed Consent

This study received ethical approval from Emory University Institutional Review Board (approval no. 114639). All patients provided written informed consent prior to enrollment in the study.

## Results

### Participant Characteristics

A total of 20 potential participants completed the screening survey. Of these, 100% were eligible based on study inclusion criteria. All but one eligible participant consented to additional contact and were scheduled for FGDs. Fifteen participants ultimately attended and participated in 4 FGDs that were conducted between December 2019 and January 2020, with a median number of 4 persons per group, ranging from 2 to 5 persons per group. Characteristics of these participants are summed in **Table 1**. In this sample, 80% of participants (n = 12) identified as Black/African-American, and 100%

reported being HIV-positive. The mean age of participants was 51.2 years (range 44 - 67). Most participants identified as homosexual/gay (85.7%,  $n = 12$ ), and all participants were cisgender men, defined as having been assigned male sex at birth and having a current male gender identity. The average length of each FGD was 105 minutes (range: 95 - 136).

## Unawareness of HPV as a Health Concern for Men

Overall, participants repeatedly spoke about how, prior to being referred by their physicians for HRA, they were unaware that men were susceptible to HPV infection or its sequelae. They spoke about having “no idea” that “this was a thing,” and if they had heard about HPV, that “that was just for women.” Similarly, they reported being unaware that HPV infection was associated with risk for cancers, especially rectal or anal cancer. Some participants discussed friends who had cancer, but they never “knew really what type of cancer,” or had assumed that it was “a prostate thing.” One participant discussed how he had first learned about rectal cancer by seeing a friend undergoing treatment for it:

With this here, it's different because I didn't actually know there's a thing called rectal cancer<sup>11</sup> 'till my friend got it and passed from it. (FGD1)

Participants repeatedly contrasted this lack of awareness of HPV to what they perceived as high awareness of HIV and other STIs in their communities. HPV was “not really highly discussed,” like “any other STD that's around,” such as “gonorrhea, syphilis, and what's another, chlamydia.” In particular, participants noted that HIV was “front and center” within their communities, and that HIV “has been ingrained in [them] since day one.” They reported seeing information about HIV “up in the club on flyers” and advertised on “all the apps, like Grindr, [and] Adam4Adam” but had not seen “a single pamphlet” about HPV. When HPV was discussed within their communities, the conversation tended to focus on genital or anal condylomas (warts), and knowledge of even this was low, as related by a participant in describing discovering condyloma on a potential sexual partner:

It's amazing the lack of education and information that's out there. . . . I've been with people, and I'll look at them, and they'll be like, show me their behind, and they want to do something, and I would see the warts. And I would see the warts on the penis. And I would say, do they not know what's going on? And it's skin to skin, you don't have to have outbreaks. . . . I don't know how to tell them in the beginning, but I'm kind of like, dude, do you think I'm going to put a condom on in any way and do something back there, or put a condom on and give you oral sex? Don't you know what's going on? (FGD3)

Accordingly, participants had confusion around the concepts of both anal cytology (“anal paps”) and HRA, despite the fact that all members in the FGDs had undergone anal cytology and had been subject often to multiple HRAs. They stated that they did not “actually know [they] would get that pap smear,” and wondered if anal Paps were to “detect cancer.”

Some participants clarified these ideas to others within the groups, one of whom asked if anal Paps were when “the doctor puts a finger in your butt and puts it on a slide.” This lack of health literacy extended to HRA, and many participants spoke about not knowing what HRA entailed until their first HRA appointment, which created “fear and anxiety.” One participant described how this anxiety exacerbated his poor comprehension of HRA:

In my mind, I was thinking, what are they finna do? So, it didn't really sink in, because all I could hear was a scope going up my rectum, so in my mind, same thing kept going through my mind, like, what the heck are they finna do and everything? But as far as they explained the procedure, for me it was like talking foreign at times. So, I wasn't really comprehending. (FGD2)

Connections were also drawn by the participants between their lack of knowledge of HPV disease and HRA to a sense of invulnerability that they felt as men, and how no one “really believes or thinks that it will affect them, or that they would get it.” They stated that men in their communities were supposed to be “strong” and show that strength through being “able to withstand” health problems, and that “nobody should know about [being gay],” so men “don't really go to the doctor until it's too late.” Participants discussed the “stigma that men don't go to the doctor,” noting that this pressure may be felt especially by men of color. “Black men [are] never going to get checked for nothing,” stated 1 participant, highlighting the racial and ethnic constraints perceived by some participants. Contrasted to that, other participants spoke about differentiating their identity as men from their behaviors that they felt put them at risk for anal HPV disease, specifically, engaging in anal sex:

Because for men, I think, I had always, I guess, my behavior, my environment, I just believed a certain thing in my environment, that this doesn't apply to me. So whether or not you practice some anal sex or not, it's how you think. And so, and I guess until you get more information, on actually it can apply to you, then you don't actually really think that it does. (FGD1)

## Challenges of Relating to Female-Oriented HPV Terminology

Similarly to how men performed their male identity by mentally excepting themselves from the risks which followed on their behaviour, men described that their initial difficulty in understanding HPV-related anal care was exacerbated by the female-oriented language that was used to describe the care. They were surprised by the terminology of the “male pap smear,” or a “pap smear for men,” that was first used to explain procedures to them, saying they had to “laugh about it.” Pap smears were perceived to be a “feminine thing” that was “only for women,” as described by 1 participant when he was first told of his need for anal cytological testing:

FACILITATOR. What were some of your reactions when you first heard about them [anal Paps]?

RESPONDENT. I was like, you're joking. They're joking. That's only for women. (FGD1)

Some participants reported negative associations with the word “Pap,” noting its connotation as a word applied to women. One participant initially thought that his provider, a Physician Assistant, was being “condescending” when she first “said Pap smear” to him, stating that “just because I’m gay, doesn’t mean I’m a woman.” When asked, participants largely suggested that when talking to male patients, the word “Pap” should not be used, or that the term “anal Pap smear” should be used in its entirety, instead of simply “Pap smear:”

And teach us the words. If it’s anal Pap smear, use that word. Don’t just say, Pap smear, because I don’t have a vagina. I don’t know what that means for me. (FGD4)

This hesitation around what was perceived to be female-centered and female-bodied language extended to discussions about outreach and communication within sexual and gender minority communities. Groups were virtually unanimous in their suggestion that, especially when conducting education and outreach into sexual minority male communities, language that is perceived to apply to women should be avoided:

Well, don’t use that word [Pap].

You don’t have to use that word [Pap], let them know that it’s just as well, like them getting their prostate checked. You need that checked too. (FGD2)

After discussing their initial difficulty understanding or relating to HPV-related anal cancer care, men described experiences of “stigma” that the medical care they were receiving was “just for women,” and not “for men too.” They spoke of having to explain to friends and family that, regarding HPV, “men can get it, women can get it too, and it’s recommended as if it was a colonoscopy, to check for cancers.” Men perceived that, in discussing their healthcare with their communities, their female friends were “very supportive” due to the similarities in healthcare that their female friends had received, whereas “guy friends” whom they had told “don’t say nothing:”

But a bunch of my female friends told me to come and stuff, because of sexual, you know, my preferences and stuff. So they told me, you need to go get checked and stuff, it’s best . . . As far as telling my family, no. But I have friends I discuss things with, like my female friends and stuff. (FGD2)

## Conception of HPV-Related Care and HRA as Related to Prostate Health

Men viewed their HPV related care and HRA as linked to their prostate health. Before becoming involved with HPV-related care and HRA, the participants were more concerned about the possibility of getting prostate cancer, noting that members of their families and communities had experienced prostate cancer. One participant stated that his friend having prostate cancer was “the reason why” he got an anoscopy, while another mentioned that his father having prostate cancer led him to “really want to know what was going on with [him].” Participants

spoke of fear or anxiety around rectal cancer as a new anxiety, and drew comparisons to past concerns about their prostate health:

I always was afraid I would maybe get prostate cancer. Now, with this here, the rectal, it’s because I knew I had practiced those things, so I put myself at risk, especially if I didn’t glove up. (FGD1)

Notably, some participants spoke in ways that indicated they viewed the health of their prostate and their HPV-related anal disease as linked phenomena. This apparent linkage also led them to question why, when their prostate health had been discussed by medical providers, their risk for anal cancer had been less emphasized or ignored. Referencing the similarity of DARE to a prostate exam checkup, they discussed how physicians and other healthcare providers would “check [their] prostate[s] on rectal exam, but never discuss” HPV or anal cancer with them, despite that “the prostate is right down in that area too.” Additionally, some participants connected a history of rectal STIs to their current risk of HPV-related anal disease, stating that their “anal areas” were “quicker” to “pick up [diseases],” as they are “like an oven:”

When I had got the gonorrhea, I was not [having a] good feeling. I’ve been fearful. And I even had to think all the way back, did any of that have, back then, the scarring back in there? These little things pile up. (FGD1)

This perceived connection between prostate cancer and anal cancer was discussed by the participants as an avenue for increasing outreach and awareness in their communities. Participants stated that since prostate exams were “something a man has to get” when one “gets to this age,” affiliating those examinations with anal health would “help a lot.” Similarly, participants emphasized that messaging that connected prostate health to anal health would serve to make men feel less “insecure” about accessing HRA:

Basically, for men, kind of size it up with prostate, in that area, so that men won’t feel so insecure, to let them know that it’s no different from you getting your prostate checked. (FGD2)

## Connection of Sexual Behavior “Bottom” Identity to Need for HPV Care and HRA

In general, HRA and anal healthcare was perceived by the participants to be a facet of healthcare that was unique to their sexual minority communities. HRA was discussed as being “a gay male area,” that was “more so for homosexual and gay men that are out here.” Within this identification as gay or homosexual, men further connected their need for HRA to their identification as “bottoms,” that is, the receptive partner in anal intercourse (Note 1), and may center their identity within their communities around that act. Some participants further viewed

linking one's identity as a "bottom" to anal HPV care as an avenue for increased outreach to and access of communities at risk:

If anything, I would love to get pamphlets and just go stand at the club and say, all bottoms line up! Or something. Because that's how they see themselves now. (FGD1)

Men anticipated further challenges in accessing men who did not identify as "bottoms," or in getting them to agree to this kind of care. "Some that are gay," said 1 participant, "even though there's people with men, they didn't want nothing entering them." Other participants said this challenge would apply especially to men of color, who said that men in these communities view even having a colonoscopy to screen for colon cancer to be "a gay thing," to have a "man or woman mess with me back there." This challenge extended even to members of their communities who were intimately aware of the HRAs that the participants were receiving:

My partner, he's clueless. He refuses to let anything go up there, so it's going to be really hard to convince him. (FGD3)

Although adopting an identity as a bottom is a clear example of where performance and identity meet, the centrality of sexual performance (either as gay or bisexual man or as a top / bottom) to one's identity was not shared by all participants. One participant clearly stated that he did not experience a connection between his sexual orientation and his identity in ways discussed by other participants in the group:

I don't work on the homosexual aspect of things, okay. I don't even think about it, it's not something that I walk around, going, oh, I'm homosexual. . . . It's not a part of me, it's not conscious with me, to the point where it's always at the forefront. (FGD3)

In fact, participants discussed that identifying with sexual minority communities may actually act as a *barrier* to seeking anal care for some men. In particular, 1 participant suggested that gay men especially were reluctant to learn potentially negative information about their health::

And when we talk about men, men have always – women have been quicker because they're birthing children or doing other things, but men have – and gay men have had this mentality, I don't want to know. (FGD1)

Despite this general conception of anal HPV and anoscopy as focusing on homosexual and bisexual "bottoms," participants used a different framework when discussing their behaviors. When focusing on their sexual behaviors, the participants tended to center the discussion around the behavior of receptive anal sex rather than the identity of "a bottom." They stated if people were "practicing anal sex" or participating in "activities [that] were part anal," then that behavior made men and women "the same." And that medical professionals should focus on their behaviors when assessing their healthcare needs. They

felt it was appropriate for healthcare providers to ascertain whether their patients were "a top or a bottom," or "a giver or a receiver," in order to determine what "certain things need to be checked out:"

They said, are you having anal sex? A man, a person who practices anal sex, whether you're a man or a woman, you're at risk. Well, I'm gay. I'm the bottom guy, so yeah . . . So I needed to know that. (FGD4)

## Discussion

Key in this study's findings is how our participants linked a lack of knowledge around HPV-related health conditions to the invulnerability they felt as men, and the subsequent delay in seeking medical care. Newman et al. (2008) documented a similar phenomenon wherein sexual minority men described a general lack of care-seeking behavior as a male trait, but participants in that study did not link their sexual orientation to this behavior, as participants in this study did, perhaps due to delivery of past culturally insensitive care from healthcare providers.<sup>28</sup>

Lack of knowledge about HPV-related disease as a men's health issue and conflation of HPV-related anal cancer with prostate health could also be influenced by the healthy literacy of the participants in our study. Majority of the participants in this study reported completing some high school or high school or GED which reflect low levels of educational attainment. Previous studies have examined the role of educational attainment in predicting the need for counseling regarding cancer risk.<sup>59,60</sup> Those who have completed secondary education, described as higher educational attainment, were more likely to participate in cancer screening and to report lower information needs than those who completed some high school, high school, or received their GED, described as low educational attainment.<sup>59,60</sup> Regardless, participants' familiarity with routine screening such as prostate cancer presents an opportunity for education and screening related to HPV-related anal cancer and the difference between the 2 diseases by providers.

This study also highlights that the use of language from cervical cancer screening and treatment when discussing anal cancer care presents unique challenges to sexual minority men, who are already sensitive to a lingering popular confusion of sexual orientation and gender identity.<sup>49</sup> This alludes to a stigma quite common in the past and persisting today, which confuses sexual desire and gender identity.<sup>61,62</sup> Participants in this study therefore suggested that researchers and advocates should avoid using what was perceived as female-gendered language in educational and outreach materials, but suggested instead that when referring to Pap smears the terms "anal Pap" and "anal Pap smear" could reduce the stigma. This contrasts with Koskan et al, whose 2018 study of 53 MSM who mostly had not accessed HRA, did not report this finding when discussing those participants' suggestions and preferences for outreach and educational materials.<sup>63</sup> While previous authors have also documented hesitation and concern around the phrase

“pap smear” when used in communities of sexual minority men, this study is the first to suggest that “anal pap” or “anal pap smear” may be considered as less gendered phrases.<sup>28,64</sup>

Within the context of a gay-community associated identity, another finding in this study is the way participants discussed their identification with being a “bottom” as promoting uptake of HRA. This identity, deriving directly from performing the receptive role in anal intercourse, attuned them to issues surrounding anal health, and allowed them to confer with female associates about sexual health practices related to being a sexually receptive partner. Participants harnessed this identity and suggested that future messaging around HPV, HRA, and anal cancer care should emphasize that it was healthcare for “bottoms.”<sup>65</sup> This is distinct from both from what has previously been described in the literature, and from messaging about anal health directed towards routine health screening for men (i.e. prostate cancer screening).

In previous literature, Newman and colleagues (2008) reported that participants in their racially diverse sexual minority male sample felt shame and embarrassment over having receptive anal intercourse, due to a perception that it spread disease, and that this internalized stigma could be a barrier to accessing anal HPV care; however, Newman’s study was released before PrEP was added to the HIV-prevention ‘toolkit’ of sexually active MSM, so these perceptions may have changed in the intervening years.<sup>28</sup> Similar to the concerns raised by Newman’s (2008) participants about the stigma of disease spread through receptive anal intercourse, Koskan et al. (2018) describes the concerns around the performative aspects of masculinity in a population of Latino MSM, noting that these men described that undergoing HPV testing and/or HRA would make them “less of a man,” or would be a procedure that would violate “*machismo*.”<sup>66</sup>

Discussion in feminist literature have further explained this phenomena by focusing on the intersections of misogyny and feelings of shame/stigma among men who engage in sexual intercourse.<sup>67,62,61</sup> Notably, this concept was *not* described by participants in this study, perhaps due to the differing ethnicities of the participants between these studies, or the differing geographic regions in which the research was conducted openly (Koskan et al. in the Greater Los Angeles area, Grace et al. in Toronto, Ontario). Likewise, different from Newman et al.’s study, whose study population described the anus as “hidden” or “private,” this male population discussed with female friends what routine health care for receptive partners should entail.<sup>27</sup>

The differences between our study population about using language such as “anal pap” and “anal pap smear” as well as emphasizing identity as a “bottom” and receptive anal sex as opportunities to improve public health messaging concerning HRA require examination of the uniqueness of our population. The participants of our study were directly recruited from Anoscopy clinic, and our population demonstrated high levels of adherence to HRA. While we have considered geography, introduction of PREP, and the evolution of HIV-positive healthcare as potential explanations, the resilience and ability

of participants to overcome the heteronormative nature of health care and prejudice cannot be understated. While previously discussed studies have identified hesitancy due to shame, our population embrace the identity of “bottom” and openly discussed HPV with female colleagues.<sup>68,28</sup>

The experiences of participants in our study greatly influenced the knowledge, attitudes, and beliefs surrounding HRA and HPV-related cancer screening in these men and further elucidation of how their experience has influenced their perspective can greatly inform future public health messaging and interventions. Our participants reported several characteristics that served as barriers to HRA and HPV screening such as social identity as MSM, sexual role preference as “bottom”, race, and delay of medical treatment, etc. The term intersectionality refers to this phenomenon as the critical insight that race, class, gender, sexuality, ethnicity, nation, ability, and age operate not in isolation but instead as reciprocal entities that influence behavior and health.<sup>69</sup> The use of an intersectional approach could further the integration of biological determinants of health and social determinants to provide more precise evidence for the causal nature of health behavior.<sup>69,70</sup> Further studies that use intersectionality as an analytical strategy could provide a fresh lens on this populations views towards HRA and HPV screening and inform future interventions and public health outreach.<sup>70</sup>

The results of this study should be interpreted considering the limitations resulting from its purposive sampling. Participants were predominantly members of racial minorities and recruited exclusively from an inner-city infectious disease clinic in the US South. As such, the views of these participants may be different from men in other regions of the US, members of other races, or from men with other sexual orientations, and cannot be generalized to persons from other groups. Because the participants in this study had all received HRA and had adhered to treatment regimens, men who have experienced more discomfort, stigma, or distress regarding HRA may not be included in these results.

The demographics of the facilitators of the focus group discussion - 1 White and 1 African American/non-White Hispanic cis-gendered woman with high educational attainment - may influence the views and responses by the participants. This interview bias can be avoided in future studies by recruiting facilitators whose sociodemographic characteristics match that of the participants.<sup>71</sup> This study is also potentially limited by its use of focus group discussions, rather than in-depth interviews, as some participants may have felt uncomfortable disclosing sensitive information in front of other members of their communities. Focus groups typically consist of 4 to 6 participants in research.<sup>72</sup> Our focus groups with only 2 and 3 participants may bias responses of the participants by limiting the range of experiences due to the small sample.<sup>72</sup> Additionally, a single author conducted the thematic analysis as opposed to 2 or more researchers limiting the mitigation of bias and interpretation of the data and thematic coding to 1 investigator.<sup>55,56,57</sup>



Despite these limitations, this study has several strengths. This study is among the first to conduct qualitative research among sexual minority men who are actively receiving HRAs and/or anal cancer care; previous studies have tended to focus on theoretical questions posed to sexual minority men at risk for requiring HRA.<sup>63,73</sup> To date, little published research has examined the themes analyzed in this study, especially among racial minority and/or sexual minority men, who historically have been underrepresented in research.<sup>74,75</sup> During the FGDs, novel themes not originally addressed in the discussion guide were raised by the participants, suggesting that facilitation of the discussions was effective in creating space for novel topics to be discussed.

Additional research is needed to determine what language would be more acceptable to sexual minority men, as past studies of gender within HPV messaging have tended to focus on increasing rates of HPV vaccination among adolescent males at the population level.<sup>76</sup> Potential avenues for investigation could include the linking of anal healthcare with men's concern for prostate health, as participants in this study suggested that this could increase comfort levels among men requiring anal HPV testing or treatment.

As lifespans of persons living with HIV/AIDS increase, rates of anal dysplasia and anal cancer are predicted to also increase,<sup>18</sup> and the role for anal cancer screening and HRA is anticipated to expand.<sup>77</sup> Understanding the intersection of gender, education level, sexual orientation, and HIV diagnosis within this population may provide information about background and barriers influencing screening knowledge, risk, and adherence.<sup>78</sup> To effectively mitigate cancer risk and improve prevention of HPV-related anal cancer in MSM physicians and researchers who work in these communities should consider the results of this study when counseling patients, crafting educational materials, and conducting outreach into sexual and gender minority communities. Future studies should focus on ways that messaging and outreach can be tailored to these communities, and how the resiliency of these communities can contribute to advancing anal cancer care.

## Note

1 Several participants elided anal, rectal, and colon cancers during the focus groups. Analysis of that elision is beyond the scope of the current paper. The focus group facilitator did differentiate these cancers and their etiology for participants at the close of the focus group session, as appropriate.

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