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Exploring repeat HIV testing among men who have sex with men in Cape Town and Port Elizabeth, South Africa

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Abstract

Despite the high prevalence of HIV among men who have sex with men (MSM) – and the general adult population – in South Africa, there is little data regarding the extent to which MSM seek repeat testing for HIV. This study explores reported histories of HIV testing, and the rationales for test seeking, among a purposive sample of 34 MSM in two urban areas of South Africa. MSM participated in activity-based in-depth interviews that included a timeline element to facilitate discussion. Repeat HIV testing was limited among participants, with three-quarters having two or fewer lifetime HIV tests, and over one-third of the sample having one or fewer lifetime tests. For most repeat-testers, the time gap between their HIV tests was greater than the one-year interval recommended by national guidelines. Analysis of the reasons for seeking HIV testing revealed several types of rationale. The reasons for a first HIV test were frequently one-time occurrences, such as a requirement prior to circumcision, or were motivations likely satisfied by a single HIV test. For MSM who reported repeat testing at more timely intervals, the most common rationale was seeking test results with a sex partner. Results indicate a need to shift HIV test promotion messaging and programming for MSM in South Africa away from a one-off model to one that frames HIV testing as a repeated, routine health maintenance behavior.

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Key terms

MSM; HIV testing; South Africa; qualitative

Introduction

More frequent HIV testing is critical in high incidence populations, because earlier diagnosis following an HIV infection allows for early treatment that leads not only to improved clinical outcomes for patients, but also potentially to reduction of HIV transmission risk to serodiscordant sexual partners (Baggaley, White, & Boily, 2010; Cohen et al., 2011). HIV testing also provides a unique point of access to services to support behavioral changes for HIV-uninfected and HIV-infected people. Although no national data for men who have sex with men (MSM) in South Africa are available, HIV prevalence among young MSM in 4 different locales ranged from 13 – 50% (Baral et al., 2011; Lane et al., 2011; Rispel, Metcalf, Cloete, Reddy, & Lombard, 2011), higher than the 5% prevalence among similarly aged heterosexual men in South Africa (South African National AIDS Council, 2012).

Most previous studies among MSM in Sub-Saharan Africa have focused on once-off HIV testing, often referred to as lifetime HIV testing. They have found that any lifetime HIV testing in South Africa is associated with improved attitudes towards testing (Kalichman & Simbayi, 2003), lower endorsement of AIDS-related stigma (Kalichman & Simbayi, 2003; Pitpitan et al., 2012), and having higher HIV knowledge (Knox, Sandfort, Yi, Reddy, & Maimane, 2011). Although these data provide information useful for targeting programs for MSM who have never tested, there is a dearth of data to inform programs designed to promote repeat HIV testing.

Current South African guidance calls for “inculcating a culture of HIV testing,” with annual testing for all sexually active adults and semi-annual repeat testing for key populations at risk for HIV (South African National Department of Health, 2010). Frequent HIV testing, along with appropriate counseling and linkage to care for those living with HIV, could lead to substantial reductions in HIV transmission over time in both US and international settings (Sullivan et al., 2012).

In order to increase repeat HIV testing, combination approaches may be necessary. Provider-initiated, opt-out HIV testing has been shown to increase testing rates, specifically among those who may not otherwise access HIV testing (Rothman et al., 2011). A recent analysis of HIV testing patterns among US MSM found that one typology of HIV testers are “maintenance testers” who seek repeat testing on a consistent basis (Hussen et al., 2013). Although no assessment of repeat HIV testing among African MSM has been published, a study of repeat workplace HIV testing among a general population in South Africa found that 19% sought repeat testing when offered free workplace testing 12 months after an initial HIV test (Houdmont, Munir, & Grey, 2013). To best establish routine testing for MSM, more information will be needed to understand HIV testing patterns and the individual rationales for test seeking in order to facilitate expansion of the group of maintenance testers.

For MSM in South Africa, no published research addresses the drivers of repeat HIV testing. In order to have an in-depth understanding of HIV testing behaviors among these men, we qualitatively explored histories of HIV testing, including investigation of rationales for seeking both first and subsequent HIV tests.

Methods

The current study presents findings from a formative assessment conducted prior to the launch of a combination package of HIV prevention interventions for MSM at sites in Cape Town (CT) and Port Elizabeth (PE), South Africa. To meet the mixed aims of the formative assessment, we intentionally over-sampled with a final sample of 79 in-depth interviews.

For this analysis, we expected that data saturation would occur prior to analyzing all 79 interviews. Based on a typical case purposive sampling strategy (Patton, 2002) that also targeted the richest and most complex interviews, we therefore sub-sampled 34 interviews to obtain variation in major groups in the MSM population. We sampled across HIV status (self-reported uninfected, infected), age (18-25, >25), and the most common categories of race in the South African census (white, colored, black). Charmaz specifies criteria for determining qualitative data saturation, including analyzing the depth of data across and within classifications, and how subsequent analysis informs theoretical understanding (2006). Based on these criteria, we determined that the sample of 34 interviews was sufficient to reach saturation for the present analysis.

Participants were recruited based on previously-developed lists of local MSM gathered by collaborating community-based organizations (CBO), and on snowball sampling (Patton, 2002) from this initial group. Eligible participants were male at birth, reported anal sex with another man in the last six months, were aged 18 years or older, and spoke English, Xhosa, or Afrikaans.

Four research assistants, including two authors of this manuscript, AdV and ZK, conducted in-depth interviews using a semi-structured guide. We assessed reasons for HIV testing by asking an open question: "Why did you test at this time?", followed by topical probes exploring testing context and experience. To facilitate conversation, we diagrammed life events such as anal sex debut, coming out to friends and family, and first and subsequent HIV tests. This timeline activity also allowed for collection of quantitative data regarding the number of lifetime HIV tests, and the time gaps between HIV tests. Data were collected in early 2012 by trained interviewers in 90-minute private interviews that followed informed consent procedures. Ethical clearance for the study was provided by boards at Emory University, Human Sciences Research Council, and University of Cape Town. Interviews were recorded, translated into English when applicable, and transcribed.

Data analysis

For analysis of transcribed data, we used Grounded Theory techniques, implementing the constant comparison method (Strauss & Corbin, 1998). An inductive codebook with 66 different codes or sub-codes was developed based on iterations of independent analysis among three coders (AJS, RS and AdV), followed by consensus revisions. Assessment of

lifetime HIV testing histories included analysis of elapsed times between HIV tests. For men reporting no subsequent test, elapsed years were calculated from the time of most recent test until time of data collection. Conceptual mapping, an analysis procedure of visual imaging, informed our analysis (Charmaz, 2006). After development of the visual model, the data were recoded and each model component assigned a code. This allowed us to explore themes in the model in greater depth, and to understand relative frequency of each theme that was subsequently categorized as “common” (6 or more mentions) “moderate” (3-5 mentions) or “rare” (1-2 mentions) for frequency of appearance in our model. Data management and analysis were conducted in MAXQDA software (1989-2014).

Results

By design, the sample was evenly distributed between men aged over and under 25; approximately one-quarter (8/34) were HIV infected; and blacks, whites and coloreds comprised 21/34 (62%), 6/34 (18%) and 7/34 (21%) of the sample, respectively. The highest level of education attained for 10/34 (29%) of participants was primary, for 18/34 (53%) secondary and for 6/34 (18%) tertiary.

All but one participant had a first HIV test, with 5/33 (15%) testing positive (Figure 1). Following the first test, 12/28 (43%) of HIV uninfected men never tested again. Of the 16 men who did receive a second HIV test, 3/16 (19%) tested positive. Following a second HIV test, 5/13 (39%) of HIV uninfected men never received a subsequent test, and eight (less than one-quarter of the original group) were tested three or more times. Median age at first anal sex with a man was 18 years, and most men had their first HIV test subsequent to their first anal sex experience (median time to first test of four years after first anal sex). Median times after first test, until second test or the time of interview, were 1.5 and 2.5 years, respectively. Median times after second test, until third test or the time of interview, were both one year.

We developed a conceptual map linking rationales for seeking HIV testing to the lifetime test number (first, second, third or more) for which each rationale was applied (Figure 2). The map shows that of the seven HIV testing rationales identified, four were only mentioned in relation to seeking a first HIV test, whereas the other three led to multiple HIV tests.

Rationales that led only to a first HIV test

Fear after sexual debut

A common (6/34) experience of men in the sample was fear related to HIV acquisition after an early sexual experience, either vaginal or anal, that led them to seek an HIV test. Interestingly, for all six of these participants, the sexual debut events that precipitated HIV testing had minimal actual risk of transmission (i.e. sex acts were condom-protected or exclusively oral). These participants explained their testing as due to ‘*paranoia*’. One man in this group who had exclusively practiced oral sex prior to his HIV test described his testing experience as: “... *weird, because ... there wasn't really a reason for me to go at that stage*” (HIV- White, Cape Town (CT), 25 years)

Impromptu testing, often motivated by the “know your status” campaign

A moderate number (5/34) of first-time HIV tests were spontaneous decisions that occurred due to a combination of test availability, a motivation to take part in the “know your status” campaign, and social environment. Men described attending a variety of free and convenient walk-in venues for impromptu testing, including hospital, university and mobile testing facilities. A few of these men mentioned the national campaign slogan to promote HIV testing, “Know your status,” or similarly described a need to “know where I stand.” Several additionally described impromptu tests as being supported by friends and peers:

P: I was 20 ... in the streets ... around the containers (mobile testing facility), that's where I tested the first time ... We were a group of friends and we just said let's go test, and that's how we went.

I: So you all as friends motivated each other to test ... Did you (ever) test afterwards?

P: No. (HIV- Black, PE, 22 years)

Required testing: Circumcision or pre-employment

A few men in the sample received their first HIV test as a required component of their group circumcision ceremony (2/34), or for new employment (1/34). Both circumcision and pre-employment tests were described as once-off events that did not include any formal HIV risk reduction counseling.

Rationales that led to multiple HIV tests

Sex with unknown serostatus or HIV infected partner

It was common for participants to seek an HIV test after sex with a partner known to be HIV positive (4/34) or of unknown HIV status (8/34). For participants having sex with unknown serostatus partners, test seeking was usually prompted by factors beyond the risk inherent to their situation. For instance, half (4/8) described mistrust in their relationships, with one representative participant stating, “*Maybe (my boyfriend's) got someone in town, and that's why I really said ... 'I have to do a test'*” (HIV- Black, CT, 26 years). Another participant described how hearing about the HIV status of a previous partner led to test seeking, “*(I tested) cause I was cheating ... my one friend told me that this guy has HIV ... and we didn't use a condom*” (HIV- Colored, PE, 22 years).

Symptoms

Another common (10/34) reason for men to seek HIV testing was physiological symptoms, either based on their own understanding or based on a physician's recommendation. Such cases were evenly divided between false alarms (such as one participant who had a rash from Rubella) and cases in which an individual subsequently tested positive for HIV:

I got sick. I was never fat but I lost 10 kilos. I had all the signs of stress. My hair fell out ... I had to shave it off. I had shingles. I was battered for 3 months. I couldn't walk. And then I went into...they took me to a hospital. And then they did

some testing. And then they found out I was HIV positive. (HIV+ Colored, CT, 45 years)

Testing in coordination with a partner

Testing in coordination with a partner was common (13/34). In the majority of these cases, the motivation for test seeking was to allow for safe sex without condoms. The mechanics of testing with a partner usually involved separate HIV test seeking, followed by mutual disclosure of test results:

Before (testing) we definitely would have had sex with a condom ... But, um, we got tested ... and then had sex without a condom ... We wanted to get tested together, but I work and he was a student, so he went while he had free time and ... I went after work one night. (Then) we showed each other the results sheets. (HIV- White, CT, 25 years)

For the few participants testing together as a couple, experiences were usually described in a negative light, with one representative participant noting:

(Testing together) was nerve-wrecking because ... the (counselor said), "One partner can be positive and the other partner can be negative." And I was like, "Oh my God, why would you say that?" It was nerve-wracking ... finding (my HIV status) with someone (HIV- Colored, CT, 24 years)

Discussion

There was limited repeat HIV testing in the qualitative sample, with three-quarters of participants having two or fewer lifetime tests to screen for HIV. From the seven rationales for seeking HIV testing discussed by men in our sample, four did not encourage repeat testing. There is a need for future research and programs to identify and promote reasons and opportunities for repeat HIV testing, with the aim of expanding the pool of repeat testers.

Analysis of participant-completed timelines indicated substantial HIV testing delays, both for testing after first anal sex and for repeat testing. Time gaps between HIV testing events were often greater than the recommended one-year interval, (South African National Department of Health, 2010) indicating that there it may be beneficial for future programs to include a component supporting testing as a routine (e.g. every 3-6 months) health maintenance behavior.

Current messaging promoting HIV testing was successful in our sample in encouraging ever HIV testing, with men frequently citing early education about HIV and a national prevention campaign slogan: "Know Your Status" ("South Africans, know your HIV status!," Sep 5, 2011) for their first HIV test. This slogan was also found as a reason for testing in a previous study among South African adolescents (MacPhail, Pettifor, Coates, & Rees, 2008). Yet the slogan is ambiguous towards repeat testing, and MSM in our sample seemed to internalize the message as promoting a single HIV test rather than repeat testing. For MSM, a social

marketing approach emphasizing repeat testing would likely add value to current approaches.

Although experience of symptoms led to a substantial amount of HIV testing (it was the third most cited rationale), this outcome might best be interpreted as a failure of the HIV screening system. The five participants who tested positive described AIDS-related symptomology, representing delayed entry to care. Similarly, the rationale of fear after sexual debut indicates a screening failure, because participants who were testing for this reason faced little or no actual risk for HIV transmission. Motivated by these rationales, participants were either testing too early or too late; future messaging should avoid fear-based messages, and clarify recommended timing of routine HIV testing.

For the eight participants who had three or more lifetime HIV tests, seven reported their rationale for continued test-seeking as being testing in coordination with a partner. These findings support previous work that has highlighted the importance of main MSM partnerships in shaping risk-taking and risk-protective behaviors, (Siegler, Sullivan, Khosropour, & Rosenberg, 2013) including HIV test seeking behaviors (Katz, Swanson, & Stekler, 2013; Mitchell & Horvath, 2013). In our sample, testing by couples was usually individual HIV testing followed by individually-driven discussion of results, and was not Couples HIV Testing and Counseling (CHTC) which involves testing and counseling at the level of the couple. Previous work has demonstrated high levels of willingness among South African MSM to participate in CHTC (Stephenson, Rentsch, & Sullivan, 2012; Stephenson et al., 2013). Given the prominence in our sample of couples-based HIV testing leading to repeat testing, CHTC may be an important area to explore for future interventions among MSM in South Africa.

This study has a number of limitations, including the CBO-facilitated sampling method. This sampling allowed for access to a hidden population, but is limited to the extent that men in contact with community organizations may not share the same experiences as other South African MSM. There were few repeat HIV testers in our sample; a promising area for future research is assessment of positive deviance with this population. Recall problems and social desirability also may have influenced the data, as we asked participants to recall lifetime HIV testing experiences.

To our knowledge, this study is the first to provide data on lifetime HIV testing among MSM in South Africa. For most participants in the study, lifetime HIV testing was characterized by few overall tests, lengthy time intervals between tests, and testing rationales that were not compatible with repeat testing. This may indicate a need to shift the messaging in South Africa around HIV testing away from a one-off model to one that frames testing as a repeated, routine health maintenance behavior. Bringing about this type of conceptual shift may require substantial effort and coordination, as it involves multiple domains such as social marketing campaigns, media efforts, one-on-one health counselor communications, health education classes, and CBO communications. This shift is particularly important, as a number of participants cited public messaging campaigns and other health communications as reasons for seeking HIV testing. For future campaigns with MSM, it may be helpful to build on the success of couples testing in encouraging repeat

testing, but it is also important for programs to target expansion of the pool of maintenance testers to include those who are not currently in long-term relationships. Similar to public health interventions, public health research should shift its focus away from assessment of ever HIV testing to one that includes assessment of repeat HIV testing. Changes to research and intervention priorities regarding repeat HIV testing will yield important research and programmatic data regarding the best ways to encourage HIV testing among MSM in Africa.

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Figure 1. History of HIV testing with mean and median years between HIV tests, by number of participants undergoing HIV testing and testing outcome

Figure 2. Conceptual map of HIV testing rationales by lifetime test number