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Attitudes toward couples-based HIV counseling and testing among MSM in Cape Town, South Africa

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Abstract

Couples-based voluntary HIV counseling and testing (CVCT) allows couples to receive their HIV test results together and has been demonstrated to be effective in reducing HIV transmission, increasing and sustaining condom use, and reducing sexual risk-taking among at-risk heterosexual couples. However, the acceptability of CVCT among MSM has yet to be evaluated in an African setting. The results from seven focus group discussions and twenty-nine in-depth interviews conducted in Cape Town, South Africa exhibit overwhelmingly high acceptance of CVCT. Participants were attracted to the counseling components of the service, stating that these would allow for the couple to increase their commitment and to explore methods of how to effectively reduce their risk of acquiring or transmitting HIV in the presence of a trained counselor. These results suggest CVCT would be highly welcomed and could work to fill the significant lack of services available and accessible to MSM couples in Cape Town.

Keywords

CVCT; MSM; HIV testing; Couples

INTRODUCTION

Couples-based voluntary HIV counseling and testing (CVCT) is a strategy that has been used in Africa for over 20 years among heterosexual couples, and is considered to be a "high leverage HIV prevention intervention" in that setting [1]. A typical CVCT service allows couples to participate in the whole cycle of voluntary HIV counseling and testing (VCT) together: they receive pretest information, pretest counseling and risk ascertainment, the results of HIV testing, and posttest counseling. Unique to CVCT, couples receive essentially two sets of test results: their personal results (negative or positive), and their results as a couple (sero-concordant negative, sero-concordant positive, or sero-discordant), and receive risk reduction counseling tailored to their couple sero-status.

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Previous studies with heterosexual sero-discordant couples have demonstrated CVCT to be effective in reducing HIV transmission, reducing sexual risk-taking, and increasing and sustaining condom use [1–5]. In Africa, both couples utilizing CVCT services and individuals utilizing VCT services exhibited higher rates of condom use; however, the degree of increase was more pronounced in CVCT services than VCT services [4, 6]. Further, CVCT has not only been shown to be more cost-effective than individual VCT, but the economic savings are also increased if the service is targeted toward populations with a high HIV prevalence [7].

Several studies have demonstrated that HIV prevalence among MSM in many sub-Saharan African countries is generally higher than among adult men in the general population [8]. It has been hypothesized that HIV prevalence among MSM in South Africa may also exceed that in the general population [9], but precise national estimates are lacking due to studies focusing on different subpopulations of MSM and the relatively small sample sizes accessed for analysis. However, localized studies in Cape Town, Johannesburg and Durban, and Soweto have all consistently yielded results showing that HIV prevalence ranged from 12.6% to 47.2% among different subpopulations of MSM [10–12]. Compared with a national HIV prevalence estimate around 11% in the general population (in 2008, 10.9%, 95%CI 10.0, 11.9%) [13], these findings suggest an unlinked epidemic pattern between MSM and the general population [14–16] and that current HIV prevention efforts have been unable to contain or reduce the spread of HIV infection among MSM in these settings [17].

A recent survey by the Global Forum on MSM and HIV in eight regions of the world revealed that more than 80% of MSM reported they had an HIV test and received test results in the past 12 months [18, 19]; however, only 27.2% (95%CI 17.2, 40.3%) of MSM in South Africa reported being aware of their HIV status in 2008 [13]. These relatively low levels of awareness may be ascribed to the mixed feelings MSM have had regarding VCT facilities. MSM who were well informed about HIV and indicated that they tested regularly generally had more positive attitudes toward HIV testing services; however, an abundance of MSM have cited problems with VCT facilities, such as the inability to understand nurses, the mishandling of reporting the test results, the inadequate or non-existent counseling given by the provider, and fears of discrimination from providers [20, 21, 22].

Equivalently in the United States, the MSM population is highly impacted by HIV. Albeit the relatively low prevalence of HIV in the US general population [18], over half (53%) of the cases of HIV in 2006 were among MSM [23]. Additionally, a recent US investigation demonstrated that most new HIV infections among MSM were attributed to transmission from an HIV-positive main sex partner [24], which emphasized the influential role that couples may have in an HIV epidemic. There has been strong evidence that MSM in the US would be highly receptive to CVCT services with only slight modifications to the existing African CVCT model used with heterosexual couples [25]; however, the acceptability of CVCT among MSM has yet to be evaluated in an African setting.

This investigation aims to examine attitudes toward CVCT among MSM in Cape Town, South Africa. South Africa is one of the few countries in the world to legally protect all the rights of MSM, and Cape Town has one of the largest, most visible lesbian, gay, bisexual, and transgender (LGBT) populations in the African continent, thus the study setting holds potential for the establishing of CVCT services for MSM. This study examines whether or not CVCT would be welcomed among MSM in Cape Town and how the service would need to be structured in order to be the most attractive to MSM.

METHODS

Recruitment and methodology

During June and July 2010, and in January 2011, seven focus group discussions (FGD) and twenty-nine in-depth interviews (IDI) were conducted in Cape Town in order to examine participants' perceptions of CVCT, comparisons of CVCT to VCT, and perceived dyadic changes that may result from CVCT.

Participants were recruited utilizing venue-based sampling that focused on communitybased organizations with strong connections to various MSM sub-populations. The target population for this study was men aged over 18 years who self-report that they have sex with men and that they reside or work in Cape Town or its surrounding townships. For the FGDs, the aim was to have 6 to 10 participants per group; anticipating subject loss, we overrecruited by approximately 30%. Potential participants who contacted the study organizers were screened on the aforementioned criteria. Upon arrival to the selected venue, participants first went through the consent process, and then completed a screening questionnaire (including age, race, sexual history, and relationship status). The research team members reviewed the completed questionnaires and selected up to 10 participants to represent a diverse mix of the potential participants (e.g. a range of ages, races/ethnicities and relationship statuses). For the IDIs, nearly half of those interviewed were recruited from the FGDs, enabling them to share information that may not have been shared during the focus group, and the others were recruited using the venue-based sampling methodology. The individual interviewees also underwent a similar process of consent and screening, and eligible participants were selected to represent a variety of ages, races/ethnicities, and relationship statuses. All participants were informed of the following: a 'couple' or a 'relationship' is self-defined, there was no need to reveal their sero-status, and that the researchers were not offering HIV screening. Following each focus group and interview, the participants were given a small envelope that included their travel reimbursement (R80≈10-12USD), referral cards with some details about the study and contact information, and a mental health resource guide detailing services in the area they could attend if they felt it necessary.

Data collection and analysis

The question guide for the focus group discussions included the following themes: attitudes towards HIV testing, motivation for HIV testing, attitudes towards CVCT, likelihood of participation in CVCT, barriers and facilitators to CVCT use, and the impact of CVCT on relationship quality and behavioral change. The question guide for the in-depth interviews included topics from the focus group question guide, as well as the following themes: attitudes toward individual HIV screening, experiences with discrimination in different sectors, perceived stigma based on sexual orientation, and racial and cultural barriers to CVCT use. All data collection was conducted in English, and all FGD and IDI were tape recorded, and later transcribed for textual analysis. The analysis of the data involved the coding and classification of the data by reviewing the transcriptions for potential conceptual categories, using the guideline questions as initial categories [26]. Two types of codes were employed: inductive (arising from literature on CVCT and VCT) and deductive (arising from data). The coded data were then separated by theme and sub-themes. Frequencies were enumerated across the themes to determine the intensity of the responses.

RESULTS

The final sample included a total of 71 participants, 29 of which were involved in IDIs and the remaining 42 were distributed amongst seven FGDs. Reported ages ranged from 18 to 65

with a median age of 28. About half (52%) of the sample was Black, 24% were Coloured, and 21% were White. Of the 72% who reported currently being in a sexual relationship, 54% stated they had main partners, 25% had multiple partners, and the remaining 21% were in casual sexual relationships.

Acceptability of CVCT

Participants initially revealed a range of attitudes toward CVCT services. At first participants were hesitant to support CVCT: however, once the process of a CVCT was explained the steps involved outlined, the majority of participants supported CVCT and favored the additive support they would receive from their partners in the event of an unwanted test result.

"Because some other people who feel anger, they want to kill their selves when they know they are HIV-positive. And then that's what, they are going to know that, 'Okay here is my partner. He is going to help me, so now I'm free. I have somebody to talk to every time I need to talk.' So that is why I say it is needed" (FGD)

Many participants reported that they hear "so many stories of people in relationships not knowing that the other one is actually HIV-positive" (FGD). Several participants suggested that receiving HIV test results together provided benefits over receiving them separately due to the "complete transparency" CVCT provides in the presence of a "trained counselor" who is perceived to be "neutral and nonbiased."

"...It's going to be much better because if I go in as an individual and my partner doesn't know, I just keep quiet if I find out I'm positive...But if you go with your partner, then you'll both start coming to your senses because then you'll both know what to do now" (FGD)

Participants further mentioned that CVCT would enable open conversations between partners who may have difficulties otherwise coming to agreements on issues, such as opening a relationship to permit outside sexual partners.

A few participants reported mixed feelings regarding receiving their test results with their partner, stating that they were willing to utilize CVCT, but only if they were given the option throughout the service to withdraw from a couples-based service and receive their test results alone. Very few men thought that the CVCT service would not work for any reason. One of those who did not endorse the service emphasized that the trust in a relationship should transcend the need to test together.

"To me, it's just an individual thing. I really don't see the need for a couple going together...If they come to that stage where they are now really settling down as a couple, they should be so trusting of each other that this is, it should have all happened prior to that" (FGD)

Existing demand for CVCT services

Participants reported experiences when their requests to test with their male partners were denied, stating that it reminded them of a time when the rights of MSM were not protected by law. Participants thought that since CVCT has been effective for heterosexual couples elsewhere in Africa, they should also have the option to utilize the service.

"There aren't very many options for gay men, because out there, services that are available are mostly for straight people. It's not very gay-friendly. So we need to educate health workers...to handle gay issues so that the service would be more

gay-friendly and so that gay men would not be scared or shamed to take medical attention when they need it" (FGD)

"This is a great service that everyone would be down for. Whether the person is straight or not, but basically it's not just about the sexual orientation, it's about who needs the service and who can benefit from the service...as long as people would be all treated as one" (FGD)

Usage of CVCT

Participants discussed which couples would and which couples would not utilize CVCT services. Several participants thought that all couples would use the service at some stage in their relationships. Men listed the types of couples that would be the most likely users: couples "who are building a future together," "exclusive," "living together," "have nothing to hide," "communicate well," and are "committed to each other." There was a debate around whether commitment was associated with longer relationships. Some participants thought that only long-term couples would use CVCT; however, an equal number of men suggested that any committed couple, regardless of relationship duration, would use CVCT. Several participants stated that new couples would benefit if they used CVCT prior to commencing a sexual relationship; thus, impeding any blame that may come in the future due to a member in a relationship being HIV-positive prior to having sex with their new partner.

Conversely, participants also discussed which couples would be less likely to utilize CVCT services. The most common mentioned relationship that would be deterred from using CVCT is between men who have sex with men and women (participants colloquially called these men "after nines," referring to men who may have a wife and kids, and then have sexual relations with men at night unbeknownst to their female sexual partners). Therefore, participants reported that these men would not be willing to bring their male partners to use CVCT, especially "in a place meant for gays" because their sexual identities would be revealed. Participants also mentioned couples that are "unstable" or "unfaithful" would not utilize CVCT services.

"There are those people that they know that they are not faithful, are not committed to have one partner. They will feel scared to come to the services, because they know; 'Okay now if I come to the service, I'm committing myself to this person'" (IDI)

Structure of CVCT

Participants reacted positively to the pre-counseling and post-counseling components of CVCT, stating that they had the potential to increase the bond of a relationship and allow for any disclosures in a safe environment. Participants reported that the questions asked on any form or by the counselors should be MSM-sensitive; that is, the questions should be applicable to MSM and the numerous different relationship types. Also, some men stated that the test results should not be written down, "Because someone can access that information in the future" (IDI.) Participants stated that especially in a couples-based test, there would be no need to write down the result because the partner is there to hear the result.

Participants felt that there should be no restriction based on the duration of a couple's relationship, stating that some couples are able to commit sooner than others, and that this would greatly limit who would seek these services. Some participants even stated that the service should be open to be used by very close friends.

"Even if they're not a couple and they're pretending to be a couple, at least they're still getting tested" (FGD)

Barriers and facilitators to CVCT use

Participants reported that the primary facilitator to HIV testing was support from their partners, stating that if they knew they were fully supported, they would certainly test as a couple. Conversely, the main barriers to obtaining an HIV test were not having the finances to afford transport costs to a testing facility, as well as an internalized fear of receiving an HIV-positive test result.

Many participants suggested that couples would seek joint testing if one of the partners began showing symptoms of other illnesses, such as an STI. Participants also reported couples that are preparing to commit to each other and take a step forward in their relationships would seek HIV testing. Lastly, participants stated that couples who increase their risk of acquiring HIV through introducing penetrative sex to their relationship, eliminating condoms from their sexual relationship, or opening their relationships to allow for outside partners would be urged to seek HIV testing. Similarly, couples would get tested if one partner discovered that the other partner has *"cheated"* by having sexual relationships with a person outside of the dyad in the absence of an agreement to do so.

Perceived effects of CVCT

Most men agreed that a concordant negative or a concordant positive result would "strengthen the bond" of a relationship. Participants listed further benefits of "increased trust" and "proved commitment." Participants also explored possible negative effects of disclosing a status to a partner during a CVCT session. The most common issue revolved around receiving a sero-discordant result. Many participants thought that the duration of a relationship would play a role in how a couple would react to these results, reporting that newer relationships with no "commitment" would have more difficulty than long-term relationships dealing with a sero-discordant result. Participants thought in these cases, the HIV-negative partner would begin to blame the HIV-positive partner for being "unfaithful" and that the relationship may end. Conversely, many men responded to this notion that if couples had foundations of trust in their relationships they would perhaps not break up.

- "...if the other is negative and the other was positive, I think it wouldn't destroy that relationship, it would actually make the relationship more stronger because the negative one would dedicate himself to the positive one, so that he would take care of him, tell him what to do" (FGD)
- "...so if I actually receive the results my boyfriend positive, me, I'm actually negative I should accept it and actually follow the structures...But I actually know that it's really difficult such things, but I have to because it's my boyfriend" (IDI)

Participants also discussed how a CVCT service could affect a relationship's quality. Many men stated that if there was a sero-concordant negative result, couples would not alter their sexual behaviors; however, an equal number of men thought this result may allow a couple to remove condoms from their sexual relationships since they would perceive to be "safe" from acquiring HIV. For both sero-concordant positive and sero-discordant results, participants reported that couples would consistently use condoms in order to prevent any further infections. Participants stated that when there is a sero-discordant result, a couple would feel "insecure" at first, "but if they really love each other" there will be no issue.

"...I think the pre-test counseling will help most 'cause then they'll actually get to know – there will be different options...So then you actually know that even if my

partner is positive, you know that you can do this and this and that. Even if my partner is negative, I can still do that, you see. So I think it will work for all partners" (FGD)

Some participants stated that CVCT might disrupt patterns of violence that may have occurred if the partners had to rely on one another to share their HIV test results. Participants reported that when MSM test individually, they must deal with the result on their own and then find a time to also disclose the result to their partners, which may facilitate an argument. CVCT eliminates the need to tell a partner at a subsequent time and location, which is reported to be preferred by many participants.

Public versus gay-friendly services

Virtually all of the participants stated discontent with the current public and government facilities offering HIV testing services. In contrast, participants stated more comfort when utilizing HIV testing facilities catered to MSM specifically or had a reputation for being "gay-friendly." Many participants reported discrimination in public and government clinics due to their MSM behavior. Participants shared that the staff in these clinics often assume heterosexuality and forgo questions that may lead the participant to disclose sexual partnerships with other men. Many participants also reported that in cases where they disclose their MSM behaviors, either voluntarily or by force, the counselors "mock" them and begin to say "nasty things" because they are "disgusted." Participants reported that the perceived discrimination at public and government services would be a potent barrier in their willingness to use CVCT services, and almost all participants reported that they would only use services for male-couples at gay-friendly health facilities and community-based organizations. Participants reported that male-male couples would be deterred from seeking HIV testing together from a public facility, stating that they "don't want to offend anyone by going to a local clinic." They thought that these public facilities were not a welcoming environment for MSM, let alone two men seeking testing together.

DISCUSSION

The results show an overwhelmingly high acceptance for CVCT services catered towards MSM among the MSM sampled in this setting. In the data collection activities, the concept and procedures of CVCT were outlined to participants, who were asked to respond with their perceived willingness and acceptability of the service: hence, participants were effectively responding to a hypothetical service situation. Nevertheless, participants reported that the additive support and commitment gained from testing for HIV with a partner was the main draw for using CVCT services, allowing for a couple to disclose personal information and sexual behaviors with each other, and in the presence of a trained counselor, work through these situations and strengthen their relationship. Conversely, the primary barrier to utilizing HIV testing services was reported to be an internalized fear of receiving an HIV-positive test result; however, this deterrent could be surmounted if MSM could take their supportive partners with them to test.

Recently, there has been a shift toward targeting the dyadic transmission of HIV, in part due to the finding that most new infections among MSM in the US were ascribed to main sex partners [24]. Thus, having the knowledge of a partner's sero-status is possibly one of the most effective strategies in reducing the risk of HIV infection [27] due to the elimination of risk that comes from assuming or guessing a partner's sero-status. In Cape Town, a small cross-sectional study indicated that only 64% of HIV-positive MSM reported confidence in disclosing their sero-status to a sex partner [28, 29]. Our participants stated that if HIV testing was completed as a couple, this concern would be eliminated. The knowledge of a couple's sero-status also allows the counselor to facilitate discussions that enable sero-

concordant negative couples to explore methods to remain HIV negative; sero-concordant positive couples to prevent re-infection and potentially transmission outside of the dyad; and sero-discordant couples to sustain safer sexual relationships.

Several participants thought that all couples would use the service at some stage in their relationships and that committed couples would be the most likely users of CVCT. Conversely, participants mentioned that men who may have female partners while having discrete sexual relations with men would be deterred from utilizing a couples-based HIV testing service, because they felt these men would fear being in public with their male partners and revealing their sexual identities: these MSM may serve as a bridge between the generalized and MSM epidemics in South Africa, and must not be excluded from interventions geared toward reducing the transmission of HIV. These results raise important issues for the practical delivery of CVCT to MSM in South Africa. The data show that there is significant demand for CVCT among MSM, yet MSM in more committed, long-term relationships are the most likely users, while MSM in shorter, casual relationships of MSM with more closeted identities/ lifestyles, may be unwilling to utilize CVCT. Ideally, CVCT should be available to be utilized by any two sex partners who wish to be tested together: to achieve this requires careful attention to the marketing and provision of CVCT. As is, CVCT appears to be attractive to longer-term couples, those who identify with the "couple" in CVCT. To attract MSM in more casual relationships perhaps requires a repackaging: in the US, CVCT has been promoted as "Testing Together" (www.testingtogether.org), in order to make it appealing to those who do not see themselves as "couples". Attracting MSM with more closeted identities/ lifestyles may be more difficult: these MSM are less likely to want to attend services at gay-focused community based organizations, and will be equally as unlikely to attend public or government services with their male partner. A compromise that involves male only non-gay specific services may be an option, although further work is needed with this under-served group to examine their preferences for service delivery.

The participants reported that the effects of CVCT on a couple depended on the HIV test results, stating that concordant negative and concordant positive results would both strengthen the bond of a relationship. However, a sero-discordant result had the possibility of negatively impacting a couple. Most participants reported that uncommitted couples would have more difficulty than committed couples dealing with this testing outcome. However, many men responded that if couples had foundations of trust in their relationships they would perhaps not break up. Some participants stated that CVCT might disrupt patterns of violence that may have occurred if the partners had to rely on one another to share their HIV test results. CVCT eliminates the need to tell a partner at a subsequent time and location, providing a method of disclosure that was preferred by many participants.

There are several limitations to this study. First, the data were collected in English, and the sample was recruited through venue-based sampling of local gay-themed venues and community based organizations. Thus, the sample of MSM analyzed here is a select sample of English speaking MSM who are exposed to and involved in the local Cape Town gay community. The results are thus not generalizable to MSM in Cape Town, nor to MSM in South Africa. In the data collection activities, participants were responding to a hypothetical situation, with CVCT described in detail to them: thus, participants could not see what the service would look like, and they were not reflecting on actual experiences of service use: before CVCT services are rolled out, further work is needed with this population to examine attitudes and perceptions of actual models of CVCT service provision. Additionally, the study collected data from individuals and not from couples: it was felt that individuals may be more willing to discuss their reasons for using or not using CVCT services in the absence of their partner, particularly if the reasons were related to their current relationship.

However, now that willingness to use services has been established in this sample, further work is needed with MSM couples in South Africa to examine dyadic influences on CVCT use.

CONCLUSION

Despite the refocusing of prevention research among MSM, MSM continue to be underrepresented in national HIV surveillance systems, targeted prevention programs, and care within many African countries [30]. The majority of MSM in South Africa are not aware of the HIV status, which may in part due to the lack of interventions catered to their unique needs. When presented with a hypothetical version of CVCT, the sample of MSM analyzed here reported high levels of willingness to use CVCT, reporting that it provided an opportunity for MSM to disclose their sero-status to their partners and have conversations about their sexual behaviors in the presence of a trained counselor. Participants were particularly attracted to the counseling components of the service, stating that these would allow for the couple to explore methods of how to effectively reduce their risk of acquiring or transmitting HIV. Further investigation is needed to gauge the acceptability of CVCT among MSM in other parts of South Africa, in non-English speaking MSM, MSM not involved in the local gay scene which served as the primary recruitment point for the sample, and to look explicitly at attitudes towards CVCT among dyads. However, the data presented here exhibits compellingly high acceptance of CVCT among this sample of MSM from Cape Town, and provides promise for the potential for CVCT to be accepted widely among the MSM population in South Africa.

REFERENCES

- Painter TM. Voluntary counseling and testing for couples: a high-leverage intervention for HIV/ AIDS prevention in sub-Saharan Africa. Soc Sci Med. 2001; 53:1397–1411. [PubMed: 11710416]
- Allen S, Meinzen-Derr J, Kautzman M, Zulu I, Trask S, Fideli U, et al. Sexual behavior of HIV discordant couples after HIV counseling and testing. AIDS. 2003 Mar 28; 17(5):733–740.
 [PubMed: 12646797]
- 3. Dunkle KL, Stephenson R, Karita E, Chomba E, Kayitenkore K, Vwalika C, et al. New heterosexually transmitted HIV infections in married or cohabiting couples in urban Zambia and Rwanda: an analysis of survey and clinical data. Lancet. 2008; 371(9631):2183–2191. [PubMed: 18586173]
- 4. Allen S, Tice J, Van de Perre P, Serufilira A, Hudes ES, Nsengumuremyi F, et al. Effect of serotesting with counselling on condom use and seroconversion among HIV discordant couples in Africa. Br Med J. 1992; 304:1605–1609. [PubMed: 1628088]
- Roth DL, Stewart KE, Clay OJ, van der Straten A, Karita E, Allen S. Sexual practices of HIV discordant and concordant couples in Rwanda: effects of testing and counselling programme for men. Int J STD AIDS. 2001; 12:181–188. [PubMed: 11231872]
- Allen S, Serufilira A, Gruber V, Kegeles S, Van de Perre P, Carael M, et al. Pregnancy and contraception use among urban Rwandan women after HIV testing and counselling. Am J Public Health. 1993; 83(5):705–710. [PubMed: 8484453]
- 7. Sweat M, Gregorich S, Sangiwa G, Furlonge C, Balmer D, Kamenga C, et al. Cost-effectiveness of voluntary HIV-1 counselling and testing in reducing sexual transmission of HIV-1 in Kenya and Tanzania. Lancet. 2000; 356:113–121. [PubMed: 10963247]
- 8. Smith AD, Tapsoba P, Peshu N, Sanders EJ, Jaffe HW. Men who have sex with men and HIV/AIDS in sub-Saharan Africa. Lancet. 2009; 374:416–422. [PubMed: 19616840]
- 9. Sandfort TGM, Nel J, Rich E, Reddy V, Yi H. HIV testing and self-reported HIV status in South African men who have sex with men: results from a community-based survey. Sex Transm Infect. 2008; 84(6):425–429. [PubMed: 19028940]

10. Burrell, E.; Baral, S.; Beyrer, C.; Wood, R.; Bekker, L., editors. Comparison of sexual risk behaviours and HIV prevalence among men who have sex with men (MSM) in traditionally black and coloured townships in Cape Town, South Africa. 4th South African AIDS Conference; 2009.

- 11. Lane T, Raymond HF, Dladla S, Rasethe J, Struthers H, McFarland W, et al. High HIV Prevalence Among Men Who have Sex with Men in Soweto, South Africa: Results from the Soweto Men's Study. AIDS Behav. 2009
- 12. Rispel, L.; Metcalf, C.; Cloete, A.; Reddy, V.; Townsend, T.; Zembe, Y., editors. A hidden HIV epidemic among men who have sex with men (MSM)? Preliminary findings from the Johannesburg/eThekwini Men's Study. 4th South African AIDS Conference; 2009; Durban, South Africa
- 13. Shisana, O.; Rehle, T.; Simbayi, LC.; Zuma, K.; Jooste, S.; Pillay-Van Wyk, V., et al. South African national HIV prevalence, incidence, behaviour and communication survey 2008: A turning tide among teenagers?. Cape Town: HSRC Press; 2009.
- 14. Wade AS, Kane CT, Diallo PAN, Diop AK, Gueye K, Mboup S, et al. HIV infection and sexually transmitted infections among men who have sex with men in Senegal. AIDS. 2005; 19:2133–2140. [PubMed: 16284463]
- Beyrer C. HIV/AIDS: HIV Epidemiology Update and Transmission Factors: Risks and Risk Contexts—16th International AIDS Conference Epidemiology Plenary. Clin Infect Dis. 2007; 44(7):981–987. [PubMed: 17342654]
- van Harmelen J, Wood R, Lambrick M, Rybicki EP, Williamson A-L, Williamson C. An association between HIV-1 subtypes and mode of transmission in Cape Town, South Africa. AIDS. 1997; 11:81–87. [PubMed: 9110079]
- 17. van Griensven F, de Lind van Wijngaarden JW, Baral S, Grulich A. The global epidemic of HIV infection among men who have sex with men. Curr Op HIV AIDS. 2009; 4(4):300–307.
- 18. UNAIDS. Geneva: 2010. 2010 report on the global AIDS epidemic.
- WHO. Genevain press; The Global Forum on MSM and HIV (MSMGF) Civil Society Consultation: MSM and Transgender Values and Preferences Regarding HIV- and STI-related Services.
- 20. Parry C, Petersen P, Dewing S, Carney T, Needle R, Kroeger K, et al. Rapid assessment of drugrelated HIV risk among men who have sex with men in three South African cities. Drug Alc Dep. 2008; 95(1–2):45–53.
- 21. Spielberg F, Branson BM, Goldbaum GM, Lockhart D, Kurth A, Celum CL, et al. Overcoming barriers to HIV testing: preferences for new strategies among clients of a needle exchange, a sexually transmitted disease clinic, and sex venues for men who have sex with men. J Acq Imm Def Synd. 2003; 32:318–328.
- 22. Wells H, Polders L. Gay and lesbian people's experience of the health care sector in Gauteng. Joint Working Group Research Initiative, conducted by OUT LGBT Well-being in collaboration with the UNISA Centre for Applied Psychology Pretoria (undated).
- 23. CDC. HIV among gay, bisexual and other men who have sex with men. 2010
- 24. Sullivan PS, Salazar L, Buchbinder S, Sanchez TH. Estimating the proportion of HIV transmissions from main sex partners among men who have sex with men in five US cities. AIDS. 2009; 23(9):1153–1162. [PubMed: 19417579]
- Stephenson R, Sullivan PS, Salazar LF, Gratzer B, Allen S, Seelbach E. Attitudes Towards Couples-Based HIV Testing Among MSM in Three US Cities. AIDS Behav. 2011
- 26. Morgan DL. Focus Groups. Annu Rev Sociol. 1996; 22:129–152.
- 27. Varghese B, Maher JE, Peterman TA, Branson BM, Steketee RW. Reducing the Risk of Sexual HIV Transmission: Quantifying the Per-Act Risk for HIV on the Basis of Choice of Partner, Sex Act, Condom Use. Sex Transm Dis. 2002; 29(1):38–43. [PubMed: 11773877]
- 28. Cloete A, Simbayi LC, Kalichman SC, Strebel A, Henda N. Stigma and discrimination experiences of HIV-positive men who have sex with men in Cape Town, South Africa. AIDS Care. 2008; 20(9):1105–1110. [PubMed: 18608067]
- 29. Lee RS, Kochman A, Sikkema KJ. Internalized stigma among people living with HIV-AIDS. AIDS Behav. 2002; 6(4):309–319.

30. Baral S, Sifakis F, Cleghorn F, Beyrer C. Elevated risk for HIV infection among men who have sex with men in low- and middle income countries 2000–2006: A systematic review. PLoS Med. 2007; 4(12):1901–1911.