Published in final edited form as:

AIDS Educ Prev. 2017 February ; 29(1): 1–13. doi:10.1521/aeap.2017.29.1.1.

Strategies Chosen by YMSM during Goal Setting to Reduce Risk for HIV & Other STIs: Results from the Keep It Up! 2.0 Prevention Trial

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Abstract

Although there have been great advances in the prevention of HIV in the last two decades, young men who have sex with men (YMSM) continue to be disproportionately impacted. Utilizing qualitative data from a sample of YMSM (N = 292) engaged in a randomized controlled trial testing the efficacy of an internet-based HIV prevention program, we examined YMSM's goals for sexual risk reduction. Goals tended to focus on strategies used to prepare for safer sex or strategies to be used during sex. In both areas, five categories of strategies were identified: skill-related, intrapersonal, social, contextual, and instrumental. Findings suggest opportunities for more tailored eHealth intervention by focusing on strategies in domains of most use to the individual. Future research should include longitudinal assessment of barriers and facilitators to goal adherence, utility of goals in increasing safer sex behaviors, and changes to goals over time.

Key Words or Phrases

HIV prevention; YMSM; sexual risk; goal setting

Although there have been great advances in the prevention of HIV in the last 35 years, young men who have sex with men (YMSM) continue to be differentially impacted by the virus (CDC 2016; Mustanski, Newcomb, Du Bois, Garcia, & Grov, 2011). Among young people in the U.S., YMSM account for more than 90% of HIV diagnoses, and they continue to demonstrate increasing rates of infections (CDC, 2016). The number of HIV infections among MSM 13 to 24 years old increased 10% between 2010 and 2014. The number of infections among MSM 25 to 34 years old increased 27% across that time. Given the disparate impact of HIV on YMSM, it is essential that researchers better understand how to encourage safe practices among this population.

Condomless anal intercourse is the primary route of HIV transmission for MSM (Pragna et al., 2014; Read, 2007). Accordingly, the majority of behavioral interventions geared toward reducing transmission among YMSM have tended to focus on decreasing the frequency of condomless anal sex acts (Johnson et al., 2008; Maulsby et al., 2013). In a review of 44 studies encompassing 58 interventions and more than 18,000 participants, Johnson and

colleagues (2008) found that frequency of condomless anal sex acts was one of few dependent variables assessed in every study and for every intervention. Further, this review demonstrated that behavioral interventions have shown moderate effectiveness in reducing condomless anal sex. Behavioral interventions in their review tested against minimal or no HIV prevention controls reduced condomless anal sex by 27%, and interventions tested against standard HIV prevention controls reduced condomless anal sex by 17%. While this reduction is an important step toward reducing HIV risk among YMSM, it may not be sufficient to effect demonstrable change in HIV or STI incidence among the population.

In order to effect greater change in the behavior of YMSM, it may be important to better understand how YMSM translate the information they have received in interventions into practice. Many of the existing behavioral interventions for reducing HIV risk among YMSM seek to change their beliefs, attitudes, and behaviors (Higa et al., 2013). These studies tend to use frequency of condom usage as an outcome variable (Maulsby et al., 2013), given its ability to limit the risk associated with anal intercourse. However, there has been little research focused on how YMSM think through and make plans to enact/utilize these changes to beliefs, attitudes, and behaviors, which ideally lead to a reduction in condomless anal intercourse. Better understanding the kinds of goals that YMSM set for their risk reduction is a critical step in understanding their concept of risk reduction and the ways that these concepts may facilitate or limit their ability to engage in safer sexual practices. For example, a factor identified in the most effective behavioral interventions is building personal skills like keeping condoms available and avoiding intoxication (Johnson et al., 2008). These kinds of skills/behaviors serve to facilitate more consistent condom use or the employment of other skills useful in reducing risk for HIV and other STIs (e.g., consistent STI/HIV testing). Determining if and how YMSM intend to incorporate such skills into their risk reduction goals and plans provides an opportunity to understand the context of condom use or disuse among this population.

More generally, setting clear goals has been found to be a core component of effective HIV prevention (Owczarzak et al., 2016), but little is known about the specific goals that YMSM adopt and what challenges they face in implementing these skills. Better understanding of this is critical for developing and improving interventions, particularly for automated interventions such as eHealth approaches where decisions may need to be made in advance about what goals to offer participants and how to help guide them through addressing pitfalls in achieving their goals. Accordingly, the present analysis examines the sexual risk strategies described by YMSM receiving an online behavioral intervention intended to reduce instances of condomless anal intercourse.

Method

Data for the present analysis were collected as part of a larger ongoing study, Keep It Up! 2.0 (KIU! 2.0), a randomized controlled trial examining the efficacy of an internet-based HIV prevention program. The focus of KIU! 2.0 was linking an eHealth HIV prevention program to HIV testing in order to capitalize on the testing experience as a “teachable moment” (Mustanski, Garofalo, Monahan, Gratzner, & Andrews, 2013). Using diverse delivery methods (e.g., scripted video content, videos of community member interviews,

interactive games), KIU! 2.0 content explored gaps in HIV knowledge, skills for negotiating safer sex, and self-efficacy related to HIV prevention. The baseline KIU! 2.0 content concluded with a module focused on setting individual risk reduction goals, identify challenges to achieving goals, and generating solutions to challenges. KIU! 2.0 also included booster sessions at 3 and 6 months that included original content and revisited success and challenges with risk reduction goals. Only data from the baseline KIU! 2.0 modules are presented here.

Participants

In order to take part in KIU! 2.0, young men had to meet the following criteria: (1) identify as a cisgender man, (2) be between the ages of 18 and 29 (inclusive), (3) receive an HIV negative test result from a participating clinic/recruitment site, (4) report condomless anal sex with a male partner in the past 6 months, and (5) not currently be in a behaviorally monogamous relationship lasting longer than 6 months. Young men were ineligible to enroll in the study if they had participated in a previous iteration of KIU! or did not have an e-mail address that could be used to contact them for retention purposes.

Participants for this study were 292 cisgender men who have sex with men (MSM) who completed KIU! 2.0. at the time of data analyses. Enrollment was ongoing, and as such, this sample of men represent a subsample of the full KIU! 2.0 cohort. The demographic characteristics of this sample are included in Table 1.

Procedure

Participants were recruited across diverse sources, including: (a) HIV testing clinics and mobile testing units of partner community-based organizations (CBOs) in Atlanta, Chicago, and New York; (b) local health department clinics in Chicago; (c) university-based HIV testing at research sites in Atlanta and New York; (d) street outreach in Atlanta, Chicago, and New York; (e) local and national print, online, and telephone recorded ads; (f) research participant registries at the university locations; and (g) nationwide online advertisements on social media applications linked with at-home HIV testing. Participants were screened upon a negative HIV test result at any of the recruitment sites or after uploading a photograph of a negative result from the at-home HIV test kit. Participants were then randomized in equal proportions to an intervention condition where they received KIU! 2.0 or a control arm where they received didactic HIV/STI knowledge. The participants studied in the present analysis were enrolled in the intervention condition.

After completing three modules of KIU! 2.0 content, participants were asked to select three personal goals as part of a realistic and practical plan for prevention of HIV infection. Participants were presented with 8 prescribed goals and the option to define a goal for themselves. These potential goals were presented individually in the following sequence: "Use a condom every time you have sex," "Make sure you are using condoms correctly," "Get tested for HIV regularly," "Improve communication with your partner," "Connect more with LGBT community," "Make a sexual agreement with a serious partner," "Practice safe sex when drinking and/or using drugs," and "Safely hook up with guys met online." The self-defined goal was presented after the initial eight. Participants were given the

opportunity to offer short answers related to how they would pursue these goals and how they would navigate potential barriers to these goals. These short answers are the data explored in the present analysis.

All study procedures were approved by the Institutional Review Boards for all three universities.

Data Analysis

Thematic analysis was used to explore the short answers provided by participants. Thematic analysis seeks to identify, examine, and record patterns in the data in order to elucidate the phenomenon being studied (Creswell, 2007; Miles & Huberman, 1994). As such, this approach to analysis is related to a phenomenological approach, given its goal of understanding the subjective experience of individuals.

To assist with classifying, sorting, and retrieving coded text during the analysis process, participants' responses were exported into a spreadsheet. While this would not be a feasible strategy with full transcripts, this format was ideal given the generally concise nature of participants' responses. Analysis began with the first author reading through the full complement of responses from each participant in order to identify larger patterns in the data. Each line of the spreadsheet held the responses of an individual participant. As such, responses were analyzed in the context of other responses offered by the participant in order to better understand them. After a thorough review of these responses, initial codes were generated and added to a preliminary codebook. Given the iterative nature of coding, participants' responses were reviewed multiple times in order to clarify meaning, revisit codes, and ensure optimal fit of codes. After codes were identified and compiled in a preliminary codebook, these codes were reviewed in order to identify how they fit into broader patterns (i.e. themes). After an initial set of themes had been identified, these themes were revised by considering how they interrelated and diverged. During this process, the first author presented initial codes and themes to the senior author and diverse members of the KIU! 2.0 research team. As a group, they discussed the fit of the codes under the identified themes and worked toward consensus on the themes themselves. When themes were finalized, precise descriptions of these themes were crafted in order to understand what clusters of codes meant when considered in tandem. These descriptions are presented in the Results with excerpts when appropriate.

In order to ensure the quality of the analysis, prolonged engagement and peer debriefing were utilized as credibility checks (Lincoln & Guba, 1992; Moustakas, 1994). For the purposes of the present analysis, prolonged engagement consisted of extended time with the data, reading and reviewing the responses in order to identify potential biases in the analysis or distortions in understanding the coded material. As stated above, peer debriefing consisted of presenting codes and coded material to a team of peers in order to receive alternate perspectives on the codes and resultant themes. Both prolonged engagement and peer debriefing were intended to minimize the impact of biases created by the particularities of the coder's experience.

Results

The results below demonstrate the range of goals and strategies identified by participants in Keep It Up! 2.0. These strategies are organized here in two groups: *preparatory strategies* and *strategies to employ during sex*. For each of these groups, there were five categories of strategies to reduce risk for acquiring HIV. *Skill-related strategies* were plans to increase understanding of aspects of HIV risk reduction and ensure the individual could effectively implement associated skills. *Intrapersonal strategies* were plans to change or manage aspects of the individual. *Social strategies* were plans to change or manage interactions with others. *Contextual strategies* focused on ways to adjust the individual's environment, and *instrumental strategies* focused on ways to ensure access to tangible tools which could reduce risk.

Preparatory Strategies

In discussing skills which could be used before the act of sex to reduce risk, young men focused on *learning more about proper condom use*. This learning took many forms, including seeking instruction about condom use through internet media, reviewing the instructions in a condom box, and practicing applying a condom to their own penis or on a proxy (e.g., a banana).

Participants endorsed a range of intrapersonal strategies for reducing risk, with some focused on making commitments to themselves around healthier behavior and others focused on self-monitoring. For example, themes that emerged in this category included *promising himself that he would use condoms consistently* and *committing to consistent HIV testing*. Young men who promised themselves they would use condoms consistently did not elaborate on this plan, but young men who planned to commit to consistent HIV testing described plans to navigate expected barriers, like low motivation, low priority, and fear. These plans included finding a preferable testing location, determining a preferred frequency of testing, saving money to pay for testing, finding free locations for testing, and setting reminders for themselves. In contrast, there were also young men who seemed to indicate significant intrapersonal barriers to consistent testing, stating that they would “force [themselves]” to test or to begin a conversation about HIV testing with their primary care provider. While there was not much elaboration around this strategy, it seems to imply that these tasks might be particularly difficult for these young men and may indicate concern as to whether they could successfully commit to consistent HIV testing.

Additional intrapersonal strategies identified by participants included *managing one's mental state* and *exercising sexual self-control*. When describing managing their mental state, participants primarily focused on the potential impact of intoxication on their subsequent decision making processes. Accordingly, these goals included abstinence from substances, moderating the strength of alcoholic beverages consumed, drinking less, monitoring levels of intoxication, and learning the levels of intoxication at which decision making becomes more difficult. Some young men chose a strategy wherein they would make a clear plan for condom use before they went out to drink. This preparatory plan was akin to the promises and commitments around condom use previously described. Young men who endorsed a plan of exercising sexual self-control focused on minimizing their use of GPS

dating apps (e.g., Grindr) and finding alternatives to sexual contact with others (e.g., self-distraction, masturbation) when safer sex was unlikely.

Given the inherently interpersonal nature of sexual relationships, there was a wide range of social strategies described by participants, including approaches to communication with sexual partners and various ways to utilize LGBT community supports. Strategies described in this domain coalesced under two larger themes: *improving sexual health communication with partners* and *improving general communication with partners*. Strategies for improving sexual health communication with partners focused on ways to more effectively talk with partners, both primary and casual, about HIV statuses, sexual risk, and plans for safer sex. Some specific strategies described included having conversations about HIV statuses early, discussing safer sex before the initiation of a sexual encounter, establishing a mutual understanding of “safer sex” with partners, and integrating sexual health conversation into casual conversation. In describing approaches to improving communication with partners more generally, participants described ways to improve the clarity and utility of communication with partners. For some participants, this was intended primarily to improve general relationship health. For others, it was related to creating a better environment for discussing sexual health more explicitly.

As it related to utilizing LGBT community supports, young men described three strategies for reducing risk: *utilizing supports to ensure regular HIV testing*, *connecting with LGBT community to exchange/share sexual health knowledge*, and *connecting with LGBT community to feel connection*. Plans to utilize supports to ensure regular testing general focused on finding others in the community to whom the individual could be accountable as it related to HIV testing, either by having regular conversations about testing as part of a sexual health plan or by testing together. Many young men voiced a desire to engage more with the LGBT community in order to increase knowledge about HIV and other STIs through open dialogue. While some young men described a desire to feel greater connection to the LGBT community without reference to ways this would assist in reducing risk for HIV, others described the utility of this connection as it related to building internal resources and support. These young men described increased connection as an avenue for meeting others to whom they could relate, connecting with other same-sex male couples, learning about LGBT history, and working toward developing greater self-love.

The instrumental strategies described by participants focused on ensuring they had the equipment necessary to enter a sexual situation safely. The first strategy described was *procuring condoms*. Participants reported plans to procure condoms either through purchase or accessing free condoms, and many offered specific plans, including how soon they would procure condoms (e.g., “soon” or “when I get paid next”) and/or the location from which they would procure them.

A second strategy, complementary to the first, was *procuring lubrication*. While participants described a variety of ways to procure condoms, they generally described purchasing as the primary approach for procuring lubrication, though some reported a plan to request samples of lubrication. In describing their plans to procure condoms, participants were often specific

in that they were seeking condom-safe lubrication and some specified that they sought lubrication which would reduce irritation caused by condoms.

The last instrumental strategy described by participants was *procuring home HIV tests*. Participants who reported this plan described it as the most effective plan for them given the absence of free testing in their communities. However, given the cost of home HIV tests, an aspect of this plan was saving money in order to use home HIV tests on a consistent basis.

The final preparatory strategies described by participants were related to managing their contexts. The first of these strategies was *avoiding spaces conducive to riskier sex*. Plans related to this strategy included finding drug-free activities and venues and drinking in predominantly heterosexual environments in order to avoid riskier sex while under the influence. Another plan was to only engage in sex while in one's own home, in order to ensure access to condoms. The second strategy, *always having condoms available*, was very much related to this plan. Participants described a desire to have condoms on their person (e.g., in their wallets) and in any place they may be during or directly preceding sexual intercourse (e.g., job, car, bathroom). One participant described having a "booty call bag," which he stocked with condoms and lubrication to ensure he had access to supplies necessary for safer sex no matter his location. Lastly, participants described the necessity of having condoms visible or in reach from the bed in order to facilitate more consistent use of them.

Strategies to Employ during Sex

When describing skill-related strategies useful to employ during sex, participants identified a plan of *correctly applying condoms during sex*. A logical sequitur of the similar preparatory strategy, this plan described a desire to be able to correctly apply a condom to one's own penis or a partner's penis in the heat of the moment. Further, some participants were specific about aspects of this skill they would need to remember, including leaving space for semen at the condom's tip or squeezing air out of the condom.

Intrapersonal strategies primarily focused on *managing one's mental state during sex*. These plans focused on paying particular attention to factors which might compromise decision making around sexual intercourse and keeping in mind one's desire to practice safer sex. This included attending to levels of sexual arousal and intoxication, because participants identified "getting lost in the moment" as a barrier to consistent and effective condom use. Further, participants described the importance of remembering why they want to use condoms consistently and the necessity of placing their sexual health needs at higher priority than their partners' sexual pleasure needs.

Social strategies to employ during sex focused on modifications to communication with partners during sex, sexual behavior with partners, and sexual partner selection. In the area of *communicating with partners during the sexual act*, participants described a plan to talk to partners about how to keep their sex safer. This included communicating about keeping condoms on, communicating that sex with a condom was the only option, and being comfortable refusing to engage in sex if the partner was not receptive to communication about safer sex. Plans related to *adjusting sexual behavior* focused on adjusting the pace of

sexual interaction, engaging in forms of intimacy aside from intercourse in order to reduce risk, and better incorporating condoms into sexual play (e.g., foreplay and fantasies). As stated, some participants discussed the role of *sexual partner selection* in reducing risk for acquiring HIV. One of the primary themes that emerged in this area was restricting sexual activity to partners with whom one had built trust. The criteria for this trust ranged though, with some participants indicating they would avoid casual sex altogether, some requiring at least one date before engaging in sex with a casual partner, and others indicating that they would only have sex with partners they knew well. The other themes were limiting sexual interaction to other HIV negative men and reducing number of sexual partners overall.

Instrumental strategies to use during sex primarily focused on ensuring that a condom could be used effectively. The primary strategies described was ensuring the *safety of the condom*. Approaches to this strategy included checking the condom for damage, checking the expiration date on the condom, and being careful not to damage the condom when opening it.

Participants only offered one strategy to employ during sex related to context. They described the importance of *leaving the lights on* in order to ensure proper use of a condom.

Discussion

The findings of this study demonstrate that YMSM are thinking critically about how to engage in safer sex. They discuss and detail a multiplicity of potential risk reduction strategies they can employ. These goals indicate potentially fruitful areas for development in new interventions.

Implications for Intervention Development

The categories of strategies which emerged from the data (skill-related, intrapersonal, social, contextual, and instrumental) represent areas where YMSM in the sample thought they could effect change in their HIV risk. Conversely, these categories also represented areas where they could observe potential risk. As such, these categories may be a useful framework for helping YMSM think about their sexual risk reduction plans more generally, as it provides a concise set of domains from which YMSM can assess risk and draw appropriate risk reduction approaches. Given the diversity of factors which may place any given YMSM at risk for transmission of HIV or other STIs, a concise set of domains (rather than sexual risk more generally) may enable these young men to think about which strategies are most feasible and applicable in their circumstances, whether broadly or in a given moment. In order to maximize the utility of this framework, interventions developed for YMSM could empower the young men to assess which domains present most challenge for them (i.e. what kind of factors tend to accompany their less safe sexual practices) and focus the individual's knowledge, attitudes, and behavior changes toward factors in the identified domains. Another approach would be for YMSM to determine which domains would be most easy for them to effect change in their sexual risk. The intervention could proceed to then focus on helping the individual change knowledge, attitudes, and behavior in the identified domains. Both of these approaches allow an approach to intervention with

YMSM that recognizes the specificity of these men's risk profiles and the limitations of a one-size-fits-all model of sexual risk reduction.

Given that the goals detailed by YMSM in the study were prompted by prescribed meta-goals, many of them help to clarify existing theories related to reducing risk for HIV and other STIs. For example, researchers have been trying to clarify the role of alcohol in the sexual risk behavior of MSM. To date, meta-analyses have found an association between heavy drinking and condomless anal intercourse (Morris & Albery, 2001; Shuper et al., 2010; Woolf & Maisto, 2009). While there has not been sufficiently strong data to support a causal claim, there is belief that a phenomenon termed alcohol myopia may serve to increase risk for less safe sex. Alcohol myopia is defined as an attentional bias toward particular cues that engender a response that might be mitigated by other cues were a person sober (George & Stoner, 2000; Steele & Josephs, 1990). Given that YMSM in the study often indicated becoming "caught up in the moment" and subsequently engaging in condomless anal intercourse, the additional presence of a substance-assisted attentional bias may heighten the potential for behaviors that are less safe than the individual would prefer if sober. Accordingly, interventions should seek to support YMSM's preparation for these situations. More specifically, some YMSM in the study indicated a goal of making a clear plan for condom use before they go out to drink. Future interventions should seek to strengthen these plans and perhaps provide YMSM with information about the potential role of alcohol myopia in sexual situations.

An area of concern demonstrated by the YMSM in the present study related to their perception of risk with partners with whom they were better acquainted. Some participants reported that they would restrict sex to individuals they knew better in order to reduce risk. However, this criterion is insufficient alone. Sex within the context of close relationships poses a great risk for the transmission of HIV if an individual is not aware of their and their partners' actual HIV statuses (Misovich, Fisher, & Fisher, 1997). Researchers have repeatedly demonstrated that YMSM are more likely to engage in higher risk behavior with familiar partners and may be exposed to more heightened risk in the context of committed relationships wherein there is a higher frequency of sexual intercourse (Greene, Andres, Kuper, & Mustanski, 2014; Macapagal, Greene, Andrews, & Mustanski, 2016; Mustanski, Newcomb, & Clerkin, 2011).

Implications for Research

The present study begins to articulate the kinds of goals that YMSM consider feasible as part of their risk reduction plans. However, a meta-analysis by Webb and Sheeran (2006) demonstrated that intention for behavioral change was an insufficient predictor of said behavior change. While studies were often able to demonstrate medium-to-high effect sizes for intentions to change behavior, effect sizes were low-to-medium for actual changes in behavior. Accordingly, future research into goals for sexual health risk reduction would benefit from longitudinal assessment of goals and plans to achieve risk reduction. This would allow researchers to assess how well participants maintained fidelity to their risk reduction plans. Further, it would allow assessment of expected and unexpected barriers and facilitators of fidelity to these plans as well as changes to these plans over time.

At present, there has been little research examining the impact of behavioral interventions on reducing HIV or STI incidence among MSM (Ross, 2010; Sullivan et al., 2012). A systematic review of HIV behavioral interventions by Hergenrather and colleagues (2016) found that the most common outcome variables in studies of behavioral HIV interventions were condomless sexual intercourse, HIV/AIDS risk behavior, condom use, HIV testing, safer sex attitude, and HIV prevention communication. While HIV status was assessed in 20% of the studies, it was not a common outcome variable. Accordingly, a necessary next step in research related to goals for HIV risk reduction would be an examination of how these goals impact biomedical outcomes (e.g., acquisition of HIV or other STIs) and other factors identified as necessary for reducing HIV in MSM communities (e.g., adherence to treatment if the individual becomes HIV positive). This would allow a better understanding of not only how goals for risk reduction impact health behaviors associated with HIV acquisition in HIV-negative YMSM, but also whether the actual risk for HIV acquisition is mitigated.

There are a number of risk reduction strategies utilized by YMSM that were not explicitly examined in the present analysis. In previous research, it has been found that YMSM are using strategies like serosorting, withdrawal before ejaculation, and strategic positioning (Hoff, 2004). While these strategies are not ones explicitly supported by researchers and health care providers, it will be important to understand how these strategies fit into YMSM's goals for sexual risk reduction in order to better understand their needs. Further, the development of pre-exposure prophylaxis (PrEP), and post-exposure prophylaxis (PEP) in the last decade pose questions about how these biomedical strategies for risk reduction fit into or alter YMSM's goals for sexual risk reduction.

Limitations

Given that the prescribed goals offered in KIU! 2.0 were presented individually rather than as a list from which participants could choose, the number of participants who chose the first goals presented may be overrepresented. More specifically, the first three goals were selected by the largest proportions of the sample: consistent condom use (79.70%), correct condom use (37.50%), and regular HIV testing (75.80%). As such, the diversity of strategies provided for other goals may be limited systematically, and YMSM may have a wider breadth of strategies for other goals than is represented in the present analysis. As such, these data shed more light on the ways in which YMSM adopt goals rather than the hierarchy of goal selection.

Another limitation of the present study is the context through which responses were gathered. Participants were administered questions about the goals they chose, but were not given parameters for how detailed or elaborate these responses needed to be. As such, there was great diversity in the length of responses and depth of description. Brief responses generally provided less data about strategies, and therefore limited how much could be extrapolated from them. Accordingly, it must be understood that the data analyzed in this study was less rich than typical in qualitative studies. Briefer responses did not allow deep analysis of the content therein. Instead, conclusions were drawn from the patterns which emerged from the breadth of responses. Further, the online administration of these questions

disallowed the kind of probing which would be more typical in in-person qualitative interviews and which could have facilitated more elaboration.

Conclusions

While reducing condomless anal intercourse continues to be a primary strategy for reducing HIV risk among YMSM, the present analysis demonstrates that this reduction is a process which YMSM are approaching from various directions. They are employing a variety of strategies, many of which begin long before the sexual encounter (e.g., practicing correct condom use, utilizing the LGBTQ community as a source of support, making commitments to themselves to engage in safer sex). In order to better support these YMSM, interventions provided to them may seek to tailor their approaches by assessing areas of strength and need as it relates to sexual risk. Further, continued research is needed examining adherence to risk reduction plans, facilitators/barriers related to plans, and other risk reduction strategies being employed by YMSM that were not explicitly addressed in the present study.

Acknowledgments

Data for this study were gathered as part of the Keep It Up! randomized clinical trial funded by the National Institute on Drug Abuse and National Institute of Mental Health (R01DA035145, PI: Mustanski). Darnell Motley was support during the preparation of this article by a training grant from the Health Resources and Services Administration (HRSA D40HP25719). We also acknowledge the support of the NIH-funded Third Coast Center for AIDS Research (CFAR; P30 AI117943). The content is solely the responsibility of the authors and does not necessarily represent the official views of the National Institutes of Health. The authors would like to give special thanks to Krystal Madkins for managing the trial and Katie Andrews for survey programming and data management.

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Table 1

Demographics

Variable	Mean	Range	N	Percentage
Age	24.28	18 – 29		
Ethnicity				
White	-	-	149	51
Black	-	-	55	19
Hispanic	-	-	70	24
Asian	-	-	18	6
Sexual Identity				
Gay/Homosexual	-	-	257	88
Bisexual	-	-	32	11
Other	-	-	3	1
Frequency of CAI in Past 6 Months				
1 time	-	-	88	30
2 times	-	-	70	24
3 times	-	-	46	16
4 or more	-	-	88	30

Table 2**Preparatory Strategies**

Themes/Sub-Themes	Representative Quotes
Skill-Related	
Learning more about proper condom use	<p>“YouTube videos on how to use [a condom] correctly”</p> <p>“Practice it on a banana”</p>
Intrapersonal	
Promising himself that he would use condoms consistently	“I will make a promise to myself to use a condom every time even if I’m not in the mood”
Committing to consistent HIV testing	“[I will] always make sure to get tested even though I’m afraid of the results”
Managing one’s mental state	“Set your limits”
Exercising sexual self-control	<p>“Have self control”</p> <p>“[I will] abstain from using Grindr & maintain occupied when I am away from my partner”</p>
Social	
Improving sexual health communication with partners	“Always ask status and explain ahead to use a condom”
Improving general communication with partners	<p>“[My plan is] to establish a clear line of communication as to what are the expectations of the relationship”</p> <p>“Take the time to think about how to properly say what I am feeling and make sure it’s the right time and place to discuss”</p>
Utilizing supports to ensure regular HIV testing	“[I will] get a testing buddy”
Connecting with LGBT community to exchange/ share sexual health knowledge	“[My plan is] to educate [the LGBT community] more on safe sex and STDs and protecting themselves and others”
Connecting with LGBT community to feel connection	“I can come more in terms with my own homosexuality and feel like I belong to the community”
Instrumental	
Procuring condoms	“[I will] order [condoms] from Amazon since I have store credit”
Procuring lubrication	“On my way home from the gym today I will purchase lube”
Procuring home HIV tests	“Save money and get test kits”
Contextual	
Avoiding spaces conducive to riskier sex	<p>“Go to straight clubs”</p> <p>“Hook up at my place, where I’m in control and have protection”</p>
Always having condoms available	“I will make sure to always have a condom in hand or on me”

Table 3

Strategies to Employ during Sex

Themes/Sub-Themes	Representative Quotes
Skill-Related	
Correctly applying condoms during sex	<p>“Put it on right”</p> <p>“Ensuring that the tip of the condom is pinched and rolled all the way down to the base of the penis and pulling off correctly when finished”</p>
Intrapersonal	
Managing one’s mental state during sex	“Don’t get lost in the moment”
Social	
Communicating with partners during the sexual act	<p>“Tell [partner] I will only have sex with condoms”</p> <p>“I’ll be honest about how they can help me keep the condom on and I’ll be sure to have condoms on me”</p>
Adjusting sexual behavior	<p>“I will try to fantasize about using a condom or imagine it wasn't there”</p> <p>“Slow down the action and watch my behavior”</p>
Sexual partner selection	“[My plan is to] not fuck around with HIV+ guys”
Instrumental	
Ensuring the safety of the condom	“[My plan is to] check the expiration date [on a condom] and make sure I'm putting them on correctly”
Contextual	
Leaving the lights on	“[To ensure I keep using condoms consistently and correctly, I will] leave the lights on”