We Prevent: A Dyadic Approach to HIV Prevention and Care Among Young Male Couples

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ATN 157 – We Prevent: A dyadic approach to HIV prevention and care among young male couples

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SIGNATURE PAGE

I will conduct the study in accordance with the provisions of this protocol and all applicable protocol-related documents. I agree to conduct this study in compliance with United States (US) Health and Human Service regulations (45 CFR 46); applicable U.S. Food and Drug Administration regulations; standards of the International Conference on Harmonization Guideline for Good Clinical Practice (E6); Institutional Review Board/Ethics Committee determinations; all applicable in-country, state, and local laws and regulations; and other applicable requirements (e.g., US National Institutes of Health, Division of AIDS) and institutional policies.

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LIST OF ABBREVIATIONS AND DEFINITION OF TERMS

AC	Analytic Core
AIDS	Acquired Immunodeficiency Syndrome
ART	Antiretroviral Therapy
ASO	AIDS Service Organization
ATN	Adolescent Medicine Trials Network for HIV/AIDS Interventions
CASI	Computer Assisted Self Interview
CDC	Centers for Disease Control and Prevention
CFR	Code of Federal Regulations
CHTC	Couples HIV Testing and Counseling
CRF	Case Report Form
CTR	Counseling, Testing, Referral
DCF	Data Collection Form
DHHS	U.S. Department of Health and Human Services
EC	Ethics Committee
GCP	Good Clinical Practices
HIPAA	Health Insurance Portability and Accountability Act
HIV	Human Immunodeficiency Virus
ICH	International Conference on Harmonization
IRB	Institutional Review Board
LGBTQ	Lesbian, Gay, Bisexual, Transgender, Queer
MC	Management Core
MTS	Michigan Tailoring System, a platform for eHealth interventions
NICHD	National Institute of Child Health and Development
NIDA	National Institute on Drug Abuse
NIH	National Institutes of Health
OHRP	Office for Human Research Protections
PI	Principal Investigator
PrEP	Pre-Exposure Prophylaxis
QNS	Query and Notification System
RDC	Remote Data Capture
SRV	Subject Recruitment Venue
STI	Sexually Transmitted Infection
TC	Technology Core
YGBMSM	Young Gay, Bisexual, and other Men who have Sex with Men
YMSM	Young Men who have Sex with Men

STUDY ABSTRACT

DESIGN: *This project seeks to develop and pilot test a developmentally-appropriate HIV prevention intervention that includes relationship skills for young gay, bisexual and other men who have sex with men (YGBMSM). This project involves three phases to develop and pilot test the intervention. Phase I collects brief quantitative survey data, in-depth qualitative and cognitive interview data from YGBMSM, and feedback from a technical expert group (TEG) to develop and refine the intervention that comprises the We Prevent study. Phase II involves conducting a one-arm pilot of the intervention condition to further refine the intervention content with a sample of 24 YGBMSM (12 dyads).The final phase of We Prevent, Phase III, involves conducting a randomized controlled trial (RCT) comparing the relationship-focused intervention to a control condition, which is HIV Counseling, Testing, and Referrals (CTR) alone with a sample of 320 YGBMSM. This protocol is for Phase III of the proposed activities..*

DURATION: *Phase I is expected to take 7 months to complete. It includes data collection from two groups of participants: 1) 30 YGBMSM in in-depth interviews and 8 YGBMSM in cognitive interviews and 2) 7 Technical Experts, for a total sample of 45 research participants. Phase I is split into three tasks. For Task 1, 30 YGBMSM will be recruited through online banner advertisements and once consented and screened will complete a brief online survey which will take approximately 15-20 minutes to complete. Participants will then be invited to participate in an in-depth interview with a study staff member, which will take approximately 1-2 hours to complete. The data generated from Task 1 will be used to design the intervention manual. For Task 2, a technical expert group (TEG) of 7 individuals will be identified to participate in virtual meetings to review and provide feedback on the intervention content. For Task 3, an additional group of YGBMSM (n = 8), excluding those included in Task 1, will be recruited to complete cognitive interviews which will last approximately 1 hour to further refine the intervention. Phase II will consist of a one-arm pilot test of the intervention condition with 12 YGBMSM and their partners (total 24 participants). Each participant will complete baseline and 1-month follow-up surveys and all will get mailed STI testing kits at baseline. Phase III involves a two-arm prospective RCT in which 320 YGBMSM will complete surveys at Baseline, 3-month, 6-month, and 9-month follow-up. They will only be mailed STI kits at Baseline and 6-month follow-up. Participants randomized to the intervention arm will have the option to participate with their partner, though it is not required or necessary.*

SAMPLE SIZE: *Participants will be recruited online with potential representation from all 50 states. The sample size for Phase 1 is 45: this is comprised of 38 YGBMSM: 30 took part in in-depth interviews for*

Task 1, and 8 took part in cognitive interviews for Task 3. For Task 2, 7 technical expert group members (TEG) were recruited to provide feedback on the intervention content. The sample size for Phase II is 24 participants (12 dyads), and the Phase III sample size is 320 participants.

POPULATION:

For phases I and II of the project, participants and their partners must be: (1) between the ages of 15 and 19 years (inclusive); (2) must meet the age of sexual consent in their states of residence (3) identify that they are in an emotional and/or sexual relationship with another male (assessed through multiple questions), (4) cisgender men (assigned male at birth and identifies as male) and transgender men (assigned female at birth and identifies as male or transgender man) who report intention to have sex with men; (5) report that they have engaged in any sex (oral, vaginal, anal) in their lifetime, (6) have access to personal device with internet access within their home, (7) self-report being HIV negative or unknown serostatus, and (8) speak or read English. A Technical Expert Group was formed in Phase I and consisted of members who engage with diverse communities of YGBMSM and have experience in the provision of HIV and LGBTQ clinical and social services. Phase III participants must (1) be between the ages of 15 and 24 years (inclusive); (2) meet the age of sexual consent in their states of residence (3) identify that they are in an emotional and/or sexual relationship with another male (assessed through multiple questions), (4) be a cisgender man (assigned male at birth and identifies as male) or transgender men (assigned female at birth and identifies as male or transgender man) who report intention to have sex with men; (5) report that they have engaged in any sex (oral, vaginal, anal) in their lifetime, (6) have access to a personal device with internet access within their home, (7) self-report being HIV negative or unknown serostatus, and (8) speak or read English.

Recruitment:

For all phases, we aim to recruit at least 50% racial and ethnic minority participants in all phases. In Phase III, we will stratify by race and ethnicity.

DATA COLLECTION:

For all study phases, YGBMSM will be recruited via online banner advertisements on social media (Instagram, Facebook, Snapchat) and will be connected to a screener survey via Alchemer. When a participant screens eligible in Phase II, they will provide their and their partners' contact information. After email and phone validation, they will be able to register for an account with the and will be enrolled in the study. Study staff will then send them each a link to complete the baseline survey. Once both partners have completed the baseline survey, the couple will schedule a relationship skills session that will be conducted via Zoom video-chat software. Zoom is a HIPAA-secure video-conferencing program. Once they have completed the relationship skills session, they will be mailed at-home HIV test kits and scheduled

for their CHTC session. Surveys will be completed at Baseline and 1-month follow-up. At-home STI testing kits will be offered at Baseline. Qualitative data will be audio-recorded, with participant consent, to allow for verbatim transcription of the interview and checked for accuracy and completion. A select number of participants (n=6) will be asked to complete an exit interview with study staff via Zoom. When a participant screens eligible for Phase III, they will be directed to a SMART registration page where they will complete the Baseline survey and be randomized. Those in the control condition will participate alone in a CTR session; those in the intervention arm will have the option to participate alone or with their partner in CTR + Relationship Skills and/or CHTC + Relationship Skills session(s). The HIV testing session will be conducted via Zoom, and the participant will complete follow-up surveys (3, 6, and 9 months) via Alchemer.

OBJECTIVES:

1) To develop and refine a developmentally appropriate relationship skills session as an additional session to the current CHTC and CTR interventions for 15-24-year-old YGBMSM.

2) To conduct a randomized controlled trial (RCT) comparing the efficacy of the adapted intervention for YGBMSM versus a control condition, which is CTR alone.

1.0 INTRODUCTION

1.1 Background

Young (15-24 years old) gay, bisexual and other men who have sex with men (YMSM) continue to be the group most heavily impacted by HIV in the US, despite stable or declining rates of infection among other groups.[1,2] More than four decades into the epidemic, HIV prevention and research efforts in the US have continued to target MSM as individuals, largely focusing on messages that encourage the uptake of prevention efforts (traditionally condoms, and more recently PrEP) and reducing sexual risk. Recently, there has been growing interest in structural interventions to reduce HIV risk, tackling social, economic and cultural factors that place MSM in contexts of risk.[3] However, despite socio-ecological theory postulating the importance of individual, dyadic and social influences on HIV risk, there has been a dearth of intervention efforts focused at the dyadic level. Substantial evidence indicates that one- to two-thirds of MSM acquire HIV from their main partners, and that the proportion of new infections attributable to main partners is higher (84%) among YMSM.[4,5] Male couples' increase in HIV risk is attributed to a combination of a lack of knowledge of both partners' HIV status before engaging in condomless anal sex (CAS), higher number of anal sex acts between main partners, and more frequent receptive roles during anal sex acts.[6-11] CAS within relationships often occurs concurrently to CAS outside of the relationship, often as part of a mutual sexual agreement, potentially increasing the couples' risk for HIV and other sexually transmitted infections (STIs).[7,8,12,13]

Although a number of evidence-based biomedical HIV preventive strategies exist for YMSM, uptake of these strategies within relationships remains low. Studies with HIV-negative male couples have found strong evidence that partnered men test less frequently for HIV and other STIs,[14-16] and are less likely to adopt biomedical prevention strategies[15, 28] and that their use is contingent upon their perception of risk.[15] There has also been low awareness and uptake of PrEP which may be reflective of limited dissemination efforts of biomedical prevention strategies for young male couples,[17] compounded with low perception of their HIV risk,[18] and the uncertainty of how using a strategy may affect their relationship.[19] Furthermore, many YMSM report increased fatigue with safer sex messages and practices but express a need for services that address health more generally,[20,21] including relationship education services.[22] Integrating relationship skills with HIV prevention is an important and necessary means to curb HIV incidence amongst those at highest risk for infection.

1.2 Rationale

To date, there are few scalable dyadic HIV prevention interventions exist for YMSM in relationships.[3,23] Couples HIV Testing and Counseling (CHTC) has been shown to be as acceptable as individual HIV testing.[24] Despite widespread acceptability and utility,[25] there has been limited dissemination and scaling up of couples-based HIV prevention interventions for YMSM, including CHTC. Qualitative evidence suggests that YMSM have CAS with serious partners to express trust and intimacy, and they stop using condoms without initiating pre-exposure prophylaxis (PrEP) because they perceive that they are in a monogamous relationship.[26,27] Young male couples also report infrequent HIV testing, even when CAS has occurred with outside partners.[14,15] Because most existing prevention strategies focus in large part on reducing CAS with casual partners,[28] many YMSM do not have the skills to navigate the complexities of HIV prevention in romantic relationships, such as timing of HIV testing, condom use, and use of biomedical prevention strategies. Thus, incorporating relationship skills into existing the CHTC intervention delivered via video-counseling has the potential to empower YMSM with the skills necessary to communicate and protect themselves from HIV in their current and future relationships.

1.2.1 Telemedicine may provide an opportunity to address barriers to HIV testing for partnered YMSM.

YMSM often rely on online technologies to build their social and sexual networks, receive social support, and obtain relevant health information. In general, Internet use among young adults aged 15-29 is nearly universal, at 99% in 2016.[29,30] Thus, telemedicine offers the opportunity to disseminate HIV prevention strategies to YMSM who might otherwise not have this opportunity. Telemedicine aims to circumvent traditional impediments to healthcare access. Over the past decade, telemedicine formats have been adapted for use in MSM populations where stigma and a lack of LGBT-friendly healthcare providers contribute to reduced access to care.[31] Online interventions are seen as convenient for youth users and allow for home-based access to health messaging, thereby reducing fears of embarrassment or ‘outing’ by connecting with local resources.[32,3334]

1.2.2 Theoretical framework for We Prevent: Dyadic Intervention

We-Prevent draws on the Relationship-Orientation Information-Motivation-Behavioral Skills (RELO-IMB) model,[35] premised on the IMB model[36] and developed for YMSM communities.[37] The RELO-IMB model entails “Information” by addressing YMSM-specific knowledge (e.g., risk within

dyads and with outside partners), “Motivation” by addressing attitudes and peers norms about prevention in relationships, and “Behavioral Skills” by addressing risk reduction skills relevant to YMSM and their partners (e.g., discussion about safer sex, HIV testing, and negotiating safety in one’s sexual agreement). This study uses the RELO-IMB model, but with variations on specific measures in an effort to harmonize our metrics with other ATN studies. We Prevent includes two sessions: session one, a motivational interviewing guided session which provides a facilitated discussion between two YMSM in which they explore and understand their own HIV risk and learn behavioral skills to improve communication, and session two, a CHTC session between two YMSM which facilitates the development of a prevention plan that meets the goals of both partners. We hypothesize that YMSM and their partners who engage in We Prevent will demonstrate greater information about different prevention options (e.g., knowledge of PrEP and the importance of STI and repeat HIV testing). Furthermore, YMSM who engage in We Prevent will demonstrate greater communication skills to use in their relationship, which will provide them with greater self-efficacy for developing a HIV prevention plan with their partner. The use of motivational interviewing techniques will allow couples to realize areas where they are doing well in their communication and HIV prevention plan while highlighting areas for improvement. These skills will facilitate engaging in CHTC in the second session in which the two partners test together and develop a prevention plan. Thus, We Prevent will increase the uptake of HIV prevention strategies by exploring YMSM’s desires, goals and behaviors within their relationship and teaching YMSM models of communication and problem-solving strategies to help them enact effective communication towards HIV prevention planning and uptake. YMSM exposed to the intervention will learn about HIV prevention options (Information), HIV prevention and risk within relationships (Information and Motivation), and will practice communication and negotiation techniques towards the discussion of sex, sexual risk and HIV prevention and planning (Behavior).

2.0 STUDY OBJECTIVES

The overall objective of our program of research is to develop and test We Prevent (ATN Protocol #157), as part of the U19HD089881-02S2 UNC/Emory Center for Innovative Technology (iTech) across the prevention and care continuum project. Phase I and Phase II have already been approved by the UNC IRB and the objective of this proposal is to obtain approval for Phase III, which is the two-armed randomized control trial. For this application, we are requesting approval for Phase III procedures and materials only. The procedures and materials for Phase III rely on the findings from Phase II.

3.0 STUDY DESIGN

This four-year study consists of three phases to develop and test the “We Prevent” intervention for YMSM and their partners. Phase II and III protocols and procedures are premised on the formative data collected in Phase I; and Phase III has been further informed by the data collected in Phase II.

3.1 Study Population

For Phase I and II of this project, we recruited a diverse sample of 15-19-year-olds. For Phase III of the project, we will recruit a diverse sample of 15-24 year-olds. Age of recruitment will vary state-by-state due to variations in state sexual consent laws. Therefore, in some states we will

not be able to recruit participants who are as young as 15, and this state-by-state logic will be built into the screener.. We will exclude those who report a recent (6 month) history of intimate partner violence, using methods specifically designed for use with male couples. To ensure representation of racial/ethnic minorities, we have a target of 50% in all phases of the study be racial/ethnic minority participants. If enrollment of racial/ethnic participants drops below 50%, we will explore additional recruitment strategies.

Eligibility for both the participant and their partner will include the following: (1) between the ages of 15 and 24 years; (2) participants must meet the age of sexual consent in their states of residence; (3) identify that they are in an emotional and/or sexual relationship with another male (assessed through multiple questions, both at the individual and dyadic level), () born male or female and currently identify as male or transgender man, with an intention to have sex with men (5) report that they have engaged in any sex (oral, anal, vaginal) in their lifetime, (6) have access to personal device with internet access within their home, (7) self-report being HIV negative or unknown serostatus, and (8) speak and read English.

3.2 Sample Size

Phase I involved three Tasks, with separate samples for each Task. For Task 1 we have enrolled 30 YGBMSM (ages 15-19) who completed a brief online survey and an in-depth interview, in order to gather the necessary data for developing the intervention manual. For Task 2, we enrolled 7 technical experts to undergo interviews to provide feedback on the intervention manual developed from the data in Task 1. For Task 3, we enrolled 8 YGBMSM (ages 15-19) to complete a brief online survey and then cognitive interviews to refine the intervention manual. The 8 YGBMSM enrolled for Task 3 are independent to those enrolled in Task 1: it is important that those involved in the cognitive interviewing (Task 3) have had no prior contact with the study. In Phase II, we enrolled 12 YGBMSM (ages 15-19) and their partners (6 couples) in a one-arm pilot of the intervention to further refine the intervention. No participants completed sessions in Phase II, and the design for Phase III is modified based on this result. Only participants randomized to the intervention arm will have the option to participate alone or with their partner. Phase III involves conducting an RCT of the We Prevent intervention (CTR + relationship skills, or CHTC + relationship skills) compared to CTR alone with 320 YGBMSM ages 15-24.

4.0 ELIGIBILITY AND SCREENING

4.1.a Inclusion Criteria for Phase I and II

*Below inclusion criteria must be satisfied by both participants within a dyad (i.e., both partners report that they are in an emotional and/or sexual relationship with each other).

- *Ages 15 to 19 years (inclusive) at time of screening*
- *Current US resident*
- *Sufficient age for sexual consent in the current state of residence*
- *Self-identify that they are in an emotional and/or sexual relationship with another male*
- *Cisgender men (assigned male at birth and identifies as male) and transgender men (assigned female at birth and identifies as male or transgender man) who report intention to have sex with men*
- *Self-reports that they engaged in some form of sex (oral, vaginal, anal) in their lifetime*
- *Has access to computer/personal device/smart phone with internet access*
- *Self-report being HIV negative or unknown serostatus*

- *Speak and read English*

4.2 Exclusion Criteria for Phase I and II

*Below exclusion criteria applies to both participants within a dyad

- *Younger than age for consent without parental permission in the current state of residence*
- *Assigned female sex at birth and currently identifies as something other than male or transgender male*
- *Assigned male sex at birth but identifies as gender other than male or transgender male*
- *Aged 14 years or younger or 20 or older at the time of screening*
- *HIV-positive*
- *Not currently in an emotional and/or sexual relationship with another male*
- *Does not speak or read English*
- *Reports intimate partner violence in the past 6 months*

4.3 Inclusion Criteria for Phase I, Task 2 (Technical Expert Group)

- *The individual has published in a peer-reviewed journal in the following domains in the past 4 years: HIV interventions for YMSM, online HIV interventions for YMSM, or dyadic HIV interventions.*
- *A list of potential participants will be identified through a review of the recent (4 year) literature.*

4.4 Inclusion Criteria for Phase III

*Below inclusion criteria must be satisfied by individual participants (or both participants within a dyad if they choose to participate as a couple, only in the intervention arm)

- *Ages 15 to 24 years (inclusive)*
- *Current US resident*
- *Sufficient age for sexual consent in the current state of residence (both at the individual and dyadic level)*
- *Self-identify that they are in an emotional and/or sexual relationship with another male*
- *Cisgender men (assigned male at birth and identifies as male) and transgender men (assigned female at birth and identifies as male or transgender man) who report intention to have sex with men*
- *Self-reports that they engaged in some form of sex (oral, vaginal, anal) in their lifetime*
- *Has access to computer/personal device/smart phone with internet access*
- *Self-report being HIV negative or unknown serostatus*
- *Speak and read English*

4.5 Exclusion Criteria for Phase III

*Below exclusion criteria applies to both participants within a dyad

- *Younger than age for consent without parental permission in the current state of residence*

- *Assigned female sex at birth and currently identifies as something other than male or transgender male*
- *Assigned male sex at birth but identifies as gender other than male or transgender male*
- *Aged 14 years or younger or 25 or older at the time of screening*
- *HIV-positive*
- *Not currently in an emotional and/or sexual relationship with another male*
- *Does not speak or read English*
- *Reports intimate partner violence in the past 6 months*

4.6 Recruitment

All recruitment will be completed online: this protocol does not involve SRV engagement in recruitment or intervention delivery. Participants will be recruited via online ads placed on key social media websites (e.g., Facebook, Instagram, Snapchat, Grindr, etc.). The online ads will show visual representations of young male couples, in a range of race/ethnicities and will be titled: "*We Prevent*." People who click on the advertisement will be taken to the Survey Gizmo screener webpage that provides basic information on the study: this will be referred to throughout the protocol as the 'landing page'. On the landing page will be basic information on the study processes and a "do you consent to be screened?" question; if participants click "yes" they will be screened for eligibility.. All recruitment will be tracked in the screener with the question "How were you directed to the study website?"

This study will also use Cameo as part of its online recruitment strategy. Cameo is a website that allows users to pay celebrities to create short 20-second videos and deliver a particular message of the user's choice. Once the video is created and paid for, Cameo delivers the video file to the user. Study staff will upload the video to the social media sites already being used for recruitment. The script will only contain information about the study: "Hi, this is (insert celebrity name) and I want to tell you about an HIV prevention study from the University of Michigan. This study is aimed at young gay and bisexual men who are in their first relationships. If you are eligible, you will take a few surveys and get mailed an at-home HIV testing kit. Click on the link to see if you're eligible!"

4.7 Informed Consent

For all phases of the study, there are two points of consent: 1) consent for screening for eligibility, and 2) consent to participate in the study. When participants click on the "interested in participation?" button, they are taken to the next page of the website. This page contains the first informed assent/consent survey (for screening). After reading the consent script participants can click on "agree" or "disagree". If they click agree they will be taken to the eligibility screener (a Alchemer survey) and if they disagree they will be taken to a page that thanks them for their interest and links them to the CDC HIV toolkit page. Those who are ineligible will be asked if they want to provide their contact information to be contacted about future research opportunities. The consent/ decline decision will be recorded in the data base linked to a participant unique ID, that can then be linked to their data to allow an electronic record of consent/ assent for all participants. For Phase I, after taking the eligibility screener (see below), those who are eligible will be taken to a page that shows the second consent/ assent form that explains the specific study activities for which they are being recruited. After reading the informed consent form the participant can consent/assent or decline in the same manner as the eligibility consent. For Phase III, participants will complete the eligibility screener in Alchemer, and if eligible and consent to participate in the study, will be automatically re-directed to a

SMART registration page where they will enter their contact information and be instructed to download the We Prevent-specific SMART app. For participants who are invited by the index partner and are eligible to participate, we will schedule an informed consent phone call immediately following their screening into the study. We will provide information about the study procedures to ensure they understand that they will be participating to a lesser extent than the index partner but still with their partner.

Assessing for decisional capacity. The study staff reviews the informed consent/assent to make a formal assessment of the youth's decisional capacity and ability to provide consent/assent prior to each video-conferencing session, using a 2-step process. First, the staff members determine if the person understands the study goals by asking "Can you tell me what this study is about?" In step 2, potential participants will be asked questions designed to assess their capacity to understand, appreciate, reason with, and express a choice about participation in our specific protocol. We will use a modified version of the widely used Evaluation to Sign Consent Form in which participants are asked to: **1)** name things they will be expected to do during the study; **2)** explain what they would do if they no longer wished to participate in the study**; 3)** explain what they would do if they experienced distress during the study; and **4)** identify potential risks for participating in the study. Potential participants will be enrolled only if they are able to provide clear and correct answers to each of these items, without prompting or correction.

Waiver of parental consent. We will request that the UNC-CH IRB as the central IRB (IRB of Record) grant a waiver of parental consent to participate in this research study for youth participants who are 15 to 17 years of age. The research team has been granted waivers of parental permission for all prior studies with sexual minority youth. Under 45 CFR 46.408 (c), an IRB has the authority to waive parental permission if it determines that "a research protocol is designed for conditions or a subject population for which parental or guardian permission is not a reasonable requirement to protect the subjects" and "an appropriate mechanism for protecting the children who will participate as research subjects is substituted" and "that the waiver is not inconsistent with Federal, State, or local law." A waiver of parental permission for studies with lesbian, gay, bisexual, transgender, and questioning (LGBTQ) youth that do not involve greater than minimal risk is a common practice among researchers working in the area of gay and lesbian health/mental health. This is done to avoid the selection biases operating in only recruiting youth whose parents are both aware of and comfortable with their sexual orientation. Commonly youth have explored their sexual orientation without their parents' knowledge as the youth struggle with issues of disclosure and its consequences within the social, religious, and economic context of their families. A requirement for parental permission in this type of study could not only affect a person's willingness to participate but could also potentially impact the ability of researchers to engage in this type of research with sexual minority youth.

If the purpose of requiring parental permission as stated in CFR is to protect the minor subject, then requiring parental permission for youth in these circumstances is not a reasonable requirement. Additional privacy protections are provided in that all assessments, notes, reports, and other records will be identified by only a coded number to maintain participant confidentiality. These records and any forms that do contain identifying information (e.g., consent/assent forms, contact information) will be kept in a locked, limited access area (such as a locked file cabinet) at the participating site.

The study is requesting waiver of written informed consent from adult participants (18 years old and above) See sections 12.5 through 12.6 for additional information regarding waivers of written informed consent.

4.8 Screening and Registration

Participants will have completed the following process: clicking on a banner advertisement, learning about the study via the study landing page, consenting to be screened for eligibility, answering eligibility questions on a Alchemer survey, reading the informed consent/assent form and consenting/ assenting to participate. For participants in Phase III, after screening eligible, participants will be redirected to a SMART linked web page where they will enter their contact information, which will then be automatically populated into SMART and verified. Study staff members will verify eligibility for all participants who screen eligible and provide consent. Once their eligibility is confirmed, participants will be sent instructions to download the SMART study application and all follow-up activities will be conducted through SMART. If the participant is randomized into the intervention arm and chooses to participate with their partner, the invited partner will be emailed a link to the eligibility screener. If they screen eligible, study staff will schedule an informed consent phone call with the invited partner (described above in the informed consent section). Contact information for the invited partner will be requested in the brief baseline survey and will be stored in a password-protected file within Box or Microsoft OneDrive.

5.0 STUDY PROCEDURES

5.1 Enrollment Procedures

Phase I: The same processes will be used for Task 1 and Task 3. They will not operate in parallel. Task 1 will be completed first, with the data from the in-depth interviews being used to develop the intervention manual. After development of the manual, we will engage in Task 2. Feedback from Task 2 will then be incorporated into the manual. Once both Task 1 and 2 are complete, then we will begin Task 3, which involves cognitive interviews with an additional 10 participants. Once the eligible participant has completed the screener and provided their contact information, a study staff member will email them with a link to the brief online survey in Alchemer. Once they have completed the brief survey, we will contact them to schedule the interview for Task 1 or Task 3 (dependent on what they are recruited for). Before the interview, the study staff member will review the consent process to ensure they understood their rights and the details of their participation. Alchemer has a business partner HIPAA agreement with Emory. Alchemer servers are HIPAA-compliant. The time between eligibility screening and completing the survey and interview will be tracked through SMART, and weekly reminders will be sent out (via the participant's choice of SMS or email) to remind them to complete the survey and/or the in-depth interview.

Phase II: If the prospective participant screens eligible, they will enter their and their partner's contact information directly into the Alchemer screener. After email and phone validation, the invited partner will receive an emailed link to the screener. If eligible, the invited partner will also provide and verify their contact information. After both partners have screened eligible, verified their data and their contact information, both participants will be emailed a link to complete the baseline survey and all subsequent study activities. Once they have both completed the baseline survey, they can opt-in to the at-home STI testing process and schedule the relationship skills session that will be conducted via Zoom or VSee video-chat software.

Participants will then be mailed STI testing kits. Once they have completed the relationship skills session, they will be mailed HIV testing kits and scheduled for their CHTC session. Surveys will be completed at Baseline and 1-month follow-up. At-home STI testing will be offered at Baseline. With regard to the baseline survey, participants have four weeks to complete the survey from the time the screen eligible. Reminders will be sent to ensure that participants are aware of this study activity. If the baseline is not complete by either of the partners within the four weeks, the couple will be study-stopped. If only one of the participants completes the baseline survey, study staff will continue to follow that participant with the 1-month follow-up survey.

Phase III: If the prospective participant screens eligible, they will enter their contact information into a registration page connected to SMART. After completing the registration page, participants will be instructed to download the SMART app where all subsequent study activities will take place. Participants will be randomized in DFexplore after completing the Baseline survey. Participants randomized to the control arm will complete the study entirely on their own. Those randomized into the intervention arm will have the option to participate alone or with their partner. If they choose to participate with their partner, their partner will be screened for eligibility, consented, and complete a brief survey (not the full baseline survey). The invited partner will not be put into SMART and the only information we will collect is the screener, consent and brief survey data, along with a satisfaction survey after the CHTC session. For invited partners who screen eligible and complete the brief survey, study staff will consent them over the phone prior to the CHTC session. . Index participants will complete surveys at Baseline, 3-month, 6-month, and 9-month follow-up. They will be mailed STI kits at Baseline and the 6-month follow-up.

To ensure representation of racial/ethnic minorities, we have a target of 50% in all phases of the study be racial/ethnic minority participants. If enrollment of racial/ethnic minority participants drops below 50%, we will explore additional recruitment strategies

5.2 Contact Information

The collection of contact information procedures is the same for all study phases. After screening eligible, participants will be asked if they would like to be contacted by email, phone, or text message for any study communication and will have options to provide contact information for each mechanism. Study staff will not leave messages unless expressly permitted to do so by the participant which also will be documented on this form. If a participant selects the phone option, the study team will ask for explicit permission to leave voice messages that will not include any protected health information or information related to study participation. Participant contact information will be maintained using the same confidential data management practices used for all study data.

5.3 Counselor Training and Intervention Fidelity

We will train counselors in motivational interviewing, CHTC and the relationship building session in a 3-day training session. They will also receive a 3-day training in CTR from the Michigan Department of Health and Human Services. Counselors will demonstrate proficiency via audiotaped role plays prior to being “certified” to deliver sessions. All counseling sessions will be audiotaped (with participant informed consent), and every fourth session will be rated by Drs. Gamarel and Darbes. Counselors will be provided timely feedback at weekly supervision sessions. For emergent psychosocial problems such as relationship conflict, unemployment, or

loss of residence, a brief problem-solving discussion will be conducted in session and referrals to relevant local agencies and community therapists will be provided, which include a generated list of national services. Counselors will intervene immediately in the event that participants are an imminent threat to themselves or others and will discuss any cases of clinical deterioration with Dr. Darbes (a Clinical Psychologist) in order to determine whether more intensive treatment is required. In the event there is an immediate situation which requires attention during an assessment or session, Dr. Darbes will be available. We will use the manualized protocol for rating counselor competence to ensure intervention fidelity. In the RCT (Phase III), counselors will be rated bimonthly as part of supervision. The first 10 session tapes for each counselor will be rated and then subsequently every fourth session will be reviewed by Drs. Darbes and Gamarel. Counselors identified as having treatment drift will receive booster trainings as necessary.

5.4 Intervention Condition (Phase II and III)

In Phase II, all participant couples will be in the intervention condition in order to pilot the study before the RCT. This dyadic intervention is based on the standard one-session Couples HIV Counseling and Testing (CHTC) session that is now a CDC recommended prevention strategy for male couples and is being tested for adult male couples via video-based counseling. The intervention condition will be modified to include an additional couples sessions, which will be dedicated to relationship skills building. Thus, the intervention will consist of two couples sessions delivered over a two week time period. The first session is the relationship skills session and will focus on defining healthy and unhealthy characteristics of relationships, teaching and practicing effective communication skills, reviewing couples-based sexual health information (i.e., negotiated safety, PrEP, HIV and STI testing), and preparing for engaging in CHTC as a couple.

In Phase III, participants will be randomized after they complete the baseline survey. Participants in the intervention arm will have the option to: (1) participate alone – this involves one CTR + Relationship Skills session within one to two weeks from completing the baseline; (2) participate with their partner – this involves one CHTC + Relationship Skills session; or (3) participate alone in the CTR + Relationship Skills session and also participate with their partner in the CHTC + Relationship Skills session. The choice on how participants want to participate will be recorded in Alchemer, where each option will be explained in detail so that participants can make the best choice for themselves. Regardless of their choice, the participant's initial session should occur within four weeks of enrollment. If they choose to participate with their partner, the invited partner will be screened for eligibility and sent a brief baseline survey before scheduling the CHTC + Relationship Skills session. Participants and their partner (if they choose the couple option) will be mailed an HIV testing kit (OraQuick rapid fluid test) prior to the session. Foundational to this intervention is the individuals or couples talking about and forming a prevention plan using effective communication. Specifically, both sessions are designed to help YMSM learn and practice communication skills and set goals regarding HIV prevention and care which can be used throughout their lives.

In the CHTC + Relationship Skills session, YMSM and their partner will receive all elements of counseling and testing together: pre-test counseling, HIV testing with an OraQuick rapid fluid (saliva) test that will be mailed to participants prior to the session, and discussion of HIV risks, delivery of test results and post-test counseling jointly as a couple. Importantly the dyadic intervention will focus on the future: participants will not be asked to reveal recent risk behaviors/ exposures. Instead the focus is on the couple learning their sero-status together and

building a prevention plan that reflects their relationship goals and sero-status. Foundational to this is the couple talking about and forming a prevention plan together using effective communication skills. Specifically, the session is designed to help YMSM and their partners learn and practice communication skills and set goals regarding HIV prevention and care which can be used throughout their lives.

In the CTR + Relationship Skills session, YMSM will receive all elements of CTR counseling and HIV testing with an OraQuick rapid fluid (saliva) test that will be mailed to participants prior to the session, and discussion of HIV risks, delivery of test results and post-test counseling. Importantly the CTR+ Relationship Skills session will focus on the future: participants will not be asked to reveal recent risk behaviors/ exposures. Instead the focus is on the participant learning their sero-status and building a prevention plan that reflects their relationship goals and sero-status. Foundational to this is the participant talking about and forming a prevention plan and learning effective communication skills to discuss HIV prevention strategies with their partner. Specifically, the session is designed to help YMSM learn and practice communication skills and set goals regarding HIV prevention and care which can be used throughout their lives.

Participants (index partners) randomized to the intervention condition and who choose to do CTR + Relationships Skills will also be given the option to do invite their partner to complete the CHTC + Relationship Skills with them after they complete the individual session. The procedures for the second session will follow those of the CHTR + Relationship Skills session described above.

5.5 Registration & Randomization (Phase III RCT)

In Phase III, after completing the baseline survey participants will be randomized via DFexplore in a 1:1 ratio into the intervention or control condition. In order for interventions to be evaluated as potential “best evidence”-based interventions through CDC’s Prevention Synthesis Research activity, data must be available for at least a single follow-up time point for at least 70% of participants. We will use best practices to retain participants (e.g., comprehensive locator information that includes participants' cell phone number, and e-mail), while being sensitive to undue disclosure of YMSM participating in the study. Depending on the participants’ preferences provided upon registration, contacts will be made initially with the preferred mode of re-contact (for example, by SMS text message); if still unresponsive, other available modes (e.g., phone call) will be used. The study will use a HIPAA-compliant web-based platform entitled Study Management and Retention Toolkit (SMART), which is a SaaS (Software as a Service) based mobile application aiding studies with various aspects of participant recruitment, study implementation, and retention. SMART is a licensed service of the Center for AIDS Research (CFAR) at Emory University, Prevention Science Core. We will follow YMSM for 9 months and have contact with them every three months. The small time frames between assessments helps us to respond quickly to retention concerns. Incentives for completing the baseline and follow-up surveys will be $40 per individual, per assessment. If a participant completes all three follow-up surveys, they will receive an additional $40.

For both conditions, participants will be taken to an online calendar asking them to schedule their first session. The calendar will be populated by study staff per their availability and will reflect local time zones. The page will explain the session format, will provide detailed instructions on using the Zoom video-chat software, and will contain a list of instructions for participating in the sessions (e.g., audio and visual privacy, etc.). For both conditions, the

sessions will be about 45 minutes... Each session will be delivered via Zoom, the HIPAA-compliant video-chat software that can be used on a PC, tablet or smartphone.

5.6 Control Condition

Participants who are randomized to the control condition will engage in one CTR session delivered via Zoom video-counseling. Approximately one week prior to the scheduled session, a box containing a home oral fluid HIV-test (OraQuick) kit will be mailed by the study team to the address provided by each participant. The participants will be instructed to have the kits with them at the time of the scheduled session, but not to use them prior to the session. The CTR session will begin by discussing the participants' perceptions of risk,, delivering the test result, and prevention planning, which will be followed by linkage and referrals to local services. During the session, the remotely located counselor will instruct the participant on how to self-test using the home HIV-testing kits mailed to them. The counselor will observe the testing, ensure they can read and interpret the results correctly, and prevention planning will be centered on the results of the HIV testing.

For both conditions, participants who receive an HIV-positive result will be counseled on the need for timely linkage to care. The counselor will arrange a time within 1 week of the initial session to conduct a second video session for participants who have preliminary positive results. During this session, new preliminary positives will be directly linked to medical care by connecting them with a medical care contact in their local area. Study staff will follow-up with them on the next business day to ensure that contact was made with a local facility closest to where the participant lives or with a medical care agency. The participant would be contacted at least three times: (1) to confirm an appointment was scheduled; (2) to confirm the appointment was attended; and (3) to report confirmatory results.

6.0 SURVEYS AND COUNSELING SESSIONS

6.1 Phase II and III Survey Measures

All surveys taken by participants are taken via a secure Alchemer link. During Phase III, this link will be distributed to them via SMART. For Phase II and III, our primary outcomes relate to the uptake of HIV prevention, conceptualized as self-report condomless sex, HIV testing, STI testing and PrEP knowledge, and efficacy and uptake. In addition, we will provide participants with kits to self-collect samples that will be mailed back and laboratory tested for STIs (syphilis, gonorrhea and chlamydia). The surveys will ask about the following information:

Demographics/Socioeconomic Characteristics:

- Age, race/ethnicity, sexual identity, housing status, history of incarceration, employment status, educational attainment, and income level.
- General sex and relationship history, including number of past partners stratified by female, male, transgender female, and transgender male partners, sexual intercourse with these partners, and length of relationships.

Primary Outcome Measures:

- *Powered Outcome:* The survey is powered on the 9-item HIV-related dyadic communication for men who have sex with men scale

- *Sexual Behaviors:* The survey will assess lifetime and past 1- or 3-month sexual intercourse, including the type and frequency of these sexual behaviors.
- *HIV, STI Testing and PrEP/PEP Use:* The survey will contain a detailed description of different HIV prevention strategies, specifically HIV testing, STI testing, PrEP, CHTC, nPEP. Awareness will be single item measures of whether the participant had heard of each of these prevention strategies (binary: yes/no). Willingness will be assessed with single item measures that ask whether the participant would be willing to use the biomedical prevention strategy if it were available for free (binary: yes/no). History and current use will be asked by asking participants their HIV and STI testing history and whether they have ever used or are currently using other prevention strategies (i.e., CHTC, PrEP, nPEP). For participants that test positive in the CHTC or CTR session, they will be asked a series of questions about linkage to care in the 1-month (Phase II) and 3-month (Phase III) follow-up survey. These questions include most recent HIV care, viral load/CD4 testing, ARV treatment uptake, and future HIV care.

Relationship Dynamic Measures:

- Surveys in this section will assess relationship satisfaction, commitment, experiences of relational closeness, and interpersonal violence.

Mechanism of Change Measures:

- In these surveys participants will be asked about risk communication with their partner, preferences for sexual health outcomes, any sexual agreements the couple may have (including breaking agreements), and general communication.

Psychosocial Measures:

- The survey will assess each participants' perception of their own HIV risk, perceived chances of success in life, anticipated HIV stigma, internalized heterosexism, everyday discrimination, family acceptance, sexual identity disclosure, depression and anxiety symptoms, and substance use.

Study Satisfaction Measures:

- Participants will be given a series of surveys that assess their satisfaction with the study, and give participants an opportunity to provide feedback on the relationship-skills session and the CHTC session.

At-Home HIV Testing Survey:

- In Phase III, participants are sent an HIV testing kit immediately after scheduling a session. It is possible that some participants who schedule a session will not actually complete the session. However, we would still like to know whether they completed the at-home HIV testing kit. If a participant is sent an HIV testing kit and does not complete a session within 45 days of enrollment, they will be sent a survey through SMART that will ask whether they took the test and the test result.

6.2 Phase I In-Depth Interviews (IDI)

Interviews for Phase I will be conducted via VSee, the HIPAA-compliant video-chat software that will also be used to deliver the intervention. The IDI will adopt a participatory methods approach, in which participants create timelines of their relationships. One way that participants can actively guide a qualitative interview process is through the use of activities in which participants are given guidelines or instructions by the researcher, but then take control of the

activity in a flexible and participant-centered approach. During the proposed IDI, participants will create a visual relationship timeline using virtual stickers to develop an overview of their dating and sexual history. The IDI follows a step-by-step process with discreet steps where participants place stickers on the timeline in response to questions about relationship dynamics, desires and communication. To construct the timeline, participants will add non-identifying nicknames for up to three “sexual and/or romantic partners” who were “significant or memorable” to the participant in some way; participants will define for themselves what “significant or memorable” means. The timeline begins with the age of when the participant first met the earliest partner and ended at the current age. Lines are added to show when and how long each relationship occurred. Participants are given flexibility on how to draw the lines in order to best represent the timeline of their relationship history (e.g. participants could choose to use different types of lines to represent different parts of the relationship, lines could stop and start again, lines for different people could overlap over the same time period). Participants then answer a series of questions on each relationship through an action-oriented process that involves participants applying stickers with predetermined labels to the timelines. Participants will first use “relationship tag” stickers with definition terms (e.g. partner, boyfriend, friends with benefits). Follow-up questions examine why terms were chosen, definitions of terms, relationship development and transitions, and relationship rules (e.g. monogamous vs. open relationship). Participants then answer the question, “How did you feel about this person when you were together?” by adding up to five positive and/or negative “emotion tags” for each partner (e.g. trusting, loved, disrespected, not myself). The timeline provides an anchor for discussion around relationship communication, negotiation and desires. Using the timeline, participants will be asked to define what a relationship is, their definition of a successful relationship, and their desires for future relationships. Participants will be asked to describe positive and negative experiences they have had in communicating within relationships. The IDI will ask participants to outline the communication skills they believe they have and the communication skills they desire to have. The IDI will end by asking the participants to describe their desired content and quality for a relationship-skills focused facilitated session. The goals and suggested outline of the session will be described, and participants will be asked to make suggestions for specific content areas.

6.3 Phase I Cognitive Interviews

After we complete the in-depth interviews, we will develop our intervention manual. The intervention manual is the counseling protocol which outlines the steps and scripts used for delivering the We Prevent condition. Following the intervention manual development, we enrolled a total of 8 YMSM to complete cognitive interviews with a study staff member who is based at the University of Michigan via VSee. During these interviews, the study staff member will walk the participant through each portion of the intervention manual. Participants will be asked to think aloud as they navigate through the intervention. The study staff member will note the participant’s behavior and any questions that they have regarding the content and flow; data will be collected via a standard cognitive interview notes form. As they navigate through the intervention, recordings will be made of any nonverbal behavior that could be important to take into consideration (e.g., frowns, sighs, or fidgeting). Recordings will be made of valuable data related to how they respond to each module (i.e., How long does it take participants to understand and respond to different modules?). These data will be used as exploratory indicators of content difficulty, attentiveness, and task-difficulty. After participants have completed the interview, they will be asked to reflect on whether the intervention met or exceeded their expectations and their HIV prevention and relationship needs. These data will be used to revise content and study procedures in preparation for implementation in Phases II and III. Consistent with our recruitment goals, we will enroll at least 50% racial/ethnicity minority YMSM (n = 4).

6.4 Phase II and III Measures

Demographics/Socioeconomic: Questions related to demographic characteristics were developed by the Adolescent Medicine Trials Network for HIV/AIDS Interventions (ATN) research program. Characteristics assessed in these questions include age, race, ethnicity, sex at birth, gender identity, sexual identity, income, education, employment, living situation, incarceration history, and internet access, and technology use.

General Sex and Relationship History: Questions related to history of relationships and sexual intercourse were developed by the Adolescent Medicine Trials Network for HIV/AIDS Interventions (ATN). Sex history questions assess age at first sexual intercourse, as well as lifetime and 3-month sexual intercourse with females, males, transgender females, and transgender males. Questions related to relationship history assess current relationship status, how participants identify their current relationship, length of current relationship, and the role of online technology in initiation of the current relationship.

Sexual Behavior and Risk: Sexual behavior and risk will be measured by questionnaires developed for and adapted from Project Nexus: Providing Online Counseling for Home-Based HIV Testing (Stephenson et al., 2017) and Project Stronger Together: A Dyadic Intervention to Improve Engagement in HIV Care Among Sero-Discordant Male Couples in Three US Cities (Stephenson et al., 2017). These questions focus on frequency of anal sex, condom use during anal sex, anal sex and condom use with outside partners.

HIV, STI Testing, and PrEP/PEP Use: HIV, STI Testing, and PrEP/PEP Use will be measured by questions adapted from the Adolescent Medicine Trials Network for HIV/AIDS Interventions (ATN) research program and Project Moxie: Providing Home-Based HIV Testing and Counseling for Transgender Youth (Stephenson et al., 2017). The baseline survey will include questions on lifetime HIV testing history. Follow-up surveys will repeat the questions from the baseline, and will also include questions on HIV testing in each 1- or 3-month period including test results. For Phase III, the HIV testing outcome will be: the proportion of YMSM tested for HIV 2 or more times at least 3 months apart in the 9-month follow-up period (“frequent tester”). As an additional analysis, we will also examine the proportions of participants who receive one HIV test.

The STI testing outcome is defined as the proportion of YMSM tested for STIs at least once in the follow-up period. At baseline, we will assess lifetime STI testing history and knowledge about STIs. We will ask participants what STIs they have been tested for, the date of their most recent STI test (if known), and whether a medical provider had diagnosed them with an STI. In the follow-up surveys, we will ask participants whether they had been tested for STIs in the past 1 or 3 months, and if so we will ask them to indicate what tests they had received and whether they had been diagnosed with an STI by their medical provider. For Phase II, participants will receive at-home STI test kits at baseline only. For Phase III, participants will receive at-home STI test kits at baseline and 6-month time points. The box contains instructions on how to collect the samples and how to mail them back to the study site. The samples will be laboratory tested for syphilis, gonorrhea, and chlamydia. We will measure the incidence of any STI in the follow-up period.

PrEP awareness will be a single item measure of whether the participant has heard of PrEP. At each follow-up assessment, PrEP-eligible HIV-negative YMSM will be asked whether they have begun using PrEP, and self-reported adherence to PrEP will be assessed at each follow-up.

Relationship Dynamic Measures: The relationship satisfaction measure will assess satisfaction with current relationship. Questions about partner's ability to provide support and companionship will be asked. Participants will also be asked questions about commitment, relational closeness, and interpersonal violence. These questionnaires will center on partner's fulfillment of intimacy needs, desire to have alternative relationships, and experiences of sexual, physical, or emotional violence. These measures will total to 45 questions.

Mechanisms of Change: These measures will include questions about communication between partners about sex and condom use, as well as questions about existing sexual agreements. Participant's attitude toward existing sexual agreements, such as commitment to the agreement and breaking of the agreement will also be assessed.

Psychosocial Measures: These measures will include questions HIV risk perception and anticipated stigma, and perceived changes of success in life. We will also assess experiences of stigma with questions about internalized heterosexism, everyday discrimination, family acceptance, and sexual identity disclosure. Depression, anxiety, and substance use will also be assessed in this section.

Linkage to HIV Care: For any incident HIV-positive individuals, we will also collect the following outcomes as indicators of linkage to care, per the recent recommendations of the Institute of Medicine [48]. These are measured within three months of HIV diagnosis via self-report [49], [50]: (1) attending at least one clinical care appointment, (2) having at least one CD4 test performed, and (3) having at least one viral load test performed. Onset of ART initiation, self-reported adherence to ART, and viral suppression are exploratory indicators, as we recognize that our follow-up period may not be a sufficient amount of time to see these changes. We will obtain guidance from the ATN on the feasibility of collecting biomarkers of viral suppression and conduct medical chart reviews for youth who are newly diagnosed.

Feasibility: In addition to the outcomes, the study will assess feasibility by examining (1) time to recruit YMSM to the intervention in both Phase II and III, and (2) rate of recruitment of YMSM expressing interest in participation. Acceptability of the intervention will be determined by analysis of data from a satisfaction survey on the intervention's acceptability. In addition, the percentages of YMSM who do not complete the either of the intervention sessions will be assessed. Adequate feasibility will entail recruiting and enrolling at least 5-6 YMSM and their partners per month and ensuring at least 80-90% retention rate.

6.5 Phase II Relationship-Skills Session

After completing the baseline survey, participants will have four weeks to schedule their relationship-skills session. This session will be conducted via Zoom, the HIPAA-compliant video-chat software that will be used to deliver the two sessions for Phases II and III. The counselor will begin the session by introducing themselves, discussing confidentiality, and obtaining verbal consent from both participants. The relationship-skills session focuses on defining health and unhealthy characteristics of relationships, teaching and practicing effective communication skills, reviewing couples-based sexual health information (i.e., negotiated safety,

PrEP, HIV, and STI testing), and preparing for engaging in CHTC as a couple. The counselor will employ Motivational Interviewing (MI) strategies and style to elicit positive commination from each partner by: 1) asking questions about each partner' strengths, 2) asking about each partners' hopefulness for change, and 3) seeking to increase respectful, supportive interaction with the couple.

Satisfaction survey: Within one week of the relationship-skills session, each member of the couple will receive an email asking them to complete a short satisfaction survey: the survey will include questions regarding satisfaction with logistics (i.e., length of session), content of session, and reactions to the session process (i.e. ease, comfort), in addition to willingness to utilize relationship skills sessions in the future.

6.6 Phase II and III CHTC and CTR Session

In Phase II, after participants complete the relationship-skills session, they will schedule their Couples HIV Testing and Counseling (CHTC) session. The session will be conducted via the HIPAA-compliant Zoom video-chat software. The test kit package containing oral fluid tests (OraQuick) will be mailed to the couple's residence. Couples in long distance relationships or that have separate living arrangements will be sent their test kits separately. Couples will be informed to have their HIV testing kits present. The session will be conducted by a counselor who is trained in CHTC and will last approximately 45 minutes. Both members will conduct their own test and read their own results – together – as directed by the counselor. Participants will be asked to show the counselor their test result for confirmation of reading accuracy. Post-test counseling will focus on dyadic prevention messages, and will revisit the couple's HIV risk concerns and sexual agreements in light of their test results. The counselor will record the couple's HIV test results in the admin portal. The goal of the CHTC session is to facilitate the couple in thinking critically about the management of HIV in their relationship and to guide them in making a prevention plan – together – that best suits their relationship needs, context, and risks. It is easy to imagine that when a positive result is given that the CHTC session may devolve into a support session for the new positive. We have trained our counselors to keep focusing on the dyad in this situation, and while a focus on the immediate needs of the positive is required, the discussion remains focused on how the couple can work together to keep the positive partner healthy and to reduce transmission risks within the relationship while also meeting both partner of the couples' needs.

For preliminary positive results for either partner, at the end of the video CHTC session, the couple will be counseled on the need for timely linkage to care. Within 48 hours, the counselor will then send a confidential email to the participant(s) individually providing the contact information for providers in their area who can provide confirmatory testing and linkage to care. Then within 1 week of the CHTC session, study staff will follow up with the participant(s) over the phone or Zoom to see if an appointment was made. If not, staff will urge participants to make an appointment as soon as they can and will emphasize the importance of confirmatory testing and linkage to care. Study staff will then follow up within 1 month of the CHTC session and 3 months to (1) confirm an appointment was scheduled, 2) to confirm the appointment was attended, 3) to report confirmatory results, and 4) assess linkage to care.

Satisfaction survey: Within one week of the CHTC session, each member of the couple will receive an email asking them to complete a short satisfaction survey: the survey will include questions regarding satisfaction with the home testing process, logistics (i.e., length of session),

content of session, and reactions to testing process (i.e. ease, comfort), in addition to willingness to utilize CHTC in the future.

In Phase III, the intervention-arm index partner will schedule their CHTC + Relationship Skills session (with their partner) or their CTR + Relationship Skills session (on their own). The session will be conducted via the HIPAA-compliant Zoom video-chat software. The test kit package containing oral fluid tests (OraQuick) will be mailed to the participant's residence of choice. Participants who chose to do CHTC + Relationship Skills and are in long distance relationships or have separate living arrangements from their partner will be sent their test kits separately. All participants will be informed to have their HIV testing kits present. The session will be conducted by a counselor who is trained in CHTC and CTR. Sessions will last approximately 45 minutes. In the CHTC + Relationship Skills session, both members of the couple will conduct their own test and read their own results – together – as directed by the counselor. In the CTR + Relationship Skills session, the participant will conduct their own test and read their results as directed by the counselor. Participants will be asked to show the counselor their test result for confirmation of reading accuracy. Post-test counseling will focus on dyadic prevention messages and will revisit the couple HIV risk concerns and sexual agreements in light of their test results. The counselor will record each participant's HIV test results in the SMART admin portal. The goal of both CHTC + Relationship Skills session and CTR + Relationship Skills session is to facilitate the participant in thinking critically about the management of HIV in their relationship and to guide them in making a prevention plan that best suits their relationship needs, context, and risks. It is easy to imagine that when a positive result is given that the CHTC + Relationship Skills session may devolve into a support session for the new positive. We have trained our counselors to keep focusing on the dyad in this situation, and while a focus on the immediate needs of the positive is required, the discussion remains focused on how the couple can work together to keep the positive partner healthy and to reduce transmission risks within the relationship while also meeting both partner of the couples' needs.

For preliminary positive results for any participant, at the end of the video CHTC + Relationship Skills or CTR + Relationship Skills session, the participant will be counseled on the need for timely linkage to care. Within 48 hours, the counselor will then send a confidential email to the participant(s) individually providing the contact information for providers in their area who can provide confirmatory testing and linkage to care. Then within 1 week of the session, study staff will follow up with the participant(s) over the phone or Zoom to see if an appointment was made. If not, staff will urge participants to make an appointment as soon as they can and will emphasize the importance of confirmatory testing and linkage to care. Study staff will then follow up within 1 month of the session and 3 months to (1) confirm an appointment was scheduled, 2) to confirm the appointment was attended, 3) to report confirmatory results, and 4) assess linkage to care.

Satisfaction survey: Within one week of the CHTC + Relationship Skills or CTR + Relationship Skills session, each participant will receive an email asking them to complete a short satisfaction survey: the survey will include questions regarding satisfaction with the home testing process, logistics (i.e., length of session), content of session, and reactions to testing process (i.e. ease, comfort), in addition to willingness to utilize the intervention in the future. If the participant's partner also took part in the session, they are also sent a satisfaction survey.

6.7 Phase II Exit Interview

A select number of participants (n=6) will be asked to participate in an exit interview following completion of the 1-month follow up survey. Exit interviews will be conducted with study staff members via Zoom, the HIPAA-compliant video chat software that is also being used to deliver

the intervention sessions. During these interviews, participants will be asked about their experience in Phase II of the research study. They will be asked what they liked and didn't like about the study (e.g., intervention content, STI testing, advertising), and how, if at all, the study can be improved. These data will be used to revise the intervention content and study procedures in preparation for implementation of the RCT in Phase III. Consistent with our recruitment goals, we will ensure that exit interviews will include at least 50% racial/ethnic minority participants.

6.8 Phase III Exit Interview

A purposeful subset of participants (n=30) will be asked to participate in an exit interview following completion of the 9-month follow up survey. We would like to capture a range of experiences in the research study, so the purposeful sample will include up to 36 participants: those who participated alone (n=10-12), those who participated with their partner (n=10-12), and those who enrolled into the study and did not participate at all (n=10-12). Exit interviews will be conducted with study staff via Zoom, the HIPAA-compliant video chat software that is being used to deliver all video-chat sessions. During these interviews, participants will be asked about their experience in Phase III of the research study. They will be asked what they liked and didn't like about the study (e.g. session content, surveys, STI testing, messaging), and how, if at all, the study can be improved. These interviews will be audio-recorded, transcribed, and analyzed to inform future individual or dyadic interventions for partnered YMSM. Consistent with our recruitment goals, we will ensure that exit interviews will include at least 50% racial/ethnic minority participants.

7.0 TECHNICAL EXPERTS

Seven Technical Experts were recruited for Task 2, consisting of members who engage with youth and diverse communities of YMSM, and have specific experience in the provision of HIV and LGBTQ clinical and social services. After modifying the intervention content, we l emailed TEG members to schedule a meeting to: (1) review the intervention content and training protocols for the two counseling sessions; and 2) explore existing screening and assessment tools that are culturally and linguistically appropriate for use with diverse groups of YMSM and their partners. VSee video-chat was used for TEG meeting, which focused on discussing the adaptation of intervention assessments and content, and developing or providing feedback associated with the counseling components of the intervention. Individuals identified as Technical Experts were offered a $200 gift card after participating in the virtual meeting. All VSee interviews will be audio-recorded; however, TEG members will have the opportunity to opt out of audio-recording.

8.0 DATA COLLECTION

8.1 Development of Protocol and Case Report Forms

The Protocol Team, in collaboration with the Management Core and Analytic Core, is responsible for the development of this protocol as well as the Case Report Forms (CRFs) needed to collect the information required to implement this protocol.

8.2 Data Records

Participant-related study information will be identified through a study ID number (SID), a couple ID, and participant code (participant first initial and two-digit day of birth) on all participant CRFs, audio files, transcripts, and Alchemer surveys. Participant names or other personally-identifying information will not be used on any study documents and will be redacted from interview transcripts. All printed study-related information will be kept in double-locked, limited access at the University of Michigan study site. Original source documents for individual participants will be maintained at the University of Michigan study site and will be accessible only to the study staff.

8.3 CRFs

Study monitoring data, including information about enrollment, verification, survey/ session completion, and monitoring untoward effects, will be collected on electronic CRFs.

8.4 Self-Administered Surveys

All quantitative survey data will be collected using Alchemer. Data will remain confidential; no personal identifying information will be collected in the survey. The participant's unique SID# will be used in order to link their responses to the participant's qualitative data. The surveys will be completed by participants on personal devices via surveys hosted by Alchemer. To ensure data privacy, as soon as data is entered (in real-time), it will be encrypted during transmission to the AC using Secure Socket Layer (SSL) technology. The data will then be stored in a secure database on an AC server within the AC data center.

The survey data collected through Alchemer utilizes Amazon Web Services servers for hosting, located in controlled data center facilities in Boulder, Colorado. We clean, manage, and download the survey data directly from the Alchemer application interface. The survey data collected through Alchemer is encrypted while in transfer using SSL certificates, encrypted at the disk level in the Amazon Web Services database servers, and encrypted at the row level. Access to the Alchemer account where the data can be downloaded is password-protected with a sufficiently complex password.

8.5 At-home STI Testing

At baseline (Phase II and III), study staff will mail participants an at-home STI test kit. For Phase III, STI kits will also be sent at 6-month follow up. STI kits for Phase II were opt-in, whereas STI kits for Phase III will be opt-out. STI test kits and condom packages are provided as a service through the iTech Technology Core and will be packaged and branded specifically for this project. STI home collection CareKits (for gonorrhea, chlamydia, and syphilis) will include a pre-paid mailer to be returned to Emory University Clinical Virology Research Laboratory for testing. These kits have been used in an ongoing RCT of "Keep It Up", for which U19 co-PI, Dr. Patrick Sullivan is the Atlanta site PI, and they have been acceptable to the young (18-29 year old) men in that study. The We Prevent study team will follow the STI CareKit, Condom and Lubricant Ordering Standard Operating Procedures developed by the CareKit team at Emory. The participant shipping addresses will be transferred to the Emory team through Box or Microsoft OneDrive via a password protected spreadsheet. Participants will be notified individually of their testing results via phone call from study staff. Participants that test positive for any STI will be referred to treatment services in their area from the resource sheet included in this application.

Due to COVID-19, the Emory University Clinical Virology Research Laboratory is no longer able to process at-home STI kits. Starting in June 2020, STI test kits will be assembled, shipped, and processed by a CLIA-certified laboratory, Molecular Testing Lab (MTL). MTL is a Centers for Medicare and Medicaid Services designated “covered entity” sworn to uphold all HIPAA considerations. Use of encryption is required on applicable communications, and Laboratory Information System (LIS) access if protected per HIPAA standards. Test kits will include written instructions for each sample to be collected, specimen collection materials, and a pre-paid mailer to return samples. Participants will be asked to register their test kit by creating an account on MTL’s secure online LIS portal, which can also be used to view their results report when available. Study staff will continue to call participants to make sure that they understand their results. MTL reports all positive test results to necessary health departments.

8.6 VSee Platform Description

When using VSee, participants will have the option to use VSee in several formats: face-to-face video chat, video chat in which they can see the interviewer (Phase I) or counselor (Phase II and III) but the interviewer cannot see them, audio chat only, or a text-based conversation. The consent form for this research project will include a full description of VSee, their options for using VSee, and will also make it clear what they can opt not to do. VSee is compatible on PCs, tablets, and smartphones. Unlike other video-chat platforms (e.g. Skype), VSee is HIPAA-compliant. VSee includes the following functions to protect users:

*End-to-end encryption without a man-in-the-middle listener***.** In WebEx, Vidyo, Tandberg, and Polycom architectures, media is sent to a server (also called a video relay or MCU). Although encryption is applied from the user’s computer to these servers, the servers still have full access to the user’s media. In contrast, VSee uses end-to-end encryption where no server, including VSee servers, has the decryption key. VSee uses public/private RSA keys to exchange a 256-bit AES session key with the property that only the endpoints have the AES session key. VSee uses FIPS 140-2 certified 256-bit AES encryption.

*One port***.** VSee uses a single port for call signaling and media. The VSee protocol is structured so that only the outgoing port needs to be open because return traffic is always structured as responses to outgoing traffic. This allows administrators to set a policy where if users inside their network are using VSee, then their firewall lets VSee traffic securely cross the firewall; however, if users inside their firewall stop using VSee, then the firewall will block external port scans.

*Automatic HTTP/SSL tunneling***.** VSee prefers to use UDP (User Datagram Protocol) since it allows higher performance video. However, if the firewall does not allow UDP, VSee will automatically switch to HTTP/SSL tunneling.

*Cloud Control***.** VSee's cloud solution allows enterprises to maintain central control of their security policies to a large number of end points even though the service is hosted by VSee. It does this by having VSee clients always connect first to VSee servers in the cloud, where the policies are controlled. The cloud servers determine whether any of these security policies should be applied and enforces them as the VSee client. This allows us to set our own security settings and to record the sessions.

*No-install client***.** Video conferencing software clients tend to be large and to leave a big footprint on the user's system. Almost all of them require administrator permissions to install. Once the client software gains administrator permissions, they can severely compromise computer security. VSee is a lightweight client that does not require administrator permissions or installation.

8.7 Zoom Platform Description

Zoom may also be used to conduct the study sessions. Participants will have the option to conduct face-to-face video chat, video chat in which they can see the interviewer, but the interviewer cannot see them, or audio chat only. Zoom is compatible on PCs, tablets, and smartphones; as well as maintains the option to conduct an audio conference without the video component. The consent form for this research project will include a full description of Zoom, their options for using Zoom, and will also make it clear what they can opt not to do. Unlike other video-chat platforms (e.g. Skype), Zoom is HIPAA-compliant. Zoom includes the following functions to protect users:

End-to-end encryption. Zoom encrypts all presentation content at the application layer using the Advanced Encryption Standard (AES) 256-bit algorithm. Zoom end-to-end (E2E) chat encryption allows for a secured communication where only the intended recipient can read the secured message. Zoom uses public and private keys to encrypt the chat session with Advance Encryption Standard (AES256), and session keys are generated with device unique hardware ID to avoid data being read from other devices. This ensures that the session cannot be eavesdropped or tampered with.

Cloud Control Infrastructure. A distributed network of low-latency multimedia routers (software) resides on Zoom's communications infrastructure. With these low-latency multimedia routers, all session data originating from the host's device and arriving at the participants' devices is dynamically switched — never stored persistently through the Zoom communications infrastructure. Zoom's communications infrastructure for real-time video, audio, and data communications resides on Zoom dedicated servers, which are housed in SSAE 16 SOC2 compliant datacenters on opposite sides of the US. Zoom sessions are completely temporary and operate analogously to the popular mobile conversation over the public mobile network. In addition to unique security benefits, Zoom's communications infrastructure also enables an extremely scalable and highly available meeting infrastructure unrestricted by the limitations of physical data centers.

The Zoom client communicates with the multimedia router to establish a reliable and secure connection. At the time of instantiation, the Zoom client will determine the best method for communication, attempting to connect automatically using udp and tcp port 8801, 8802 and 8804 or HTTPS (port 443/TLS).

Additionally, Emory University has entered into a BAA with Zoom, where Zoom agrees to be responsible for keeping all patient information secure and report any breaches of protected health information (PHI).

8.8 Data Management

8.8.1 CRFs

Although the iTech projects will involve substantial online follow-up, CRFs will be used to collect key study visit data (e.g., enrollment and randomization assignment), study milestones such as completion or discontinuation, study laboratory results, and adverse events (AE). AC staff will work with study investigators and the MC to develop and design the CRFs. During study conduct, the SRVs will maintain the CRFs in secured locations, and transmit CRF data to the AC either electronically using DFexplore or by submitting scanned paper forms using DFSend. DFexplore and its DFdiscover platform is a leading multi-site database environment for HIV RCT that can receive and transcribe CRF data via scanned PDFs, or allow for direct electronic data entry. It provides for monitoring form completion and data quality, and a system for data querying and resolution with SRVs, while maintaining an audit trail. The AC uses DFexplore for MSM studies and RCTs and data is maintained by the parent company DF/net on a cloud-based server with Microsoft Azure.

8.8.2 Audiotape Data

In-depth Interviews (IDIs), cognitive interviews, relationship skills sessions, CHTC sessions, CTR sessions and exit interviews will all be audio-recorded to allow for verbatim transcription of the interview, and checked for accuracy and completion. All audio files will be kept confidential and stored in a locked/limited access folder on secured servers, which is only accessible to designated study staff. All members of the research team will be trained in confidentiality and have signed confidentiality agreements. We will format all transcripts and import them into qualitative data analysis software. Data analysis will be primarily conducted by Drs. Stephenson and Gamarel, and will also involve ATN members from the Analytic Core when appropriate. One year after the study is over, the audio recordings will be destroyed.

8.8.3 Self-Administered Survey Data Transmission

The data will routinely be downloaded and stored in a secure database on an AC server within the AC data center.

8.9 Data Quality Assurance

Investigators receiving federal funding must adhere to the Code of Federal Regulations (CFR) to protect research participants and produce reliable study information. The iTech AC will monitor data entry and will have an internal quality assurance plan that will identify problems and correct errors in research study records.

8.10 Study Site Monitoring and Record Availability

Site monitors from the MC may visit the University of Michigan to review a selected portion of the individual participant records, including assent/consent forms and supporting source documentation to ensure the protection of study participants, compliance with the protocol, and accuracy and completeness of records. Regulatory files, as required, will also be inspected to ensure that regulatory requirements are being followed.

The principal investigators will make study documents (e.g., assent/consent forms) readily available for inspection by the local IRB, the central IRB, the site monitors, the NICHD, the

Office for Human Research Protections (OHRP), or the sponsor's designee for confirmation of the study data.

9.0 PARTICIPANT MANAGEMENT

9.1 Tracking Participants

All participants will be contacted before their scheduled in-depth qualitative interview and cognitive interviews (Phase I) and assessment and counseling sessions (Phase II and III). Participants will be asked whether or not messages can be left for each of the phone numbers that they provide. They will be informed that messages will not contain any information regarding the nature of the project.

As described above, the study will use a HIPAA-compliant web-based platform entitled Study Management and Retention Toolkit (SMART), which is a SaaS (Software as a Service) based mobile application aiding studies with various aspects of participant recruitment, study implementation, and retention. The application has the ability to securely manage participant information across multiple studies and customers simultaneously, stratifying participant information by study and site. SMART includes an admin web portal and a participant facing mobile app (optional), which allows for secure messaging, study calendar management, self-scheduling by participants, secure photo uploads, and longitudinal tracking of participants from screening to study completion. The ability to designate specific roles to all SMART users allows for greater control around permissions and accessibility to participant information. Users can even be limited to a reporting only role, which allows for study oversight through real time aggregate reporting, but no access to PHI. SMART is a licensed service of the Center for AIDS Research (CFAR) at Emory University, Prevention Science Core. Utilization of the mobile app is optional and the admin web portal will fully function without it.

The following information outlines the security of the admin web portal. The admin web portal is a web-based application developed using Microsoft .NET technologies. It uses SQL server as backend database. The application requires two servers to host: (1) Web server [Windows server with IIS] and (2) SQL server [Standard or Enterprise version]. Both these servers are to be placed behind a firewall. Web server will have a public IP to access the server using VPN. SSL certificate is to be installed on the web server. The admin website will be rendered over SSL (https). The application uses form authentication (no integrated authentication such as AD). All passwords are stored encrypted within the database. System will also be using database level encryption, which will prevent any copying of information from one database to another. Web application also uses an automatic logout feature after a certain period of inactivity. By default, the inactivity duration is set to three minutes.

Study staff can only first gain access to the admin web portal if granted by a study or site administrator. Their assigned user role will determine their permissions to perform different actions and even view PHI. Email notifications are sent from the system (without the need to login) when: (1) a staff member requests to reset their password, (2) role assignments to a study are made, (3) an event/visit staff are scheduled to work is nearing, (4) a new task is assigned to a staff member, or (5) they are designated as a staff member to receive alerts of positive test results. All participant communications are performed using secure messaging through the message center (inbox) implementation within the mobile app. If the mobile app is not utilized by a study, communications are sent as standard email or text messages to participants.

9.2 Compensation

Phase I participants will receive $40 for completing the brief online survey and in-depth qualitative interview. Participants who complete the brief online survey and the cognitive interviews will also receive $40. Phase II participants will receive $40 for completing the baseline, $50 for the follow-up assessment, and $20 if they are selected to participate in an exit interview. Phase III participants will receive $40 for each survey they complete, including the Baseline and all Follow-up surveys (3, 6, and 9 months). If a participant completes all three follow up surveys, they will receive an additional $40. Invited partners will receive $20 for completion of the brief survey. Participants that are selected to complete an exit interview will receive $50.This is the standard compensation used by Dr. Stephenson in his ongoing YMSM studies.

9.3 Intervening on “Social Harms"

The University of Michigan has specific policies governing the treatment of human participants. These policies specify that medical and psychological assistance will be available in the immediate environment in the event a participant should experience any adverse reactions resulting from study procedures.

While participants will be informed that they may refuse to answer any question at any time, responses or reactions to certain questions may indicate distress on the part of the participants. If at any time during the study, a participant divulges that he is at risk for harm, including but not limited to being abused or experiencing violence, if harm is suspected or likely, or if the participant states he is suicidal/homicidal, measures will be taken to ensure his or her safety. Reporting will be done as appropriate to the situation and the legal statutes, including reporting to child protection agencies or other appropriate agencies and referrals will be provided to appropriate support, counseling, or treatment resources.

9.4 Criteria for Premature Study Discontinuation

For the primary objective, participants will be prematurely discontinued from the study if any of the following occurs:
9.4.1 The participant withdraws consent/assent (see below);
9.4.2 The study is cancelled by the NIH (or iTech, or other administrative entity);
9.4.3 The study is cancelled for other administrative reasons;
9.4.4. The participant becomes incarcerated or placed in detention during the study; or
9.4.5 Death of the participant.

Participants may end their participation in the study at any time. Participants who experience distress during the survey can access our list of community referrals, which can be viewed on our study's website, or contact the research staff using the information provided to the participant within the consent/assent process. Any unexpected adverse events will be immediately reported to the UNC IRB as per the UNC IRB’s reporting requirements, and all study activities will halt pending UNC IRB review and recommendations if necessary. If a participant withdraws from the research, all data collected in the interview will be immediately destroyed and will not be used in subsequent analysis.

If a participant withdraws or is removed from the study, the Study Stop CRF will be completed.

10. MONITORING UNTOWARD EFFECTS ASSOCIATED WITH OR RESULTING FROM THE STUDY

For each phase of the project, untoward effects are those related to the participant. The study will catalogue any untoward effect related to the participant. Reporting is required for occurrences including social harms, psychological distress, and serious life-threatening events such as suicide attempts. These may be immediately apparent to the study staff, such as the participant's emotional upset state requiring referral for counseling; or they may be delayed and reported later to study staff, such as physical harm to an individual for having participated in the study. Study staff will notify the team of these untoward effects using the iTech QNS accessible through the iTech website (https://itechnetwork.org). Study staff will be briefed during the training on the scope of possible untoward effects and instructed to report events.

11. Phase I DATA ANALYSIS

Qualitative data collection and analysis will be conducted in collaboration with the ATN analytic cores, using framework analysis,[38] which is systematic and dynamic in its approach to qualitative data, resulting in the ability to produce accessible analyses focused on specific research questions. The thematic framework will be refined for coding by reading and re-reading the data, identifying themes that emerge, and writing analytical memos about those themes. Next, specific sections will be identified that corresponded to particular themes. Finally, we will refine the relationship between indexed data and the original thematic framework, interpreting the resulting themes. Reliability amongst the coders will be checked by having each coder code a subset of transcripts with acceptable agreement be ≥90% reliability. Disagreements will be resolved through discussion. This analysis will involve identifying and summarizing patterns of experiences related to manual content. Analysis will involve identifying how to improve the intervention. The study team will review analysis of qualitative data, and assess the strengths and weakness of the each of the components of the manual based on the findings. The research team will meet with TEG to share results and discuss how best to improve the intervention modules, exercises, and process. The survey data collected prior to the interviews will be used to describe the demographic, socio-economic and behavioral characteristics of the sample, to contextualize the qualitative data.

11.1. Phase II DATA ANALYSIS

The primary purpose of Phase II is to examine the feasibility of the We Prevent intervention to prepare for the RCT in Phase III. Phase II will include the following forms of data: self-reported data through Survey Gizmo questionnaires (baseline and 1 month), STI test results at baseline, and intervention acceptability (through satisfaction surveys and exit interviews). The analysis for Phase II will focus on the following domains:

1. Feasibility, acceptability and safety is assessed through several data points. Data from the participant satisfaction surveys will provide measures of participant acceptability (of the intervention and each of its components), willingness to recommend the intervention to peers, and willingness to take part in the intervention in the future. CRFs detailing the

content of intervention sessions will provide information on issues of safety that may occur during the sessions.

2. Logistics: process data will be monitored to examine recruitment and enrollment (data on number of clicks on advertisements, numbers creating accounts, rate of progression from account creation to eligibility, to consent, to enrollment). Process data will monitor the number of participants for whom successful partner matches are made, the numbers who order STI kits, provide a valid address for delivery and return samples for testing. Data will also capture the numbers completing surveys at baseline and three months and the numbers scheduling and attending each of the intervention sessions.

Impact: unpowered analysis will examine trends from the survey data and STI testing on STI incidence, engagement in HIV prevention behaviors, and couples' communication around HIV prevention.

11.2 Phase III DATA ANALYSIS

We will examine differences between the treatment groups for the index participants using t-tests or Wilcoxon rank sum tests for continuous variables and chi-square tests for categorical variables. We will conduct analyses of our primary HIV and STI testing behavior outcome using regression analyses to compare each active treatment group to the control in pairwise comparison tests at an adjusted significance level of 0.017 to reduce Type-I errors in our 2-arm trial. The proportion of index participants who obtain at least 2 tests at least 3 months apart within the follow-up period will be calculated and presented with corresponding 95% exact binomial confidence intervals. The regression will be run with group assignment only in the model, as well as, controlling for participant characteristics, with a focus on understanding the role of reported relationship dynamics and mechanisms of change (i.e., information, motivation, and behavior) in mediating the outcome. The ability of the intervention to yield increase in PrEP knowledge and efficacy over time will be examined using two separate outcomes. Scores at baseline and all follow-ups will be analyzed using generalized linear models (GLM) with properly-chosen (based on the distribution of dependent variable) link functions to analyze longitudinal PrEP outcome data. The GLMs will be estimated using generalized estimating equations with robust standard error estimates (GEE), which provide an extension of regression analysis to the case of correlated or repeated observations with appropriate modeling of the covariance structure. Models will control for demographic characteristics and study arm and will explore interactions between treatment arm and individual characteristics. The incidence of at-risk sex acts will be calculated as an incidence density, with the numerator being number of individual at risk sex acts, and the denominator being person-years of follow time. Comparisons of the incidence of at-risk sex acts and incidence of STIs will be made by comparing incidence densities across the arms. Period incidence rates (3-monthly incidence density rates) of at-risk sex will be estimated by performing a generalized estimating equations (GEE) Poisson regression analysis of the 3 monthly counts, implemented using SAS PROC GENMOD/ GEE models will control for demographic characteristics, baseline HIV testing history and relationship dynamics and hypothesized mediators, and examine interactions between relationship dynamics and sexual risk-taking. Analysis will also consider differences in changes in information, motivation, and behavioral skills in accordance with the RELO-IMB model.

Qualitative data from the exit interviews and will be conducted in collaboration with the ATN analytic cores, using framework analysis,[38] which is systematic and dynamic in its approach to qualitative data, resulting in the ability to produce accessible analyses focused on specific research questions. The thematic framework will be refined for coding by reading and re-reading

the data, identifying themes that emerge, and writing analytical memos about those themes. Next, specific sections will be identified that corresponded to particular themes. Finally, we will refine the relationship between indexed data and the original thematic framework, interpreting the resulting themes. Reliability amongst the coders will be checked by having each coder code a subset of transcripts with acceptable agreement be ≥90% reliability. Disagreements will be resolved through discussion. This analysis will involve identifying and summarizing patterns of experiences related to participation in the RCT. Analysis will involve identifying how to improve the intervention and provide recommendations for future studies. The study team will review analysis of qualitative data, and assess the strengths and weakness of the each of the components of the intervention based on the findings.

12. HUMAN SUBJECTS

This study will be conducted in compliance with the protocol, ICH Good Clinical Practice guidelines, and 45 CFR Part 46.

12.1 Participants' Confidentiality

All questionnaires, reports, transcripts, and other records will be identified by a study ID and participant code to maintain participant confidentiality. All records with personally-identifying information will be kept in a locked file cabinet in a limited secure access area at the University of Michigan site.

All computer entry and networking programs will be done with coded numbers only. Clinical information will not be released without written permission of the participant, except as necessary for monitoring by the MC or NICHD.

Every effort will be made to ensure that study participants are protected from risks. The main risk specific to the role of the Analytic Core is breach of confidentiality.

Breach of Confidentiality: A potential risk to participants is violation of confidentiality. We will take the utmost caution to protect the confidentiality of all responses. We will minimize this risk by maintaining confidentiality and discretion throughout all iTech research procedures and data management and analysis.

Participants may be concerned about the security of their data, particularly since it is collected and stored electronically. The Analytic Core has significant experience developing security protocols for Internet-based studies, and we will take a variety of steps to ensure participant security, including using a dedicated server behind a firewall, encryption of data, separation of identifiers from responses, and password-protected access to data. Therefore, we believe that this risk will be minimal. All of the apps and websites included in the iTech have features to ensure app security and privacy.

12.2 Certificate of Confidentiality

This research specifically targets a vulnerable population, children (YMSM ages 15-17). We will take every available step to minimize the risk of identifying/linking data being subpoenaed, stolen, or inadvertently released. First, the iTech has received a Certificate of Confidentiality from the NIH. Second, all research staff members are required to complete ethical clearance certification regarding protection of human's subjects through their relevant IRBs. Third, all studies will have documented procedures to safeguard against the risk of the linking information being stolen by keeping such information in a locked spaces to which only essential study

personnel who have completed CITI certification for human subjects research ethics training (http://citiprogram.org) will have access.

Per Section 2012 of the 21st Century Cures Act as implemented in the 2017 NIH Certificates of Confidentiality Policy, all ongoing or new research funded by NIH as of December 13, 2016 that is collecting or using identifiable, sensitive information is automatically issued a CoC. . As noted on the NIH website (http://grants.nih.gov/grants/policy/COC/faqs.htm#187), a Certificate of Confidentiality will help the research team "...avoid compelled 'involuntary disclosure' (e.g., subpoenas) of names and other identifying information about any individual who participates as a research subject (i.e., about whom the investigator maintains identifying information) during any time the Certificate is in effect."

12.3 Risks and Benefits

The potential risk for participants in Phase II and III will be minimal. The study sessions will occur via a secure, encrypted teleconference interface (Zoom) to maximize security and privacy. To minimize risks to confidentiality, we will secure study data with all appropriate physical, electronic, and operational protections. Participants will provide their names and addresses or other personally identifying information as part of the study. There is a risk that these data could be unintentionally disclosed to someone not authorized to access the data, compromising the privacy of the participant. To reduce this risk, data will be stored in a physically secure environment. All data files will have encryption and strong password protection. Any identifiable data will either be stored on the University of Michigan's secure servers or will be on fully encrypted laptops as well as SMART. Surveys and online eligibility screening will take place on an encrypted commercial survey website, Alchemer. This site has been used by the investigators for thousands of online surveys with YMSM with no data security breaches. Access to data will be on a role-based standard; only those study staff who require access to each type of data to complete their study-related roles will be allowed access.

All study staff will be trained in security and confidentiality procedures, and will sign a confidentiality agreement before receiving access to any participant data. We will also develop procedures to minimize indirect disclosure that a participant is participating in an HIV-related research study, or a study that enrolls YMSM. For each mode of contact information, we will ask specifically whether anyone else potentially has access to that mode of communication, and if it is acceptable to leave a non-specific message about participation in a health study. Because this study also includes couples, we cannot guarantee confidentiality. We have additional precautions to avoid inadvertent transfer of confidential information from one partner to another in the assessments. We send each participant the quantitative assessment and STI kits separately so avoid participants revealing information about the other partner and ask them to complete the survey and STI kits in a private location. No study-related messages will ever mention HIV prevention or the nature of the research study. Additionally, all scripts for email, text message, and telephone contact with participants will be reviewed and approved by the UNC IRB before being used for contact with participants. We use SSL encryption for transfers of information online.

Some participants may be uncomfortable talking with their partner or a counselor about their past sexual behavior and HIV-related behaviors, or may feel uneasy about having HIV testing done. Each of the study counselors will be trained, and have experience, in the provision of CHTC and CTR, and thus will have experience in answering research participants concerns about HIV testing, comprehending the HIV testing process, and concerns around discussing

sexual behavior with a counselor. At each video-conference session we will follow existing protocols for HIV testing, which include establishing the client's willingness, readiness and comprehension of the HIV testing process.

Participants who learn that they are HIV-positive may be distressed to learn of their health condition. This poses the greatest emotional and physical risk to participants in the research study. The informed consent documents will outline the HIV testing process, stating that results will be delivered the same day, and study staff will explain in full what a positive, negative or indeterminate HIV test result mean before conducting the HIV tests. The counselor will assess the individual's readiness to receive both the HIV test and the result, following standard HIV testing guidelines. All study counselors are experienced in the delivery of HIV test results, and will follow standard clinic guidelines for results delivery. Individuals (or couples) receiving positive HIV test results will be provided with counseling and referrals to care that are appropriate to their economic situation (e.g. those eligible for Ryan White Care will be linked to the appropriate services). All those receiving a positive result will be given a full list of local service providers.

It is also possible that having a discussion about past sexual behaviors with a participant's partner might lead to subsequent conflict, or even violence, within their relationship. To ameliorate this risk, we propose to screen out those with a history of intimate partner violence (IPV) in the relationship. It is possible that new, incident, IPV may occur. This will be recorded through questionnaires on the surveys at each study visit. Individuals reporting IPV will be offered the opportunity to also meet individually with the study counselor, and will be provided with referrals to local services. All study participants, regardless of whether or not they report IPV, will be given a local resource guide that outlines programs and sources of support for people dealing with a wide range of circumstances (e.g., mental health, suicide), such that no partner will be able to identify that the other has reported IPV to study staff.

Although not a risk caused by the trial, a potential ethical issue that could arise is the counselor or study staff learning that one member of a couple is having risky sex outside the relationship, and not disclosing this risk to their main partner if the index partner is randomized to the intervention arm and selects the CHTC + Relationship Skills session with their partner. The issue of disclosure of sex risk outside the relationship is difficult. If we inform participants in the consent process that information about sex outside the relationship would be disclosed to an unknowing partner, then we will likely reduce truthful reporting and bias against consent by the participants who are in most need of intervention. However, we also appreciate the ethical imperative to protect our study participants. We suggest the following compromise. First, all participants randomized to the intervention condition who choose to have their partner complete the CHTC + Relationship Skills session, will have the session with a counselor that will provide a supportive and protective environment in which to disclose such risk from sex outside the relationship. Previous qualitative work with MSM has suggested that some MSM seek HIV testing as a means to find a supportive environment for disclosure of HIV status, so providing such an environment may be an important step to promoting disclosure. Second, all couples in the CHTC + Relationship Skills session will be counseled about the benefits of communication within their relationship. This seems to us to be a reasonable compromise that will both allow collection of research data that hold promise of reducing new HIV infections for YMSM couples, and extend multiple opportunities in a supportive environment for disclosure.

The Analytic Core will use Dedoose software to perform all qualitative analyses. Dedoose is a web-based application for organizing and analyzing textual, audio, and video data (qualitative) along with outstanding functionality for their integration with survey, test score, ratings, and

demographic data (quantitative). Dedoose employs the highest levels of data encryption available for a web application in all data storage, back up, and transmission. Dedoose allows for project specific encryption feature. When using this feature, only Dr. Muessig or her designee will hold the additional encryption key needed to be entered in order to view the project. This gives Dr. Muessig exclusive control over who can view the project under any circumstances.

In addition to a Certificate of Confidentiality, we will protect participants in the following ways:

1. Breach of confidentiality. We will take every precaution to minimize risks to study participants. All research staff members are required to complete ethical clearance certification regarding protection of human subjects through UNC-CH or the University of Michigan. We also have a strong data and safety monitoring plan in place to protect participants. Adverse events will be reported to the UNC-CH and the University of Michigan IRBs using Adverse Event Reporting Forms created by the Analytic Core (AC). When possible, reports will be sent within 24 hours of notification by the PIs. Annual updates on enrollment and retention will also be sent to the IRBs.

2. All data collection will take place in secure and supervised research settings. All study personnel have completed training and received certification in Human Subjects Research Protection (CITI Program) and HIPAA regulations. They will continue to renew this training in compliance with institutional policies.

12.3.1 Benefits

Participants will have the opportunity to learn their own HIV status and STI results, and to receive information and counseling about how to reduce their future risk of HIV infection Participants may benefit from becoming cognizant of their risk behaviors as they discuss HIV and STI topics, including circumstances and motivations behind their HIV and STI risk behaviors and the potential to reflect on changing behaviors or taking steps to reduce risk. Participants will receive a resource guide listing HIV/STI/PrEP services. In sum, potential benefits for the research far outweigh the risks for the participants.

Others will benefit because the study will result in increased knowledge about prevention interventions to serve YMSM and their primary partners who are at high risk for HIV infection.

12.4 Institutional Review Board (IRB) Review and Informed Consent

This protocol, the informed assent/consent documents, and any subsequent modifications will be reviewed and approved by the UNC IRB who is responsible for the oversight of the study. Phase II findings will inform Phase III study procedures; therefore, we will submit a modification before beginning these phases. The informed assent/consent will describe the purpose of the study, the procedures to be followed, and the risks and benefits of participation.

12.5 Waiver of the Requirement for Parental Permission for Special Circumstances

Under 45 CFR 46.408 (c), an IRB has the authority to waive parental permission if it determines that “a research protocol is designed for conditions or a subject population for which parental or guardian permission is not a reasonable requirement to protect the subjects” and “an appropriate mechanism for protecting the children who will participate as research subjects is substituted” and “that the waiver is not inconsistent with Federal, State, or local law.”

Given our study population, we seek to avoid asking for parental consent as YMSM may not have disclosed their sexual orientation to their parents/legal guardians. Rather, we would like YMSM to give their assent to be in the study themselves. This procedure aligns with state laws that allow minors to receive HIV/STI testing without parental consent.

We are requesting a waiver of documentation of parental consent given the eligibility criteria of the study. Participants must report being male and being in a relationship with a man. Given the stigma that continues to surround same-sex behavior in many families, it is inconceivable to ask parents for consent and thereby endanger the privacy and safety of those participants aged 15-17 years.

12.6 Waiver of the Requirement for Signed Consent Form

12.6.1 For Study Participation

In order to maintain the anonymity of the survey and fully protect the privacy of the volunteer study participants, the UNC IRB will be requested to waive the requirement for a record of a signed consent form.

Under 45 CFR §46.117 (c) (1) and (2), an IRB may waive the requirement for the investigator to obtain a singed informed consent for some or all of the participants if it finds either: (1) That the only record linking the participant and the research would be the consent document and the principal risk would be potential harm resulting from a breach of confidentiality. Each participant will be asked whether he/she wants documentation linking him/her with the research, and the participant's wishes will govern; or (2) that the research presents no more than minimal risk of harm to the participants and involve no procedures for which written consent is normally required outside the research context."

The protocol team believes that both #1 and #2 applies to this study and, both combined, justify a waiver of written consent. Once a participant is deemed eligible by completing the eligibility screener, he will be presented with the assent/consent form. The assent/consent form will outline the voluntary nature of the study, YMSM's freedom to discontinue the survey at any time, approval to retain data for future research, approval to retain email addresses for future study opportunities, and the procedures to guarantee their confidentiality. Email addresses of the participants who agree to the content of the assent/consent will be stored in a password-protected file housed within a secure, encrypted sever at the University of Michigan School Of Nursing and only available to designated study staff.

12.6.2 For Eligibility Screening

No identifying information on participants is recorded during the eligibility screening. Therefore, documented assent/consent for this screening would constitute the only identifying link to participants who are ineligible or choose not to participate, unless they consent to providing contact information for future studies. In addition, the screening presents minimal risk to participants and involves no procedures that would require written consent outside of a research context. Under these conditions the IRB is authorized to modify the requirements to obtain a signed consent form for some or all participants (45 CFR 46.117 [c]).

12.7 Prisoner Participation

NICHD has concluded that this protocol does NOT meet Federal requirements governing prisoner participation in human subject research and should NOT be considered by local IRBs

for the recruitment of prisoners. Participants enrolled who subsequently become incarcerated or are placed in detention may not continue study participation. Study interviews cannot be conducted during the period of incarceration or detention.

12.8 45 CFR Parts 160 and 164 Standards for Privacy of Individually Identifiable Health Information ("Privacy Rule" Pursuant to the Health Insurance Portability and Accountability Act - HIPAA)

The University of Michigan will be responsible for adherence to their individual institution's HIPAA policies and procedures.

12.9 Study Discontinuation

This study may be discontinued at any time by the UNC IRB, NICHD, or other government agencies as part of their duties to ensure that research participants are protected.

13.0 PUBLICATION OF RESEARCH FINDINGS

Any presentation, abstract, or manuscript will be made available for review by the study sponsor(s) prior to submission.

14.0 REFERENCES

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ATN 157 We Prevent Informed Consent

The University of Michigan School of Nursing
Consent to participate in a Research Study – Phase III Participants (survey, CTR session, CHTC + Relationship Skills session, CTR + Relationship Skills session, STI testing, and follow-up surveys)

Title of Study: ATN 157 – We Prevent: A dyadic approach to HIV prevention and care among young male couples

Site Principal Investigator: Rob Stephenson, PhD, MSc, MA
Site Principal Investigator: Department of Systems, Populations, and Leadership
Site Principal Investigator phone: 734-615-0149
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Sponsor: The University of North Carolina at Chapel Hill (UNC-CH)

Funding Source: National Institute of Health (NIH)

Study Contact: Matthew Rosso
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What are some general things you should know about research studies?

You are being asked to take part in a research study. Your participation in the study is voluntary. You may refuse to join, or you may withdraw your consent to be in the study at any time, for any reason, without penalty. If you decide not to take part or if you change your mind later, there will be no penalties or loss of any benefits to which you are otherwise entitled.

Research studies are designed to obtain new knowledge. This new information may help people in the future. You may not receive any direct benefit from being in the research study. There also may be risks to being in research studies.

Details about this study are discussed below. It is important that you understand this information so that you can make an informed choice about being in this research study. You will receive a copy of this document and may ask the researcher named above if you have any questions about this study at any time.

Please consider the study time commitments and responsibilities as a research subject when making your decision about participating in this study.

What is the purpose of this study?

Researchers are trying to find better ways to address the relationship and HIV prevention needs of young, gay, bisexual, and other men who have sex with men. The purpose of this part of the study is to test out a new type of session as an addition to the current HIV prevention interventions. We are comparing two different types of sessions: A) Couples HIV Testing and Counseling and B) Individual HIV Counseling, Testing and Referral. The study involves the completion of a baseline survey, collection of samples at-home for sexually transmitted infection (STI) testing, an online HIV testing session, and follow up surveys 3, 6, and 9 months from now. There is a chance that you will be asked to invite your partner to the HIV testing session. The HIV testing sessions will be completed via Zoom, a secure video-conferencing software.

What makes me eligible for this study?

You can participate in this study if all of the following apply to you:

- You are between the ages of 15 and no more than 24 years-old
- You are a current US resident
- You are of sufficient age for sexual consent in the state in which you live (we will confirm this for you)
- You self-identify that you are in an emotional and/or sexual relationship with another male
- You are a cisgender man (assigned male at birth and identify as male) or a transgender man (assigned female at birth and identify as male or a transgender man) who reports intentions to have sex with men
- You have had oral, anal, or vaginal sex in your lifetime
- You have access to a computer with internet access
- You are HIV-negative or not sure of your HIV status
- You can read and speak English
- You have not experienced intimate partner violence in the past 6 months

How many people will take part in this study?

Approximately 320 individuals will participate in Phase III of We Prevent.

How long will your participation in this study last?

Your participation will involve one baseline survey that you will fill out on a computer, an HIV testing session (individually and possibly with your partner), and 3-, 6-, 9-month follow-up surveys. At the time of the baseline survey, you will also be asked to collect samples at-home to be mailed in for STI testing. All components of the study will be completed online. HIV and STI testing kits will be sent to a physical mailing address of your choice. Depending on when you complete the surveys and counseling sessions, your participation in this phase of the study will last approximately 9 to 10 months.

What will happen if you take part in the study?

The different study activities are described below. After reading through them, you will be asked to agree to participate at the end of this consent form before you can begin your participation.

Baseline Online Survey. If you are eligible to participate, you will provide contact information for yourself. You will be asked to complete an online baseline survey. This survey will include questions about your relationships, sex life, HIV and STI testing, and PrEP use. Once the baseline is complete, you will be randomly assigned to one of two study groups. Participants in both groups will receive the HIV testing video-chat sessions. There is a possibility that your

partner will be asked to join the study, but only if you would like them to and if you are randomized to that part of the study. If your partner agrees to join, they will be asked to complete a brief baseline survey. When you are completing the survey, you may skip questions that you don't want to answer. You can also stop the survey at any time. The survey will take about 30 minutes to complete.

STI Testing. After completing the baseline survey, you will be mailed an STI testing kit (you will have the option to opt-out or not to complete this activity). If you choose to receive the kit, you will be asked to complete the tests at home and to return the test samples by mail to a specified address. The at-home STI test kits will collect urine, throat and rectal tissue from a self-swab, and blood collected by a self-administered finger prick. The STI kit that we mail you will contain instructions on how to complete each test and should only take 5-10 minutes to complete.

HIV Testing Session. After completion of the baseline survey, you (and possibly your partner) will participate in an online video-chat HIV testing and counseling session. During this session, you will test for HIV and review your test results with a trained counselor. The HIV testing kits will be shipped to you at an address that you specify. This session will be completed online through the Zoom video-conferencing system. If you and/or your partner test positive for HIV during this session, study staff will provide resources to link you to appropriate care. This part of the study takes about 45 minutes.

Follow-up Surveys: After the HIV testing session is complete, you will be asked to complete follow-up surveys at three, six and nine months from the time you took the baseline survey. The surveys will be similar to the baseline survey, and will ask questions about your relationships, sexual health, HIV testing, and PrEP use. Additionally, these follow-up surveys will ask you about your experience during the HIV testing session that you will complete in the study.

Exit Interview. You may be selected to complete a study exit interview. If this happens, the interview will be conducted online by one of the trained counselors using the Zoom video-conferencing software. During the interview, you will be asked about your thoughts about We Prevent and how the study could be improved. This is an independent interview, which means you do not need to complete it with your partner.

What are the possible risks or discomforts involved from being in this study?

Potential discomfort with survey questions and HIV testing sessions. It is possible that some of the survey questions may make you feel embarrassed or uncomfortable. You do not have to answer any questions you do not wish to answer. You can stop the survey at any time. HIV testing may also produce discomfort. If you feel discomfort during the HIV testing session, you can discontinue your participation at any time. During self-testing, you may also experience physical discomfort or bruising at the site of the finger prick.

Potential risks of data collection and loss of confidentiality. We will use several strategies to protect your confidentiality. All information that you provide to us, including your test results, will be stored on secure servers with restricted access. We will assign you an identification number that will replace your name on the data files. Only members of the study team will have access to your files. We will make every effort to protect your confidentiality, but there is a small possibility that information you provide could become known to others.

You will be informed if the study staff learns of any new risks.

What if you want to stop before your part in the study is complete?
You can withdraw from this study at any time for any reason, without penalty. You do not have to give a reason. The investigators also have the right to stop your participation at any time. This could be because you have failed to follow instructions, have undermined the right or privacy of another participant, or because the entire study has been stopped.

How will your privacy and confidentiality be protected?
We have your email address and phone number for administrative purposes. Email addresses are necessary for sending an appointment reminder and connecting you to the Zoom program to do the online sessions. Your phone number is used in the event that the Zoom program stops working in the middle of the interview. The study staff member will call you to work on fixing the problem. Your email and phone number will be kept for five years after the study ends, given your consent. Personal information will not be linked to any of the information that you provide in the survey or interview. Your personal information will not be used for any additional correspondences after the completion of the study.

Your participation in this study will be kept confidential and private as permitted by law. This includes the information you provide to us in the baseline and the 3, 6, 9-month follow-up surveys, the HIV testing and counseling sessions, and the exit interviews. Every effort will be taken to protect your identity as a participant in this study. You will not be identified by name in any report or publication of this study or its results. Instead, you will be known only through a study ID number. Any data linking your name to your study ID number will be kept in a locked cabinet in a locked room at the study site but separate from where your study records are stored. Staff members involved in this study are required to sign a form stating that they will protect and keep private all information on every person in the study.

Self-collection biospecimen kits will be mailed from a CLIA-certified testing laboratory and fulfillment center, Molecular Testing Labs (MTL). Participant information including name and mailing address will be entered by study staff into an online ordering portal where MTL will process the shipment. None of the information you share in the surveys you take as part of your study visits will be included with the participant addresses that study staff share with MTL. Test kits will be mailed in a generic USPS mailer so that the contents will not be visible to anyone unless the mailer is opened.

MTL is a Centers for Medicare and Medicaid Services (CMS) Designated "Covered Entity" sworn to uphold all HIPAA Considerations. Use of encryption is required on applicable communications. Laboratory Information System access is protected per HIPAA Guidelines.

Although every effort will be made to keep research records private, there may be times when federal or state law requires the disclosure of such records, including personal information. This is very unlikely, but if disclosure is ever required, the University of Michigan will take steps allowable by law to protect the privacy of personal information. In some cases, your information in this research study could be reviewed by representatives at the University of Michigan and the University of North Carolina at Chapel Hill, research sponsors, or government agencies for purposes such as quality control or safety. At the end of the study, all of your de-identified data

collected from the study will be coded and stored in our We Prevent servers in Ann Arbor, Michigan.

Every effort will be made to keep your participation in the study and any personal information about you private and confidential. However, absolute confidentiality cannot be guaranteed. For example, if a study staff member learns something that would immediately put you or others in danger, the study staff member is required by law to take steps to keep you and others safe. This means that study staff members have to report to the authorities (hospital, police, or social services) any information you say that suggests that you might be in danger, such as telling staff that you plan to hurt or kill yourself, hurt or kill someone else, or if someone is abusing or neglecting you.

In addition, your records may be reviewed by certain agencies or people who make sure that the study staff are doing what they are supposed to and everyone in the study is being protected. Under the guidelines of the Federal Privacy Act, the sponsoring agency at the National Institutes of Health (NIH) and the UNC IRB may look at your records. If your study records are reviewed, your identity could become known to them. However, these persons are expected to maintain your individual confidentiality. This means that they will not tell others information about you or that you are in the study. By signing this form, you are allowing such access.

Most people outside the research team will not see your name on your research information. This includes people who try to get your information using a court order in the United States. There are exceptions for information that is required to be reported under law, such as information about child or disabled abuse or neglect or certain harmful diseases that can be spread from one person to another. Personnel of a government agency sponsoring the study may also be provided information about your involvement in the research study.

Will you receive anything for being in this study?

You will receive $40 in the form of an Amazon eGift Card after completing the baseline survey. If your partner participates in the study, they will receive a $20 Amazon eGift Card for completing a brief baseline survey. You will receive another $40 Amazon eGift Card for each follow-up survey completed at the 3-, 6-, and 9-month follow-up points, totaling in $120 for completing all of the follow-up surveys. If you are selected to complete the exit interview, you will also receive $20 for your participation. Therefore, you can receive up to $180 by participating in this study and your partner can receive up to $20.

What are the benefits from participating in this study?

Participating in our study may not benefit you directly. We hope that what we will learn from your participation will help us to implement an HIV prevention program to meet the needs of young gay, bisexual, and other men who have sex with men and their partners.

Are there any costs to you for taking part in this study?

No, there are no costs to you for taking part in this study.

Who is sponsoring this study?

This research is being sponsored by the University of North Carolina at Chapel Hill and funded by the National Institutes of Health (NIH). This means that the sponsor, the University of North Carolina at Chapel Hill (UNC-CH), is providing money from NIH to the University of Michigan

to help conduct this study. The researchers do not, however, have a direct financial interest with the sponsor or funding source or in the final results of the study.

What if you are an employee of the University of Michigan?
Taking part in this research is not a part of your job duties and refusing will not affect your job. You will not be offered or receive any special job-related consideration if you take part in this research.

What if you have questions about this study?
You have the right to ask, and have answered, any questions you may have about this research at any time before, during, or after your participation. If you have questions, or concerns, you should contact the researchers listed on the first page of this form.

What if you have questions about your rights as a research participant?
All research on human volunteers is reviewed by a committee that works to protect your rights and welfare. If you have questions or concerns about your rights as a research subject you may contact, anonymously if you wish, the University of North Carolina at Chapel Hill (UNC-CH) Institutional Review Board (IRB) at 919-966-3113 or by email to IRB_subjects@unc.edu.

You can also call the University of Michigan Institutional Review Board (IRB) at 734-936-0933 or by email to irbhsbs@umich.edu

UNC IRB Study #18-0200

Title of Study: ATN 157 – We Prevent: A dyadic approach to HIV prevention and care among young male couples

Site Principal Investigator: Rob Stephenson, PhD, MSc, MA

Participant's Agreement:
If you agree to voluntary participate in this study, please select the appropriate response:

- o I agree to participate in this research study
- o I do NOT agree to participate in this research study