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PrEP and Sexual Well-Being: A Qualitative Study of the Impact of PrEP on Sexuality of MSM and the Effects of Sexual Health Care from PrEP Providers on PrEP Persistence

By

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PrEP and Sexual Well-Being: A Qualitative Study of the Impact of PrEP on Sexuality of MSM and the Effects of Sexual Health Care from PrEP Providers on PrEP Persistence

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2016

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An abstract submitted to the Faculty of the Rollins School of Public Health of Emory University in partial fulfillment of the requirements for the degree of Master of Public Health in Behavioral Sciences and Health Education 2019

ABSTRACT

PrEP and Sexual Well-Being: A Qualitative Study of the Impact of PrEP on Sexuality of MSM and the Effects of Sexual Health Care from PrEP Providers on PrEP Persistence

Background: Minimal uptake of Truvada for HIV pre-exposure prophylaxis (PrEP) among men who have sex with men (MSM) has prompted studies about patient-provider dynamics, prescription practices, and patient perceptions of healthcare. Previous literature has shown that barriers to uptake and prescription are related to perceptions of sexual behaviors among MSM. In the gay community, people who use PrEP are perceived to be promiscuous while healthcare providers often cite concerns about behavioral risk compensation among MSM who use PrEP. These concerns related to sexual behaviors have been noted as barriers to PrEP uptake, but there is a paucity of research investigating the impact of elements of sexuality on the persistent use of PrEP.

Objectives: The purpose of this qualitative study is to examine the impact of PrEP use on elements of sexuality among MSM, explore how MSM patients experience sexual health care with PrEP providers, and to understand how sexual health care impacts PrEP persistence among MSM in the context of evolving sexuality.

Methods: The primary researcher conducted semi-structured interviews with 20 MSM adults in Atlanta, Georgia with current or past prescriptions for PrEP. A thematic analysis approach was used for data analysis and consisted of four major steps: 1) code and codebook development, 2) assigning codes to segments of interviews, 3) code-based and comparative analysis methods, and 4) developing thematic findings. Constructs from the information-motivation-behavioral skills (IMB) theory informed the development of interview guides and deductive codes used in analysis.

Results: Findings from interviews with MSM confirm and extend previous literature pertaining to changes in sexuality while using PrEP such as decreased feelings of anxiety surrounding sex, feelings of control over personal health without dependence on sexual partners, and less stigma regarding sex with MSM who have HIV. Participants indicated PrEP healthcare needs such as tailored sexual health advice based on individual sexual preferences, provision of non-judgemental sexual health care, and improved access to PrEP providers who identify as gay men or who practice in LGBT-friendly settings. Data linkages regarding PrEP persistence were thin, though some data indicated that PrEP provider judgment and perceived lack of investment in the patient may translate to patient disregard for personal sexual health.

Conclusions: The findings from this study support a need for a gain-frame approach to sexual health especially among MSM. Study results regarding MSM PrEP patient perceptions of their sexual health care may inform LGBT medical education, contribute to medical guidelines for constructing effective patient-centered sexual health recommendations, and support future research about MSM medical care and PrEP persistence.

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CHAPTER ONE: INTRODUCTION

The human immunodeficiency virus, commonly known as HIV, weakens the body's immune system and can progress to an acquired immunodeficiency syndrome (AIDS) in the final stage of the infection (CDC, 2017). Because HIV is viral in nature, it is classified as a chronic infection and impacts long-term health and potential for transmission through the exchanges of bodily fluids between people. The most common forms of transmission are through sexual activities and needle or syringe use while blood transfusions and breast milk sharing between mothers and babies constitute other modes of HIV transmission (CDC, 2017).

The first report of AIDS incidence in the United States was published by the Centers for Disease Control and Prevention in 1981 when five formerly healthy gay men had become infected with *Pneumocystis pneumonia* – a type of pneumonia that is almost always acquired in severely immunosuppressed people (Gottlieb, 1981). The New York Times published an article in the following year noting that the elusive disorder had reportedly affected 335 people in the United States of whom 136 had died. This article also noted that the disorder primarily seemed to affect gay men and shared the newly coined term for the disorder: gay-related immunodeficiency (GRID) (Altman, 1982). While the disease was shortly after known to affect heterosexual women and only be transmitted through the exchange of bodily fluids, it came to be known in the 1980's and 1990's as a gay disease or the "gay plague" ("HIV/AIDS and U.S. History," 2017).

HIV in the United States Today

In 2017, men accounted for 66% of all new diagnoses of HIV among adults and adolescents in the United States (CDC, 2018). In fact, the majority of all diagnosed infections of HIV among adults and adolescents in the U.S. are attributed to sexual contact between men (CDC, 2018). Men who have sex with men (MSM) are considered among populations most at

high-risk of newly acquiring HIV in the United States (CDC, 2014). Men who have sex with men (MSM) is a categorization that was first termed in 1994 (Glick, Muzyka, Salkin, & Lurie, 1994) and has since been used to include all men who have sex with men regardless of sexual identity. While the field of public health has strongly adopted the use of the term MSM, there has been examination of the term's arguable erasure of sexual identity from the public health discourse (Young & Meyer, 2005). For the purposes of this research project, MSM will denote men who have sex with men as a behavioral term regardless of sexual or gender identity though questions about gender and sexual identity will be addressed throughout the study.

In the United States, MSM are disproportionately affected by HIV in the southern region of the country classified by researchers as states with historical ties to slavery and agricultural economics (Reif et al., 2014; Reif et al., 2015; Reif et al., 2017). As of 2017, the southern region of the United States has the highest rate of HIV infection while the state of Georgia has the second highest rate of HIV incidence in the continental United States (CDC, 2018). The city of Atlanta ranked third among cities in the United States for diagnosis of HIV infections in 2017 and accounts for where the majority of people with HIV in the state of Georgia reside (CDC, 2018).

Biomedical Breakthroughs for HIV Management

Management of HIV became a reality when the U.S. Food and Drug Administration (FDA) approved Retrovir containing azidothymidine and commonly referred to as AZT. Retrovir was a drug first developed in 1964 as a potential treatment for cancer and worked to control HIV by slowing the replication of the virus (PHS, 1987). By 1995, the FDA approved the first protease inhibitor, Invirase, that worked similarly to AZT treatment by reducing viral loads in a person's blood (James, 1995). Invirase was the first of many highly active retroviral treatments

(HAART) to be developed in the next two decades. Today, the recommendation for antiretroviral treatment, or ART, is that all people with an HIV diagnosis should take ART to prevent the progression of HIV to acquired immunodeficiency marked by CD4 cell reduction (DHHS, 2017). Continually using ART maintains a low viral load of the HIV virus. If viral loads are low enough to be undetectable by assay tests, there is diminished probability of HIV transmission (DHHS, 2017). Various drugs that serve as ART have made HIV a chronic condition for individuals who may now live longer and relatively healthier lives than previously experienced with early cases of HIV.

Strides in Behavioral HIV Prevention

While the strides in HIV treatment have significantly improved the quality of life of people living with HIV, there is still a critical need for effective HIV transmission prevention methods. Behavioral interventions to prevent HIV include education about risk reduction, or alterations in behaviors that effectively minimize a person's risk of contracting HIV. To address sexual transmission of HIV, the Centers for Disease Control and Prevention (CDC) recommend a number of sexual risk reduction behaviors in high risk populations including consistent condom use, reduction of multiple sexual partners, and regular screening for HIV and other sexually transmitted infections (STIs) (CDC, 2017). Studies focused on MSM, however, indicate low rates of consistent condom use and a need for contextualizing condom use and other behavioral interventions with an understanding of individual MSM sexual experiences (Adams & Neville, 2009; Collins, McMahan, & Stekler, 2017; Hensel, Rosenberger, Novak, & Reece, 2012; Rosenberger et al., 2012; D. K. Smith, Mendoza, Stryker, & Rose, 2016). Inconsistent application of CDC sexual risk reduction guidelines among MSM indicates a need for other methods of prevention of sexual transmission of HIV.

The Era of PrEP

An additional method of prevention was introduced when the FDA approved Truvada for pre-exposure prophylaxis (PrEP) in 2012 as a daily dose pill consisting of antiretroviral medications tenofovir and emtricitabine (FDA, 2012). While the medication has been shown to be highly effective in biomedically preventing HIV acquisition the adoption of PrEP among MSM has been an emerging field of research with an aim to better understand behavioral intentions and motivations surrounding PrEP use among MSM (Baeten et al., 2012; Grant et al., 2010).

Though Truvada has proven to be an efficacious prophylactic tool, uptake of PrEP among MSM in the United States has been relatively low compared to estimates of at-risk MSM. As of 2016, about 84,000 men of unspecified sexual partner preference obtained prescriptions for PrEP relative to an estimated 813,970 MSM who met high-risk indications for PrEP (Mera, 2017; D. K. Smith, Van Handel, & Grey, 2018). Men who have sex with men have also associated PrEP with concerns about perceived stigma and promiscuity from potential partners and in the gay community at large that impact the uptake of PrEP among MSM (Bourne et al., 2017; Calabrese et al., 2017; Calabrese & Underhill, 2015; Collins et al., 2017; Golub, Gamarel, Rendina, Surace, & Lelutiu-Weinberger, 2013; Thomann, Grosso, Zapata, & Chiasson, 2018). Literature related to PrEP adherence has also noted that these perceptions of stigma, promiscuity, and assumptions about condomless sex once on the medication from potential partners may reduce motivation to remain adherent to the daily medication (Calabrese & Underhill, 2015; Gilmore et al., 2013; Liu et al., 2014; Thomann et al., 2018).

Ongoing implementation of Truvada for PrEP has also been hindered by a dearth of knowledge among medical providers and concerns about risk compensation, side effects,

adherence and cost (Arnold et al., 2012; Karris, Beekmann, Mehta, Anderson, & Polgreen, 2014; D. Krakower, Ware, Mitty, Maloney, & Mayer, 2014; D. S. Krakower et al., 2015; Mayer et al., 2015; Matthew J. Mimiaga, White, Krakower, Biello, & Mayer, 2014; Tellalian, Maznavi, Bredeek, & Hardy, 2013). Risk compensation is an increase in the practice of risky behaviors due to perceptions of protection from disease acquisition. There is a paucity of research investigating PrEP provider care of MSM sexual wellbeing especially because sexual risk compensation has proven to be a major concern for providers regarding uptake (Pinkerton, 2001). Holistic understandings of MSM sexuality and sexual wellbeing may better inform patient behavioral tendencies and the nuances of PrEP and sexuality including the role of pleasure and intimacy (Calabrese & Underhill, 2015). This is a pertinent topic of study as previous studies have indicated biases and assumptions made by medical professionals that influence PrEP prescription patterns and MSM patient comfort with PrEP healthcare (Calabrese et al., 2018; Fortenberry, 2013; Thomann et al., 2018).

The barriers to PrEP uptake and adherence among MSM that are heavily linked to sexual identities and external perceptions of sexual preferences should be explored as a critical component of healthcare for MSM who are already using or seeking to start PrEP (Hughes et al., 2018). Qualitative research has been conducted to understand the impact of PrEP on sexual health and wellbeing with early indications of dissonance between sexual healthcare recommendations and individual sexuality of MSM patients (Collins et al., 2017; Grace, Jollimore, MacPherson, Strang, & Tan, 2017). Medical recommendations to use condoms consistently have been perceived to be unrealistic especially as PrEP allows MSM to eliminate condoms as a barrier to intimacy (Collins et al., 2017). Interviews with some MSM using PrEP indicate an ability to continue practicing condomless sex without previously experienced anxiety and shame derived from fear and stigma

(Grace et al., 2017).

This study aims to further contextualize the experiences of MSM PrEP users with their medical providers by exploring the integration of sexuality and sexual wellbeing in their medical PrEP care. By interviewing MSM people who have been prescribed PrEP and/or currently use it, this study will gain a qualitative understanding of how using PrEP impacts sexuality and how MSM patient sexual wellbeing is addressed by healthcare providers.

CHAPTER TWO: REVIEW OF LITERATURE

The current literature details explorations of male sexuality in the context of sexual behaviors especially in the years following the discovery of HIV. Behavioral and social scientists have worked to better understand how elements of sexuality of MSM impact behavioral risks of HIV acquisition and transmission. In the era of PrEP, there has been a resurgence of behavioral research surrounding MSM investigating intentions and motivations for pursuing PrEP care as well as an understanding of risk compensation behaviors once using PrEP. Early literature that emerged after FDA approval of Truvada for PrEP also details healthcare provider PrEP perceptions and prescription practices to better understand barriers and facilitators to PrEP uptake among populations at high risk of acquiring HIV. Studies about MSM and LGBT medical care at large also inform potential barriers to PrEP uptake from a clinical viewpoint that are further supported by the findings of more recent literature about healthcare-related PrEP stigma and needs for improved PrEP medical care for MSM patients.

Understanding Sexuality of MSM

Sexuality has been a topic of interest as social and personal perceptions of MSM sexuality impact individual behaviors and attitudes towards sex (Bourne et al., 2017; Carballo-Diéguez, 2001; Dean, 2015; Elsesser et al., 2016; Gamarel & Golub, 2015; Hughes et al., 2018). For example, sexual sensation seeking among MSM is associated with behaviors such as *barebacking* (condomless sex) and intercourse with multiple partners (Adam, Teva, & de Wit, 2008; Carballo-Diéguez & Bauermeister, 2004). *Barebacking*, a term which was first used in 1997 to describe the phenomenon of intentional condomless sex practiced by people who are HIV positive, is now widely used to describe condomless sex practiced by MSM regardless of HIV status (O'Hara, 1997). A noted gap in HIV biomedical and behavioral prevention programs

is the failure of the public health and medical fields to integrate sexual meanings and practices that are specific to the gay, transgender, and MSM communities with HIV prevention strategies (Aggleton & Parker, 2015; Collins et al., 2017; Garcia et al., 2016; Parker et al., 2015).

PrEP and the Sexuality of MSM

Early research related to intention and motivations for certain sexual practices while on PrEP has emerged in response to a need to better understand the role of sexuality among male PrEP users who have sex with men. Enhanced pleasure, minimizing of HIV stigma, and feelings of personal control of sexual health have all been associated with the use of PrEP in addition to feelings of enhanced safety and relief from stress of contracting HIV (Grant & Koester, 2016). However, these perceptions of security do not necessarily contribute to changes in sexual practices (Hughes et al., 2018; Koester et al., 2017; Marcus et al., 2013). Patterns of risk compensation have not been established in PrEP users as indicated by early clinical setting studies which show varied behavioral responses to using PrEP based on context (Marcus et al., 2013; Parker et al., 2015; Volk et al., 2015). This finding highlights that people who are on PrEP may not significantly alter their sexual behaviors and that reported sexual behaviors among PrEP users may be similar to those practiced prior to starting the medication.

Intentions behind engaging in condomless sex among PrEP users vary based on the nature of the sexual relationship. For example, condomless sex with partners of unknown status can be motivated by wanting to enhance feelings of pleasure and facilitating intimacy acts as a driver to not use condoms with partners who are known to be HIV negative (Golub, 2014; M. J. Mimiaga, Goldhammer, Belanoff, Tetu, & Mayer, 2007). This distinction in motivation for a behavior that is perceived as risky reveals a deeper notion that HIV prevention in the form of PrEP is tightly intertwined with a person's sexuality. Adopting an understanding of how sexual

practices evolve or remain the same before and after PrEP use presents an opportunity to better understand the dynamic sexuality of individual MSM patients who are using the biomedical prevention tool.

Clinical Understandings of Sexuality of MSM

When Truvada was approved by the FDA in 2012, there was a slow growth of people using the medication for PrEP until 2014 with a rapid increase in usage from 2014 to 2015 (Mera, 2017). Through 2017, approximately 120,000 people have started using Truvada for PrEP with room for growth among African Americans, women, and younger folks (Mera, 2017). Medical provider understandings of Truvada for PrEP have reflected some barriers to prescribing PrEP such as perceptions of increase in risk behaviors or risk compensation, concerns about insurance coverage, and limited knowledge about PrEP especially among primary care physicians compared to HIV providers (D. Krakower et al., 2014; D. S. Krakower et al., 2015; Petroll et al., 2017; D. K. Smith et al., 2016; Tripathi, Ogbuanu, Monger, Gibson, & Duffus, 2012; White, Mimiaga, Krakower, & Mayer, 2012). Of note, many of these assessments of knowledge about PrEP among healthcare providers range from 2012 to 2017 – a period of time in which the Centers for Disease Control published clinical guidelines for PrEP prescription in 2014 with updates in 2015 and 2017 (D. Smith et al., 2014).

A broader understanding of healthcare for lesbian, gay, transgender, and queer (LGBTQ) people is necessary to recognizing the impact of social and political discourse on treatment of MSM PrEP patients who are largely a part of the LGBTQ community. Among MSM, identity as a gay or transgender man is a significant part of sexuality and lived experiences and, as such, impacts sexual health and prevention of sexually transmitted infections (Mayer et al., 2008). Patients who identify as LGBTQ experience significantly greater perceived stigma from their

healthcare providers than that of heterosexual patients (Hatzenbuehler & Pachankis, 2016). In particular, MSM who have adopted PrEP have experienced perceived stigma from providers related to preferred sexual practices and choices (Ayala et al., 2013; Schwartz & Grimm, 2017). This perceived stigma contributes to barriers in accessing PrEP from physicians due to feelings of discomfort related to openly discussing gay sexuality and sexual risk (Grace et al., 2017). Among medical providers, sex tends to be directly associated with risk which introduces complexity to patient care as sexuality can have significant meaning for MSM (Grant & Koester, 2016).

A Theory-Based Approach to Understanding PrEP Persistence and Adherence

The information, motivation, and behavioral skills theory (IMB), originally conceived in 1992 as a framework for promoting AIDS risk reduction behaviors, provides a model for understanding PrEP persistence as a risk reduction method among MSM patients (Fisher & Fisher, 1992). In particular, IMB provides the framework for pinpointing the areas in which PrEP providers may contribute to the promotion of PrEP persistence. The major constructs, information; motivation; and behavioral skills, interact to promote a desirable health behavior – persistently using PrEP, in this case. Researchers reviewing PrEP uptake efforts in the context of IMB have noted that successful PrEP information sharing includes objective information that is factual such as medication efficacy, side effects, and dosage. Necessary knowledge also includes subjective information that refers to beliefs about PrEP such as perceived burden of PrEP regimen and impact of PrEP on intimacy and closeness in sex (Dubov, Altice, & Fraenkel, 2018; Gamarel & Golub, 2015). Interviewing MSM PrEP patients about provider communication of both objective and subjective information as well as personal developed knowledge of the impact of PrEP on sexuality will elucidate the impact of MSM knowledge base on adherence to PrEP.

The second construct of the IMB model is motivation, which consists of perceived risk of contracting HIV and perceived impact of having HIV on quality of life, which both work to direct and attenuate efforts to engage in a risk-reducing behavior (Dubov et al., 2018). Motivation also encompasses personal intentions, personal attitudes, and social norms. Of importance to this study, patient personal attitudes include an emotional association with the idea of persistently using PrEP as well as beliefs about positive and negative consequences of remaining adherent long-term. Personal attitudes about long-term persistent use of PrEP are heavily based on subjective knowledge or individual beliefs about PrEP (Dubov et al., 2018). Some critical beliefs that influence attitudes about PrEP include attitudes towards healthcare with medical mistrust or perceived stigma negatively impacting PrEP use (Brooks, Landovitz, Regan, Lee, & Allen, 2015; Cahill et al., 2017). Additionally, the importance of integrating cultural humility with healthcare for MSM patients who identify as LGBTQ has been noted and may be a critical component to building trust with PrEP providers and motivating patients to adhere to daily medication intake and the follow up regimen (Ruud, 2018; Walker, Arbour, & Waryold, 2016). This study aims to better understand the facilitators and barriers to stimulating motivation among MSM PrEP patients as related to the impact of provider care on patient attitudes and beliefs.

The IMB framework for risk-reduction behavior promotion posits that even with adequate information or inspired motivation, people cannot achieve a desired behavior without behavioral skills (Fisher & Fisher, 1992). The current study frames behavioral skills as a combination of the feasibility of taking a daily medication pill and the patient's self-efficacy or confidence in being able to maintain the medication regimen and remain true to one's sexuality. The present study explores PrEP provider communication of sexual health recommendations to

better understand the role of healthcare in enhancing MSM self-efficacy. A qualitative study with MSM PrEP patients in Seattle has indicated an emerging need for PrEP providers to employ sex-positive approaches to patient care to alleviate stigmatization of MSM sexual practices (Collins et al., 2017). Cultural humility in healthcare may provide insight into the need for sex-positive approaches to patient care as the lack of sex-positive care may be the result of stigmatization of MSM sexual practices or LGBTQ cultural and social norms. The core components of cultural humility include provider consistent reflection and education to bring personal awareness to biases and assumptions about patients whose identities differ from those of the provider (Tervalon & Murray-García, 1998; Yeager & Bauer-Wu, 2013). An exploration of how PrEP providers integrate a patient's sexuality into comprehensive care is necessary to identifying areas for improvement or maintenance of standards related to enhancing MSM self-efficacy for long-term PrEP use.

Conclusion

The existing PrEP literature presents a need for understanding the impact of PrEP on the sexuality and sexual wellbeing of MSM patients, especially now that Truvada for PrEP has been approved for about six years. While MSM sexuality and the use of PrEP have been studied in public health, the results from these studies have not been integrated with research concerning PrEP provider prescription of Truvada and subsequent patient care. Changes in MSM sexuality and wellbeing need to be explored in a clinical context to discover the extent to which medical professionals who prescribe PrEP integrate an evaluation of patient sexuality in their patient care routine. Addressing a potential disconnect between provider care practice and MSM patient needs may lead to future interventions that enhance patient-provider relationships and increase uptake and long-term adherence to PrEP.

CHAPTER THREE: STUDENT CONTRIBUTION

This project was initiated following course work conducted by the student, who is the current study's primary researcher, in a qualitative methods class in the Spring 2018 semester. The course work involved interviewing PrEP providers about their provision of sexual health care for MSM patients using PrEP. With feedback from thesis committee members, the primary researcher further developed the research question and formulated a qualitative research project examining sexuality in the context of PrEP use, experiences with discussing sexual wellbeing with healthcare providers, and how these elements impact continued PrEP medication use.

The student developed the structure of the qualitative research project consisting of key informant interviews with PrEP healthcare providers and in-depth interviews with MSM participants to gather rich data contextualized by key informant contributions. The Emory Institutional Review Board (IRB) submission for the project was drafted and submitted by the student in May 2018 including subsequent edits and amendments sent to the Emory IRB. Materials for the project included key informant and participant interview guides developed by the student using a review of literature related to previous PrEP studies, patient-provider clinical relationships, and theoretical frameworks used to understand patient behavior. Feedback from the faculty chair and thesis committee members was also incorporated into the final versions of the interview guides prior to IRB approval. Other materials submitted for IRB approval include the project protocol and recruitment advertisements for Facebook and print created by the student. Expedited approval from the Emory IRB was obtained on May 31, 2018. An amendment to include a study sponsor was approved on August 6, 2018. Financial support of the project was provided by the study sponsor, Hope Clinic at Emory Vaccine Center through Dr. Srilatha Edupuganti and the AIDS Vaccine 200/Action Cycling Atlanta grant. This grant covered the cost

of recruitment advertisements, participant compensation, transcription service fees, and manuscript submission fees.

Recruitment for the project was conducted by the student investigator with aid from the Emory Hope Clinic Community Engagement Director, Machel Hunt, from May 2018 to October 2018. Mr. Hunt invited the student investigator to community events in Atlanta and referred the student to community members with interest in the research study. The student contacted and scheduled people from these community events for in-depth interviews and conducted all semi-structured interviews in-person, over the phone, or via video chat. After student transcription of five interviews, a professional transcription service was used for all remaining interviews. The first steps of the qualitative analysis plan for the project included initial cleaning of transcribed interview and creating memos during initial readings and were conducted by the student. The student researcher then developed codes and synthesized a codebook prior to conducting peer agreement on a subset of transcripts with a colleague to finalize code definitions and criteria for all codes. The codebook was revised and applied to all transcripts by the student who then conducted code-based analyses, sub-group comparative analyses, and conceptualizing emergent themes to derive qualitative findings.

The student wrote the manuscript for publication in Chapter 4 with feedback from the faculty chair and committee members prior to submission. The journal selected for initial manuscript submission is *AIDS Care*, which aims to present research from varying disciplines such as psychology, sociology, epidemiology, law, and medicine as they inform the HIV and AIDS fields.

CHAPTER FOUR: JOURNAL ARTICLE

PrEP and Sexual Well-Being: A Qualitative Study on PrEP, Sexuality of MSM, and Patient-Provider Relationships

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Abstract
Most new diagnoses of HIV in the United States are among men who have sex with men (MSM). Pre-exposure prophylaxis (PrEP) is a medication that mitigates risk of HIV acquisition and requires regular STI testing and prescription refills with PrEP providers. Considering that PrEP care heavily monitors sexual behavior, there is a need to understand how PrEP providers approach sexual health care for MSM patients. Semi-structured interviews were conducted with 20 MSM in Atlanta, Georgia with current or past prescriptions for PrEP. A thematic data analysis approach was implemented in four major steps: 1) code and codebook development, 2) assigning codes to segments of interviews, 3) code-based and comparative analysis methods, and 4) developing thematic findings. Findings from interviews with MSM about changes in sexuality while using PrEP include decreased feelings of anxiety surrounding sex, feelings of control over personal health, and less stigma towards sexual partners with HIV. Participants indicated needs such as tailored sexual health advice based on individual sexual preferences, non-judgemental sexual health care, and improved access to PrEP providers who identify as gay men or who practice in LGBT-friendly settings. Study findings support a call for a gain-frame approach to sexual health in PrEP care for MSM.

Keywords: PrEP, HIV prevention, sexual health, primary medical care, sexuality

Introduction

In 2017, sexual contact between men who have sex with men (MSM) accounted for 66% of all diagnoses of HIV among adults and adolescents in the United States (CDC, 2018). As of 2017, the state of Georgia has the second highest rate of HIV incidence in the continental United States with city of Atlanta ranking third nationally for new diagnoses of HIV (CDC, 2018). In fact, the Department of Health and Human Services (HHS) identified four Atlanta area counties as high-priority areas in their “Ending the HIV Epidemic: Plan for the United States” goals to reduce new HIV diagnoses by 75% by 2024 (Fauci, Redfield, Sigounas, Weahkee, & Giroir, 2019). A key strategy in the HHS plan to reduce HIV diagnoses is supporting prevention of HIV by improving access to pre-exposure prophylaxis (PrEP). The U.S. Food and Drug Administration (FDA) approved Truvada for PrEP in 2012 as a daily dose pill consisting of antiretroviral medications tenofovir disoproxil fumarate and emtricitabine (FDA, 2012). PrEP is

an efficacious prophylactic tool; however, uptake among MSM in the United States has been relatively low compared to the number of at-risk MSM (Mera, 2017; D. K. Smith et al., 2018).

Though individual-level factors influence a person's decision to take PrEP, provider-level factors can also influence patient adoption of PrEP. Provider concerns about risk compensation behaviors such as inconsistent condom use and multiple sexual partners among MSM patients are among barriers to provider prescription of PrEP to MSM patients (Arnold et al., 2012; Karris et al., 2014; D. Krakower et al., 2014; D. S. Krakower et al., 2015; Mayer et al., 2015; Matthew J. Mimiaga et al., 2014). Beyond provider concerns about risk compensation prior to PrEP prescription, provider approaches to discussing sex, sexuality, and other facets of sexual health may be important to appropriate and continued use of PrEP among MSM once prescribed. Previous qualitative research suggests misalignment between sexual healthcare recommendations and patient sexual practices indicating a need to understand how PrEP providers approach sexual health care for MSM patients (Collins et al., 2017; Grace et al., 2017). MSM patients often experience perceived stigma from PrEP and other healthcare providers regarding sexual practices instigating feelings of discomfort while discussing sexuality with providers (Ayala et al., 2013; Fortenberry, 2013; Schwartz & Grimm, 2017; Thomann et al., 2018).

There is a paucity of research examining the extent to which the PrEP integrate discussion of sexuality into sexual health care encounters with MSM, and how integration of such discussions affects PrEP uptake and care. The purpose of this qualitative study is to explore the experiences of MSM with sexual health care from PrEP providers to contextualize sexual health related barriers to uptake and prescription as considerations for sexual health care after uptake of PrEP.

Methods

From June to October 2018, the principal investigator conducted twenty in-depth, semi-structured interviews with MSM who were currently using or had used Truvada for PrEP in the last three years in Atlanta, Georgia. Participants were recruited through online advertisements, printed flyers posted at local universities, and through in-person recruitment at LGBT community events such as Atlanta Pride. Potential participants self-reported 1) identifying as a man who has sex with men, 2) being between the ages of 18 to 60, 3) residing in the Atlanta metropolitan area, and 4) being prescribed PrEP in the last three years. The Emory Institutional Review Board provided ethical approval for this study including the recruitment strategies, consent process, and general study design. A ten-dollar gift card was provided as incentive to each participant.

All qualified participants gave verbal informed consent before beginning the interview. The principal investigator, a female graduate student with experience in LGBTQ community outreach, conducted all the interviews using an interview guide developed by the study team. The guide consisted of open-ended questions to elicit rich data about the participant's perceptions of sexuality, the impacts of PrEP on their sexuality, and their experiences interacting with their health care providers regarding sexual health during their PrEP care.

All interviews were audio recorded and transcribed verbatim by a professional transcription company. The transcripts were imported into MAXQDA 8, a qualitative data analysis software, for coding and analysis. A codebook was developed after reviewing the transcripts. The principal investigator and a colleague in the LGBTQ health field coded a subgroup of transcripts to establish inter-code agreement. Using a theoretical thematic analysis approach, interviews were analyzed using codes pertaining to the research question: How MSM

patients experience sexual health care with PrEP providers while using PrEP (Braun & Clarke, 2014)? Themes were developed by using coded data to identify linkages between patient health care experiences and personal aspects of sexuality. Data about racial identity and the LGBTQ community contextualized the relationship between sexuality and health care experiences for PrEP users.

Results

Demographic data indicates characteristics of the participants in the study sample (see Table 1). All the study participants identified as men and openly identified as gay; the majority were Black or African American (75%) with a mean age of 30.2. Most of the men interviewed had a college or graduate degree (90%) while one participant had attended some college, and another had a high school diploma. Half of the participants were in romantic relationships at the time of the interview and half of the participants considered themselves single. Of the men in romantic relationships, half classified their relationship as monogamous while the other half considered themselves in non-monogamous romantic relationships. Most of the participants had engaged in sex the week before at the time of the interview (65%), visited a medical provider in the past month (70%), and visited a PrEP provider in the past month (55%). Most study participants (n=17) were PrEP users at the time of the interview. For the three participants who were no longer using PrEP, the time since last use ranged from six months to 18 months. Three overarching categories emerged from the data: 1) the impact of PrEP on sexuality 2) PrEP health care experiences of MSM patients and 3) patient recommendations for improved sexual health care from PrEP providers.

Table 1. Demographic Results

Characteristics	**Study Participants, N=20**
Mean Age (years)	30.2
Characteristics	**N (%)**
Gender	
Male	20 (100)
Female	0 (0)
Transgender	0 (0)
Race	
Black/African American	15 (75)
White/Caucasian	4 (20)
Asian	1 (5)
Ethnicity	
Hispanic/Latinx	3 (15)
Non-Hispanic/Latinx	17 (85)
Education	
No schooling completed	0 (0)
Some high school	0 (0)
High school graduate	1 (5)
Some college	1 (5)
Bachelor's degree	15 (75)
Master's degree	2 (10)
Doctorate degree	1 (5)
Other professional degree	0 (0)
Relationship Status	
Single	10 (50)
Current Romantic Relationship	10 (50)
Monogamous Relationship	5 (25)
Non-monogamous Relationship	5 (25)
Last Sexual Encounter (*prior to interview*)	
Past one week	13 (65)
Past one month	5 (25)
Past three months	1 (5)
Past six months	1 (5)
PrEP Use (*at time of interview*)	
Currently using PrEP	17 (85)
Not currently using PrEP	3 (15)
PrEP Provider Visit	
Past month	11 (55)
Past six months	8 (40)
Past one year	0 (0)
Past two years	1 (5)
Past three years	0 (0)
Over three years ago	0 (0)

Medical Provider Visit	
Past month	14 (70)
Past six months	3 (15)
Past one year	3 (15)
Past two years	0 (0)
Past three years	0 (0)
Over three years ago	0 (0)

Impact of PrEP on Sexuality

The study confirmed results from previous studies regarding the impact of PrEP on elements of sexuality such as feelings, seeking partners, and sexual behaviors. For example, participants expressed reduced feelings of anxiety concerning acquiring HIV during sex while using PrEP (Table 2, Quote 1). Men stated that being on PrEP allowed them to have personal control of their health despite partners who may not be truthful about their health status (Quote 2). Potential sexual relationship with men who have HIV were more realistic for many men on PrEP and helped them diminish subconscious feelings of stigma (Quote 3). About half of the participants used condoms in conjunction with PrEP (Quote 4) and about half inconsistently used condoms or didn't use condoms at all. Men in long-term relationships evaluated the risk of HIV transmission based on their partner's testing results and PrEP usage prior to engaging in condomless sex (Quote 5). Of the participants who did not consistently use condoms, about half described condoms as a barrier to intimacy during sex and that PrEP facilitated more connected sexual relationships (Quote 6).

Table 2. Impact of PrEP on Sexuality Significant Statements

Quote	Theme	Significant Statement	Participant
1	Decreased anxiety with sex while on PrEP	"I don't have to have the subsequent worrying like, you know, while we're in the sexual act. 'What is gonna happen?' I don't have that scare anymore."	Dramon
2	Control of personal health despite distrust in partners to fully disclose their HIV status	"There have been people that I have dated short-term that lied about their status, so it does help me feel safe. Because even if you ask somebody, it doesn't mean that they are telling you the truth, you know. So, you always have to do whatever you can do to protect yourselves."	Akin
3	PrEP diminishes fear about having sex with men who have HIV	**"**Um, I actually view sex with HIV positive people differently now. I think there was that subconscious stigma. It's somewhat of a barrier that's lifted knowing that I'm protected by this medicine and I can be physically intimate with somebody because they're HIV positive."	Jerome
4	Condom use with PrEP	"Just because I'm taking PrEP doesn't mean that I should be having unprotected sex. I take [PrEP] every day and that I'm still taking appropriate measures because it doesn't protect against things like chlamydia or whatever"	David
5	Inconsistent condom use with long-term partners	"And often when I have long term relations and we both get tested and everything comes back, that's when we abstain from using condoms."	Andrew
6	Condomless sex while using PrEP contributes to more intimacy during sex	"But, with PrEP, what sex is for me is it's a more enhanced connection. It's like the difference between shaking somebody's hand when you're wearing gloves versus shaking somebody's hand when you're not. It's the same gesture, but, one of them, you feel a lot more intentionally."	James

PrEP Health Care Experiences of MSM Patients

Communication with PrEP providers and impact on visit procedure

Participants described positive experiences communicating with PrEP providers who engage in open dialogues about sexual practices and health. Open communication contributed to participants feeling comfortable about disclosing all sexual activities, which allowed providers to recommend appropriate STI testing and offer additional patient education (Table 3, Quote 8).

Other participants described difficulty communicating with PrEP providers – especially those who utilized a sexual risk checklist to assess sexual activities and other behaviors. In these situations, participants felt that the discussions about sexual health were scripted and did not allow space for comprehensive conversations about their sexual behaviors (Quote 9-10). In some circumstances, this lack of communication led to inconsistent oral and rectal swabbing for STI panels and a lack of tailored sexual health advice based on the participant's actual sexual practices and preferences.

PrEP provider perceptions of patient sexuality

Participants who had generally positive experiences with their PrEP providers noted a normalization of their sex life when discussing partners, positions, and condom use with their provider. These participants felt that their life experience as a man who has sex with men was validated when providers normalized their sex life in conversation. (Quotes 11). Many of the participants reported stigma regardless of their sexual behaviors. About half of the participants reported feeling stigmatized by providers after disclosing inconsistent condom use and encounters with multiple sexual partners. Rather than facilitating an open discussion about sexual health, these providers also regularly recommended ceasing current sexual practices considered to be risky. Participants found these recommendations unhelpful and seldom followed the guidance (Quote 12-13). On the other hand, there were many participants who did not engage in condomless sex and did not have multiple partners, yet the doctor assumed they did and provided similar advice. As a result, these participants reported feelings of discomfort as their providers made false assumptions about their sexual behaviors based on stereotypes (Quote 14).

Provider sexual identity as a factor in patient comfort

The ability to comfortably share sexual background was enhanced with PrEP providers who identified as gay men. Participants with gay PrEP providers felt that their providers had a personal understanding of their sexual and social experiences as an MSM therefore enhancing patient-provider communication about sexual behaviors and improving patient comfort levels (Quote 15). Many participants with non-MSM PrEP providers noted a lack of understanding about many elements of sexuality for MSM. For example, participants reported that providers often assumed that gay men only engage in one sexual position when in reality there is variability in preferred and practiced sexual positions (Quote 16). Limited understanding by providers about MSM sexual practices made conversations about STI testing, sexual risk, and sexual behavior difficult. In these cases, the participants did not receive comprehensive care.

Table 3. PrEP Health Care Experiences Significant Statements

Quote	Theme	Significant Statement	Participant
8	Open communication with PrEP provider about sexual practices	"He asks me like what type of sex do I have, am I a top or a bottom, am I verse and then because of that, the conversation came up, 'You're a receptive partner. So, have you thought about rectal exams?' and I was like, "No, I haven't thought about that. I probably should get that done."	Raymond
9-10	Scripted and superficial communication about sexual practices	"And my health provider here doesn't really seem in tune with what I do. It feels like it's more of a script that he's following when he talks to me about, you know, sexual risk or how PrEP affects me or, what should I be looking out for, or things like that."	James
		"When I talk to my provider, I'm always on like a Likert scale. It's not open-ended questions like these. I'm always on a Likert scale when I have to answer questions about my sexual health	Dramon
11	Non-judgmental discussion with providers about MSM patient sex life	"But he and my current doctor were both completely, completely neutral. Like it was normal for me to be in these kinds of relationships and have these kinds of experiences. Just like an equally valid way of going through the world. So, they don't really talk about it like it's this thing."	Blake

12-13	Judgment from PrEP providers concerning sexual practices and medical recommendations to cease current behaviors perceived as unhelpful	"If I choose being a part of the gay culture which is a little bit more sexually fluid, I don't feel like that should be passed along, especially with my healthcare. She's like, 'Limiting your partners could reduce your risk.' When she makes those statements, it doesn't fully qualify as a statement. It comes across as judgment." "I've not encountered anyone who was so overtly scornful of my behavioral choices as self-sabotaging. Just extremely judgmental, extremely unhelpful; basically, made recommendations to stop doing that."	Travis Blake
14	Provider assumptions of condom non-use among MSM patients	"When I told him that I wanted to be on PrEP, he made it very clear like, "You still should use protection." And I'm like, "Well, yeah. Because there's other things out there." And he said, "Okay. Yeah. Just saying it." But the way he said it felt as if like there was an assumption that I wasn't going to use protection."	Brian
15	Having gay male PrEP providers elicited comfortable and honest conversation about sexual practices	**"**I would just say the only positive experience is just having a listening ear, especially someone who is in the community and knows what's going on. So, having that identity piece as a gay man, it's great to know – I mean he knows lingo. I don't have to feel awkward when I talk about anal sex or anything like that. I don't have to feel awkward about getting throat swabs because he knows the walk. It's good having him understand identity-wise. It makes for a better conversation."	Jerome
16	Limited provider understanding of sexual positions variability among MSM	"I think [non-MSM providers] of the mindset that in sex with men that – I refer to them as positions - penetrative versus receptive sex. They view it as more so like you have that discussion and that's kind of the role you fit into and it's not more fluid. Those positions can be more fluid even in one singular sexual act with someone. You can kind of do multiple things. So, I feel like that stagnated view of men who have sex with other men could be shifted a little bit."	Andrew

Patient Recommendations for Improved Sexual Health Care

Individualized sexual health recommendations

Participants made recommendations for care that providers and the field of PrEP health care in general could adopt for improved patient experiences. A primary recommendation was that providers could use more in-depth questioning about individual sexual practices to better

assess the needs for STI testing and specific types of patient education. Participants noted that recognizing the diversity of sexual experiences of MSM should incorporate a range of possible patient sexual practices and preferences into individualized sexual health care. (Table 4, Quote 17).

Break the cycle of stigma regarding MSM sexual behavior

Participants identified perceived judgement from PrEP providers as a major impediment to personal healthcare experiences and recommended modified approaches to discussing sexual health to counter the adverse effects of stigma (Quote 18). One recommendation included the use of conversation prior to PrEP prescription to allow the patient to think through how their behaviors and attitudes towards sex may change once on PrEP. Participants noted that this method would allow patients to openly discuss their sexuality without facing preconceived notions about sex between men. Participants suggested that providers who are themselves comfortable with speaking directly about sex can minimize feelings of judgment among patients and cultivate more honesty when asking about sexual risk factors (Quote 19).

Providers who identify with patient social identities and/or understand the experiences of MSM

A majority of participants noted that an ideal PrEP provider would be someone who understood the experiences of being a gay man whether personally or through extensive research and work with MSM. Participants strongly believed that a PrEP provider who could understand their social identities, primarily their race and sexual identities, would provide better sexual health advice, establish comfort with openly discussing sex, and minimize judgment experienced by patients (Quote 20). A majority of African American participants specifically noted that having a provider who was black and gay would maximize their ability to openly discuss

personal sexual experiences free of shame with a provider who understands lived experiences of black, gay men (Quote 21). Similarly, white participants noted that having a gay-identified provider could mitigate assumptions about their sexuality made by heterosexual providers, but no other gender or race identities were noted as characteristic of an ideal PrEP provider by white participants.

Table 4. Patient Recommendations for Improved Sexual Healthcare Significant Statements

Quote	Theme	Significant Statement	Participant
17	Integrating individual sexual practices and preferences into personalized sexual health care	"It would be a more individualized approach to PrEP. I need someone who can at least acknowledge that condoms don't always feel the best, and they're not situation appropriate all the time. So, what then? And to have conversations that can answer those type of question would be great.	James
18-19	Breaking the cycle of stigma and assumptions among PrEP providers through open and non-judgmental conversation	"Not all of us are taking it because we're sluts. I get the sense that the stigma does permeate the actual practitioners' minds. Which is kind of annoying. Maybe you guys can talk about that and break that cycle." "I think the healthcare providers, should be okay with talking about about all types of sex. People still have this taboo idea about sex and if you are able to have a open conversation like, "Oh, so how many penises did you suck this week" I'm gonna lay it all out for you because I feel comfortable. Now you can accurately make the best recommendation because you know what I'm doing sexually versus me sneaking and saying I'm not gonna say that because they might judge me."	Brian Jerome
20	Provider understanding of MSM identity to provide non-judgmental advice about sexual health	"I think sometimes having a real versed background of how people identify or maybe how people interact or how people choose to live their life. Like that helps one to better convey information in a way that doesn't come across as judgmental or off-putting."	Travis
21		"A black, gay man or even he doesn't have to be a gay man. He can be a man who's well-versed in the type of sex that black, gay men like to have. So, somebody who reflects the patient. I would feel a lot more comfortable because I would	Raymond

	feel like there's a mutual connection without even saying anything.

Discussion

The findings from this study confirm previous research regarding the impact of using PrEP on partner seeking and condom use among MSM as well as studies that show reduced anxiety surrounding sex and increased feelings of control over personal health (Golub, 2014; Grant & Koester, 2016). The present study findings extend previous understandings of PrEP and sexuality to applications in clinical care by examining how patient sexual experiences and preferences are integrated into provision of PrEP care. A range of patient experiences including both positive and negative anecdotes associated with PrEP care are portrayed in the experiences of MSM study participants. The varied experiences with PrEP providers are indicative of a lack of standard of care regarding patient sexuality and PrEP use.

Many of the recommendations made by participants in this study reflect medical and public health efforts to shift towards sexual health frameworks in general medical care. One sexual health framework proposes a national effort to promote strategies including community participation and comprehensive sex education to minimize stigma surrounding sex and to unite the branches of sexual health such as family planning and STI/HIV prevention (Swartzendruber & Zenilman, 2010). Another paradigm incorporated elements of sexual health such as sexual pleasure, sexual choice, sexual knowledge, and sexual pleasure as key elements to reshaping how the fields of medicine and public health understand sex as integral to health and overall wellbeing (Fortenberry, 2013). Currently, sex tends to be directly associated with levels of risk especially in the STI and HIV prevention fields, which complicates patient care for MSM as sexuality is meaningful to identity and lived experiences (Grant & Koester, 2016). Modifying the

discourse of medical training from a loss-frame approach that focuses on the consequences of sex to a gain-frame approach that emphasizing the elements of wellness and benefit deriving from sex may appropriately integrate sexual health frameworks into physician training (Ford, Barnes, Rompalo, & Hook, 2013b).

Implications for Clinical Practice

Experiencing judgment from PrEP providers about the use or nonuse of condoms and number and/or type of sexual partners prompted participants to recommend that PrEP providers engage in non-judgmental sexual health care. Patient concerns about stigma align with previous research indicating that MSM expect to experience stigma from healthcare providers once starting PrEP, which can negatively impact health care encounters, engagement with PrEP care, and continuation of PrEP (Ayala et al., 2013; Collins et al., 2017; Gilmore et al., 2013; Golub, Gamarel, & Surace, 2017; Grov, Whitfield, Rendina, Ventuneac, & Parsons, 2015; Liu et al., 2014). Perpetuation of stigma, especially within healthcare settings, has been shown to negatively impact the sexual health of MSM by driving patients to withhold information about their sexual practices, decreasing use of healthcare services, and minimizing the overall quality of care MSM receive from the medical field (Collins et al., 2017; Herek, Chopp, & Strohl, 2007; Preston, D'Augelli, Kassab, & Starks, 2007; Wolitski & Fenton, 2011). The long-term impacts of stigma effected by PrEP medical providers are unknown, but there may be implications for the mental and emotion dimensions of sexual health and persistence of PrEP use over time.

Positive experiences with provider communication noted in this study exemplify approaches to non-judgmental patient-provider communication such as normalized conversations about sex between MSM that encourage openness and are based in a thorough understanding of

sex between MSM and the patient's individual sexual preferences. Consistent, non-judgmental communication practices are one approach to minimizing perpetuated stigma by PrEP providers. However, previous literature indicates that healthcare providers in general may not be sufficiently trained in communication strategies regarding sexual history especially considering the elements of MSM sexuality (Lanier et al., 2014; M. J. Mimiaga et al., 2007; Sherman, Kauth, Shipherd, & Street, 2014).

Efforts to strengthen medical training in sexual history taking may improve experiences of stigma among patients and cultivate more widespread feelings of normalcy when discussing sex with healthcare providers. Improving sexual history intake training for primary care physicians, in particular, is critical to minimizing stigmatizing experiences for MSM and may increase uptake of PrEP among new MSM patients who may now develop more trusting relationships with healthcare providers. In this study, communication about sexual history taking practices was hindered by the use of checklists used by PrEP providers to assess sexual risk among patients during follow up visits rather than engaging in open dialogue. Many participants noted that these checklists maintained heteronormative perceptions of sex such as assumptions of monogamy in a relationship or expecting patients to be either a top or a bottom during sex but not both. These checklists reflect Centers for Disease Control and Prevention Clinical Practice Guidelines for PrEP. While the established guidelines distinguish recommended practices for MSM and heterosexual people, delivery of sexual history and risk assessment questions may not be appropriate for non-judgmental care of MSM patients. The implications of using heteronormative sexual history checklists with LGBTQ medical patients has been previously studied and resulted in recommendations to replace formalized questions with open-ended

questions about identity and sexual practice to fully encompass the spectrum of experiences in the LGBTQ community (Pye, 2013).

In this study, we found that gay men are more comfortable with PrEP providers who are also gay men. On the other hand, they reported feeling discomfort with fully disclosing sexual practices with providers who are themselves not gay men or notably uncomfortable with open discussions about sex. Participant perceptions of gay men as ideal PrEP providers may stem from the underlying perceived stigma experienced through judgmental communication and provider assumptions about patient sex practices. Medical education efforts to effectively train physicians to approach health care from a sex-positive and sexually inclusive mindset may contribute to enhanced feelings of comfort with patients and improved disclosure of sexual practices.

Black and African American MSM patients using PrEP shared recommendations for providers who specifically identified with them racially and sexually to facilitate mutual understanding of the patient's lived experiences. The intersectional nature of the sexual experiences of black gay men was noted as critical to understanding their sexual preferences, struggles with sex, and even partner seeking and other sexual behaviors. Efforts to cultivate medical student bodies that reflect diverse social and sexual identities may improve health care for MSM and other sexual and gender minorities in general. As of 2016, only 6.3% of students enrolled in medical school were Black or African American indicating a need for more Black and African American students to pursue and enroll in medical school (AAMC, 2016). Community organizations that conduct HIV/AIDS outreach for youth may consider incorporating information sharing about career paths with particular interest on how they may engage in service for communities of color as a future minority physician. Using cultural humility and intersectionality frameworks for medical training regarding sexual health and

medical care in general provides opportunities for physicians in training to learn about how multiple personal identities compound to impact health and behavior. A clear background in intersectionality may equip PrEP providers with a unique mindset attuned to developing health plans and advice that are tailored for the individual patient – a recommendation widely suggested by study participants.

Future Research

The findings from this study provide a number of directions for future research that may inform understandings of PrEP use among MSM and improve rates of PrEP uptake and persistence on PrEP. Investigating the impact of negative and positive sexual health care experiences with PrEP providers on PrEP adherences and persistent use over time would highlight the role of healthcare providers in the long-term successful use of PrEP among MSM.

Participants from this study proposed recommendations for improved sexual health care that align with sexual health frameworks developed to shift sexual health care away from a risk avoidance approach. A future direction for study may explore the acceptability of applying the proposed sexual health frameworks to PrEP health care among current PrEP providers. A qualitative study interviewing medical professionals who prescribe PrEP about their perceptions of the sexual health framework may inform feasibility of its application to PrEP care. Developing a PrEP health care system that both caters to the needs of MSM and accounts for the health care structure is critical to ensuring a sustainable approach to sexual health care.

Limitations

The limitations of this study concerning recruitment and data collection may influence the study findings and should be considered. Most participants were recruited through outreach

at LGBTQ community events in the Atlanta area and through snowball sampling. Having a mostly educated participants who are involved in the LGBTQ community indicates a need to understand the extent to which educational status may be attributable to access to PrEP or experiences with PrEP providers. This study, while focused on MSM, only included a sample of men who identified as gay and excluded the experiences of transgender men and women who have sex with men on PrEP. There is a gap in research about transgender men and women, PrEP, and HIV prevention in general especially with notable rates of HIV infection among transgender people (Marquez, 2015 ; Reisner, White Hughto, Pardee, & Sevelius, 2016). Finally, the interviewer for the study was a heterosexual graduate student who identifies as a woman. The extent to which participants disclosed details about their sex lives and interactions with the health care system is unknown. Findings reflecting discomfort with heterosexual and/or women PrEP providers may be applicable to the interview setting and may have influenced the types of experiences shared with the interviewer.

Conclusion

While the HIV epidemic in the United States continues to afflict MSM the most, PrEP provides an opportunity to effectively mitigate infection rates and enhance quality of life for MSM. Ensuring that patients are met with health care that prioritizes their sexual needs and preferences may improve mental and emotional elements of sexual health for MSM whose fear of acquiring HIV may be reinforced by providers who perceive their sexual practices as risks. Implementation of the sexual health framework in medical training would minimize the stigma associated with sex especially for MSM who, historically, face stigma and judgement from healthcare providers and society at large. This study aligns with previous research calling for a

more sex-positive approach to HIV prevention provide comprehensive sexual health care and destigmatize sex between men.

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CHAPTER FIVE: PUBLIC HEALTH IMPLICATIONS

The aim of the current study is to explore how PrEP sexual healthcare experiences impact PrEP persistence among MSM in the context of evolving elements of sexuality such as sexual feelings, preferences, and behaviors. A qualitative approach to understanding sex and sexual health care experiences for MSM provided context to the range of healthcare practices in the PrEP care field and the varied effects on MSM using PrEP. While there were limited data specific to PrEP persistence, the themes can inform further research regarding motivations and behavioral elements of continuous and accurate intake of Truvada for PrEP among MSM. The present study has implications for clinical care of MSM using PrEP and presents directions for future research that may help increase uptake and consistent use of the prophylactic medication.

A Call for Sexual Health Frameworks in Healthcare and Society

Stigma surrounding sex is a critical issue noted by this study's findings about PrEP sexual health care recommendations that are not aligned with MSM sexual preferences and behaviors. Recommendations made by the present study participants reflect medical and public health efforts to shift towards sexual health frameworks in general medical care. One proposal for improved sexual health care is a national effort to promote strategies to minimize stigma surrounding sex and to coordinate comprehensive sexual healthcare services (Swartzendruber & Zenilman, 2010).

This national call for sexual health approaches to care, provided as a commentary in JAMA 2010 by Swartzendruber, offers a number of strategies for to minimize stigma experienced in clinical settings across patient communities including two ideas that are supported by present study findings:

- Patient and provider participation in open community discussions about sexual health
- Coordinated delivery of high-quality sexual health care in primary care settings

Encouraging patients and healthcare providers to participate in open public discussions about sexual health on a national platform may benefit communities who associate stigma with sex by normalizing communication about sex. Healthcare providers who engage in public forums in the medical field and advocate for a focus on sexual health for improvement in overall health may contribute to a shift in medical culture and attitudes towards discussing sex. Additionally, MSM and LGBTQ engagement in sexual health campaigns to bring awareness of the importance of sex and health to the larger public may not only make discussions about sex more visible but, over time, may reduce the stigma associated with sex. Swartzendruber calls for a concerted and collaborative effort across disciplines of medicine and public health to engage in destigmatizing sex. Combining the efforts of the LGBTQ community with women and adolescent communities may deconstruct negative associations with discussing sex and unify and strengthen the advocacy of multiple sexual health sector.

One strategy presented by this proposed national sexual health approach to coordinate sexual healthcare services includes the delivery of high-quality sexual health services in primary care and for youth. The findings from this study noted a range of sexual health care approaches within the field of PrEP medical services alone, which consists of infectious disease and primary care specialties. Advocating for the importance of sexual health across medical disciplines may elicit a general shift in medical fields towards a focus on how sexuality impacts health and health behavior. By introducing sexual health across specialties, patient education and prevention efforts can be improved for a number of sexual health concerns such as teen pregnancy, HIV acquisition, and safer sex practices.

Another sexual health paradigm incorporates elements of sexual health such as sexual rights, sexual choice, sexual knowledge, and sexual pleasure as key elements to reshaping how the fields of medicine and public health understand sex as integral to health and overall wellbeing (Fortenberry, 2013). The MSM community specifically has been targeted as a population of interest for HIV prevention without special regard for a positive approach to sexuality and sexual relationships. Sex is generally associated with levels of risk, which complicates patient care for MSM as sexuality is meaningful to identity and lived experiences (Grant & Koester, 2016). Modifying the discourse of medical training from a loss-frame approach that focuses on the consequences of sex to a gain-frame approach that emphasizes the elements of wellness and benefit deriving from sex may appropriately integrate sexual health frameworks into physician training (Ford, Barnes, Rompalo, & Hook, 2013a). A shift in medical training towards incorporating understandings of sexual pleasure and choice with a gain-frame approach may equip PrEP providers with the necessary skills to appropriately recognize and understand elements of an MSM patient's sexuality and deliver tailored PrEP medical care accordingly.

Implications for Clinical Practice

The findings from this study confirm previous research regarding the impact of using PrEP on partner seeking and condom use among MSM as well as studies that show reduced anxiety surrounding sex and increased feelings of control over personal health when using PrEP (Golub, 2014; Grant & Koester, 2016). The present study findings extend previous understandings of PrEP and sexuality to applications in clinical care by examining how patient sexual experiences and preferences are integrated into provision of PrEP care. A range of patient

experiences including both positive and negative anecdotes associated with PrEP care are portrayed in the experiences of MSM study participants. The varied experiences with PrEP providers are indicative of a lack of standard of care regarding patient sexuality and PrEP use.

Experiencing judgment from PrEP providers about the use or nonuse of condoms and number and/or type of sexual partners prompted participants to recommend that PrEP providers engage in non-judgmental sexual health care. Patient concerns about stigma align with previous research indicating that MSM expect to experience stigma from healthcare providers once starting PrEP, which can negatively impact health care encounters, engagement with PrEP care, and continuation of PrEP (Ayala et al., 2013; Collins et al., 2017; Gilmore et al., 2013; Golub et al., 2017; Grov et al., 2015; Liu et al., 2014). Perpetuation of stigma, especially within healthcare settings, has been shown to negatively impact the sexual health of MSM by driving patients to withhold information about their sexual practices, decreasing use of healthcare services, and minimizing the overall quality of care MSM receive from the medical field (Collins et al., 2017; Herek et al., 2007; Preston et al., 2007; Wolitski & Fenton, 2011). The long-term impacts of stigma effected by PrEP medical providers are unknown, but there may be implications for the mental and emotional dimensions of sexual health and persistence of PrEP use over time.

Positive experiences with provider communication noted in this study exemplify sexual health framework approaches to non-judgmental patient-provider communication such as normalized conversations about sex between MSM and PrEP providers. This type of communication encourages openness and is rooted in a provider's thorough understanding of sex between MSM and their patient's individual sexual preferences. Consistent, non-judgmental communication practices are one approach to minimizing stigma perpetuated by PrEP providers. However, previous literature indicates that healthcare providers in general may not be

sufficiently trained in communication strategies regarding sexual history especially considering the elements of MSM sexuality (Lanier et al., 2014; M. J. Mimiaga et al., 2007; Sherman et al., 2014).

Efforts to strengthen medical training in sexual history taking may improve experiences of stigma among patients and cultivate more widespread feelings of normalcy when discussing sex with healthcare providers. Improving sexual history intake training for primary care physicians, in particular, is critical to minimizing stigmatizing experiences for MSM and may increase uptake of PrEP among new MSM patients who may now develop more trusting relationships with healthcare providers. This focus on sexual history taking skills for primary care physicians aligns with proposed sexual health frameworks strategies to make sexual health a priority across medical fields, not just in specialty fields such as obstetrics or infectious disease.

In this study, communication about sexual history was hindered by the use of checklists used by PrEP providers to assess sexual risk among patients during follow up visits rather than engaging in open dialogue. Many participants noted that these checklists maintained heteronormative perceptions of sex such as assumptions of monogamy in a relationship or expecting patients to be either a top or a bottom during sex but not both. These checklists are part of the Centers for Disease Control and Prevention Clinical Practice Guidelines for PrEP. The recommended behavioral risk assessment questions provided in the guidelines are tailored based on sexual orientation. While the established guidelines distinguish recommended practices for MSM and heterosexual people, the delivery of sexual history and risk assessment questions may not be appropriate for non-judgmental care of MSM patients. The implications of using heteronormative sexual history checklists with LGBTQ medical patients has been previously studied and resulted in recommendations to replace formalized close-ended questions with open-

ended questions about identity and sexual practice to fully encompass the spectrum of experiences in the LGBTQ community (Pye, 2013). This recommendation to include open-ended questions may improve the already established CDC clinical practice guidelines for PrEP.

Findings indicate feelings of discomfort when disclosing sexual practices with providers who are themselves not gay men or who are notably uncomfortable with open discussions about sex. Study findings indicate that gay men are more comfortable with PrEP providers who are also gay men. Participant perceptions of gay men as ideal PrEP providers may stem from the underlying perceived stigma experienced through judgmental communication and provider assumptions about patient sex practices. Medical education efforts to effectively train physicians to approach health care from a sex-positive and sexually inclusive mindset may contribute to enhanced feelings of comfort with patients and improved disclosure of sexual practices even with providers who do not identify as gay.

Of note, Black and African American MSM patients using PrEP shared recommendations for providers who specifically identified with them racially and sexually to facilitate mutual understanding of the patient's lived experiences. The intersectional nature of the sexual experiences of black gay men was noted as critical to understanding their sexual preferences, struggles with sex, and even partner seeking and other sexual behaviors. Efforts to cultivate medical student bodies that reflect diverse social and sexual identities may improve health care for MSM and other sexual and gender minorities in general. As of 2016, only 6.3% of students enrolled in medical school were Black or African American indicating a need for more Black and African American students to pursue and enroll in medical school (AAMC, 2016). Community organizations that conduct HIV/AIDS outreach for youth may consider incorporating information sharing about career paths with particular interest on how they may

engage in service for communities of color as a future minority physician. Using cultural humility and intersectionality frameworks for medical training regarding sexual health and medical care in general provides opportunities for physicians in training to learn about how multiple personal identities compound to impact health and behavior. A clear background in intersectionality may equip PrEP providers with a unique mindset attuned to developing health plans and advice that are tailored for the individual patient – a recommendation widely suggested by study participants.

Future Research

The findings from this study provide a number of directions for future research that may inform understandings of PrEP use among MSM and improve rates of PrEP uptake and medication persistence. The study research question aimed to examine how experiences with PrEP provider sexual health care impact persistence of PrEP medication use considering the impact of PrEP on elements of sexuality for MSM. The study yielded rich data regarding healthcare experiences and recommendations for improved sexual health care in PrEP clinical care but did not result in similarly rich data regarding how these experiences impact motivations to continue using PrEP across study participants. However, some findings from the study provide avenues for future study specifically concerning PrEP adherence and persistence.

A few participants indicated feeling that their PrEP provider seemed to lack investment in the participant's general and sexual health care and that this indifference made it difficult for them to take their own health seriously. While this finding was not consistent in a majority of participants, it conveys a budding impact of ineffective and impersonal clinical PrEP care. Further investigation exploring priorities for MSM patient regarding PrEP clinical care, sexual

health care as a long-term experience, and the impacts of PrEP providers on long-term and prescribed use of PrEP may inform PrEP uptake and maintenance research. Examination of how sexual health care impacts elements of sexuality for MSM may also elucidate pathways of impact between effective sexual health care and consistent PrEP use. Investigating the impact of negative and positive health care experiences with PrEP providers on PrEP adherences and persistent use over time would highlight the significance of healthcare providers in the long-term persistent use of PrEP among MSM.

Participants from this study proposed recommendations for improved sexual health care that align with sexual health frameworks developed to shift sexual health care away from a risk avoidance approach and towards a gain-frame approach that emphasizes the benefits of sex. A future direction for study may explore the acceptability of applying the proposed sexual health frameworks to PrEP health care among current PrEP providers. An explorative qualitative study interviewing PrEP providers about their perceptions of the sexual health framework may inform feasibility of its application to PrEP care and medical education. Additionally, constructing a randomized control trial with provision of health care guidance for MSM with and without a sexual health framework may demonstrate impacts on patient outcomes such as PrEP medication adherence, STI testing, use of condoms, partner seeking behaviors, and feelings of security regarding sexuality. Developing a PrEP health care system that both caters to the needs of MSM and accounts for current health care structures and perceptions is critical to ensuring a sustainable approach to sexual health care.

Conclusion

While the HIV epidemic in the United States continues to afflict MSM the most, PrEP provides an opportunity to effectively mitigate infection rates and enhance quality of life for

MSM. Ensuring that PrEP patients are met with health care that prioritizes their sexual needs and preferences may improve mental and emotional elements of sexual health for MSM whose fear of acquiring HIV may be reinforced by providers who perceive their sexual practices as risks. Implementation of the sexual health framework in medical training would minimize the stigma associated with sex especially for MSM who, historically, face stigma and judgement from healthcare providers and society at large. This study aligns with previous research calling for a more sex-positive approach to HIV prevention that provides comprehensive sexual health care and destigmatizes sex between men.

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APPENDIX A

Research Question:

How does the impact of PrEP on MSM sexuality affect provider-patient dynamics and patient persistence of PrEP?

MSM Participant Interview Guide Draft

Date: ________________________ **Participant Name: _____________**
Start Time: _________________________ **Interviewer: __________________**
End Time: __________________________
Location: _____________________

Background Questions:

1. Are you currently in a relationship?
    a. Monogamous? Multiple partners?
    b. Tell me about your social circle or closest friend.

2. Tell me about when you were first aware that you were attracted to men.

3. How has your sex life changed from then to now?
    a. How do you seek sex partners now?

Main Questions

4. What emotions do you associate with sex?
    a. How are your emotions different with a casual sexual partner and a monogamous partner?

5. What kind of meaning do you attribute to sex?
    a. What kinds of needs does sexuality fulfill in your life?

6. Why did you decide to get on PrEP?

7. How does being on PrEP fulfill or not fulfill [insert participant meaning that they attribute to sex]?

8. How does being on PrEP impact physical/emotional pleasure experienced during sex?

9. Have you discussed this impact of PrEP on your sexuality with your doctor/nurse/physician assistant?

a. How has your provider discussed your changes in sexuality, if any, since taking PrEP?
b. How do you feel when you discuss your sexual well-being with your PrEP provider?

10. How does your PrEP provider discuss sexual health with you?
    a. What are your provider's recommendations for improved sexual health?
        i. Does he/she talk to you about condom use? How about changes in sex behaviors?
        ii. Do you follow these recommendations?
    b. Tell me about some positive experiences talking about sexual health with your provider.
    c. What are some examples of negative experiences discussing sexual health?

11. "So, tell me a little bit about your life/experiences with doctors before starting PrEP."

Closing Questions

12. Are you still using PrEP?
    a. If yes…
        i. What kept you motivated to continue using PrEP?
    b. If no…
        i. How long were you on PrEP?
        ii. Why did you stop taking Truvada?

13. Tell me about the impact of your relationship with your provider on your continuation of PrEP.

14. Describe your ideal interaction with a perfect PrEP provider.
    a. What should they talk about with you, but don't?
    b. What advice would you give to a PrEP provider?
    c. What don't they know that they should?

15. Are there any topics that we haven't covered that you'd like to discuss?

This concludes our interview. Thank you for your participation!

APPENDIX B

Emory University
Oral Consent and HIPAA Authorization Script/Information Sheet
For a Research Study: Version 3.0

Study Title: PrEP and Sexual Well-Being: A Qualitative Study of the Impact of PrEP on MSM Sexuality and Effects on Patient-Provider Relationships and Adherence to PrEP.
Principal Investigator: **Sinthuja Devarajan, B.A., B.S., Rollins School of Public Health, Department of Behavioral Science and Health Education**

Introduction and Study Overview

Thank you for your interest in our PrEP research study. We would like to tell you everything you need to think about before you decide whether or not to join the study. It is entirely your choice. If you decide to take part, you can change your mind later on and withdraw from the research study.

1) The purpose of this study is to explore the impact of PrEP on MSM sexuality and sexual behaviors and understand how patients discuss this impact with their PrEP providers.
2) This study will take between 30 minutes to one hour to complete.
3) If you join, you will be asked to participate in an in-person interview and complete a demographic survey at the end of the interview. Through the interview I will ask open-ended questions and you will be able to share your experiences and beliefs in a conversation-style exchange
4) You are one of twenty participants in this study whose input will contribute to the research being conducted.
5) There will be minimal risk to you by participating in this study; however, potentially sensitive topics such as personal attitudes and experiences related to sex may come up during the course of the discussion.
6) There will not be any direct benefits from participating in this project, but your insight will be used to contribute to the body of knowledge about PrEP influences on sexuality and provider-patient relationships.
7) Your participation is greatly appreciated and will be compensated with a $10 value gift card for your time today even if the interview is not completed.
8) The nature of this interview involves sharing potentially personal information and, as such, it is important that each respondent remains confidential during the research process. Your responses and personal information will be de-identified meaning that your name and contact information will not be connected to your responses in this interview. Data that is collected may be shared with my faculty advisor for review. If identifiable information comes up in the interview that you would not like to be shared, please do let me know.
9) Your health information that identifies you is your "protected health information" (PHI).
10) The PHI for this study includes any medical or psychiatric information that you choose to share in the duration of this interview.
11) To protect your PHI, we will follow federal and state privacy laws, including the Health Insurance Portability and Accountability Act (HIPAA).
12) The following persons or groups may use and/or disclose your PHI for this study:

- The Principal Investigator and the research staff.
- Emory offices who are part of the Human Research Participant Protection Program, and those who are involved in research-related administration and billing.

13) We will disclose your PHI when required to do so by law in the case of reporting child abuse or elder abuse, in addition to subpoenas or court orders.

14) You may revoke your authorization at any time by calling the Principal Investigator, Sinthuja Devarajan.

15) If identifiers (like your name, address, and telephone number) are removed from your PHI, then the remaining information will not be subject to the Privacy Rules. This means that the information may be used or disclosed with other people or organizations, and/or for other purposes.

16) We do not intend to share your PHI with other groups who do not have to follow the Privacy Rule, but if we did, then they could use or disclose your PHI to others without your authorization Let me know if you have questions

17) Your authorization will not expire because your PHI will need to be kept indefinitely for research purposes.

Contact Information

If you have questions about this study, your part in it, your rights as a research participant, or if you have questions, concerns or complaints about the research you may contact the following:

Sinthuja Devarajan, Principal Investigator: (832) 724-0170
Emory Institutional Review Board: 404-712-0720 or toll-free at 877-503-9797 or by email at irb@emory.edu

Consent

Do you have any questions about anything I just said? Were there any parts that seemed unclear?

Do you agree to take part in the study?

Participant agrees to participate: Yes No

Do I have your permission to audio record this interview?

Participant agrees to audio recording: Yes No

If Yes:

____
Participant ID

____
Name of Person Conducting Informed Consent Discussion

APPENDIX C

Participant Survey

Thank you for your participation in this study! Your answers to the following questions will help inform the results of this study and how the information learned can be applied to the larger population of men who have sex with men who are seeking PrEP.

Data that are shared will not be associated with any identifying information and will remain confidential. Your answers will remain anonymous.

This survey should take approximately 5 minutes to complete. Your participation in this survey is voluntary. If you any questions at any time during the survey, please let us know.

1. How old are you? ______________________________

2. What gender do you identify as?
   a. Male
   b. Female
   c. Transgender
   d. Other, please specify___________________

3. What race do you identify as?
   a. White
   b. Black, African American
   c. American Indian or Alaskan Native
   d. Asian
   e. Other

4. Do you identify as Hispanic or Latino?
   a. Yes
   b. No

5. What is the highest level of education that you have completed?
   a. No schooling completed
   b. Some high school
   c. High school graduate
   d. Some college
   e. Bachelor's degree
   f. Master's degree
   g. Other professional degree beyond bachelor's (JD, LLB, etc).
   h. Doctorate degree

6. Do you consider yourself out?
    a. Yes
    b. No

7. Are you in a romantic relationship?
    a. Yes
    b. No

8. If yes, is it a monogamous relationship?
    a. Yes
    b. No
    c. N/A

9. When was the last time you had sex?
    a. In the past week
    b. In the past month
    c. In the past 3 months
    d. In the past 6 months
    e. In the past year
    f. More than one year ago

10. When was the last time you visited a medical doctor?
    a. In the past month
    b. In the past 6 months
    c. In the past year
    d. In the past 2 years
    e. In the past 3 years
    f. More than 3 years ago

11. When was the last time you visited a PrEP provider?
    a. In the past month
    b. In the past 6 months
    c. In the past year
    d. In the past 2 years
    e. In the past 3 years
    f. More than 3 years ago