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Improving Philadelphia Health Department Services to Prevent HIV Infection In Young Black Men Who Have Sex With Men (YBMSM): A Qualitative Study

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Improving Philadelphia Health Department Services to Prevent HIV Infection In Young Black Men Who Have Sex With Men (YBMSM): A Qualitative Study

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An abstract of
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Abstract

Improving Philadelphia Health Department Services to Prevent HIV Infection
In Young Black Men who Have Sex with Men (YBMSM): A Qualitative Study

By Caitlin Hoffman

Background: BMSM in Philadelphia face an HIV infection rate that is five times the national average. The highest incidence is found in BMSM 13-24 years old, which accounted for 44% of all new HIV infections in Philadelphia in 2014. There is little qualitative data available for YBMSM in Philadelphia. The purpose of this study is to explore the social and behavioral barriers that hinder HIV prevention efforts and to identify gaps in health care that could better prevent HIV in Philadelphia. A clearer understanding of the risk taking and sexual behaviors of YBMSM may help improve prevention programs.

Methods: In-depth interviews were conducted with 10 YBMSM living in Philadelphia. Participants were recruited from health department surveillance databases between January-November 2015. Eligibility was based on 1) negative laboratory-confirmed HIV test at the time of 2) positive rectal chlamydia/gonorrhea test reported to the health department in 2015 3) being between 18-24 years old and 4) identifying as a Black/African American male. A total of 114 young men were eligible for the study and saturation was reached after 10 interviews. Using NVivo qualitative software, a qualitative description approach was used within the Integrated Behavioral Model to guide analysis.

Results: Six main themes emerged from data analysis: 1) Partner Dynamics, 2) Improving Relationships with Providers and Health Messaging, 3) Perception of HIV, 4) Conflict of condomless anal intercourse (CAI), 5) STD/HIV Knowledge and Skepticism with Health Care and 6) Testing is Valued.

Conclusions: Perceived norms, attitudes and self-agency were influential in the participant's intentions to have CAI, condom negotiation and testing for HIV/STDs. Partner dynamics, especially age, may play a large role in the decision to use condoms, in defining sex roles, and in discussing sexual health, including HIV status and other protective heuristics. Participants identified friendship with health care providers and community role models as necessary elements of effective HIV prevention.

Improving Philadelphia Health Department Services to Prevent HIV Infection In Black Male Youth who Have Sex with Men (YBMSM): A Qualitative Study

By

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Thesis Committee Chair: Dr. Travis Sanchez, DVM, MPH
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Chapter 1: Introduction

1.1 Background and Significance

Despite advancements in detection, treatment and prevention over the last 30 years, the human immunodeficiency virus (HIV) continues to be a serious health problem. By the end of 2012, the Centers for Disease Control and Prevention (CDC) estimated that there were 1.2 million people infected with HIV in the United States (CDC, 2015c). Of those people, it is estimated that 12.8% do not know their HIV status, which likely contributes to over 56,000 new infections a year (CDC 2015d). While HIV incidence has remained relatively stable, data shows a troubling increase in certain subpopulations.

Research shows gay, bisexual and other men who have sex with men (MSM) are disproportionately affected by HIV. According to recent data from the CDC, gay and bisexual men represent approximately 4% of the population, but account for almost 78% of all new HIV infections found in men in 2010 and 63% of all new infections in the general population (CDC, 2016a; CDC 2012b; CDC 2015c). There was a 12% increase from 2008 to 2010 of HIV infection in all MSM in the United States (CDC, 2012b). Even more disproportionately affected are Black/African American gay and bisexual men. In 2010, Black MSM (BMSM) accounted for 72% of all new infections among all Black men and 36% of all new HIV infections among all gay and bisexual men in general (Seth, Walker, Hollis 2015).

What is more concerning is the rate at which young men who have sex with men (YMSM) are becoming disproportionately affected by HIV. Between the years 2008-2010, there was a 22% increase in new HIV infection among young gay and bisexual men (CDC 2012b)**.** The CDC's National HIV Behavioral Surveillance system study of MSM found the HIV prevalence to be about 7% in 18-19 year olds and 12% in 20-24 year olds and higher among Black young MSM (BYMSM) at 9% and 20% in those respective age groups (CDC, 2012b). More new infections occurred among African American youth ages 13-24 than any other subgroup of MSM. In fact, this population accounted for 45% of all new HIV infections among BMSM and 55% of new HIV infections among YMSM overall in the United States (CDC, 2012b). This is more than twice as many estimated new infections in young White or young Hispanic/Latino MSM (CDC, 2016b). Between the years 2001-2006, there was a 93% increase in HIV diagnoses among black MSM (CDC, 2008). Moreover, although the rates of unprotected anal intercourse are similar, YBMSM have an odds ratio of HIV infection that is 9 times that of young White MSM (Harawa et al., 2004).

The CDC defines adolescents or young adults as aged between 13-24 years old (CDC, 2012b). While understanding YMSM younger than 18 is critical, research in this demographic has historically proven to be limited, especially in minority populations. This is due to recruiting difficulties, population samples and local Institutional Review Board Policies (Mustanksi, 2014). Therefore, this study utilizes the extensive research found in adult BMSM populations to establish a framework for understanding the epidemic, in spite of the limitations of using older BMSM to explain risks in adolescents, as young adults may experience some of these factors differently.

Paradoxical findings from previous research studies suggest complex contextual factors, such as socioeconomic status, sexual networks, stigma, homophobia and discrimination that may drive rates of HIV in BMSM and results are typically not well studied or well understood on intrapersonal, interpersonal and macro levels. Researchers have several explanations, including previous assessments of risk behavior, higher HIV prevalence in BMSM sexual networks, and greater HIV infectiousness of sex partners, and structural barriers such as incarceration rates and lack of healthcare services available to BMSM (Millet et al., 2006; Harawa et al., 2004; Maulsby, Millet & Lindsey, 2013). However, no definitive differences in risk factors between BMSM and other MSM populations have been found, despite evidence of greater STD prevalence and greater unknown HIV infections among BMSM (Millet, Peterson, Wolitski & Stall, 2006).Furthermore, because BMSM tend to have partners of the same race, and because of the high prevalence of HIV in that population, BMSM may have a greater statistical risk of being exposed to HIV (Oster et al, 2011; Millet et al., 2006; Mayer et al., 2014). Finally, Black populations face greater stigma, homophobia and discrimination than other racial populations, which can in turn affect whether they seek and feel comfortable receiving health services (CDC, 2016a).

These complex issues may present differently in YBMSM. Often times this subpopulation has even more limited access to and use of quality health care, lower income levels, higher rates of unemployment and incarceration than do older men (CDC, 2016a). However, they are less well-studied.

The economic burden that results from living with and receiving treatment for HIV is another concern for public health officials. A large fraction of this comes from the medical costs of treating people with HIV. According to a recent cost analysis, it is estimated that a lifetime of HIV treatment costs $379,668 (in 2010 USD) per individual (Schackman, Gebo, Walensky, Losina, Muccio, Sax, Weinstein, Seage, Moore, Freedberg, 2006). The recent study conducted by Schackman et al (2015) found that the medical cost of avoiding one HIV infection is $229,800 and the cost saved if all HIV-infected individuals presented early and remained in care would reach $338,400 per person (pg. 295). Therefore, the economic value of HIV prevention in the United States is substantial.

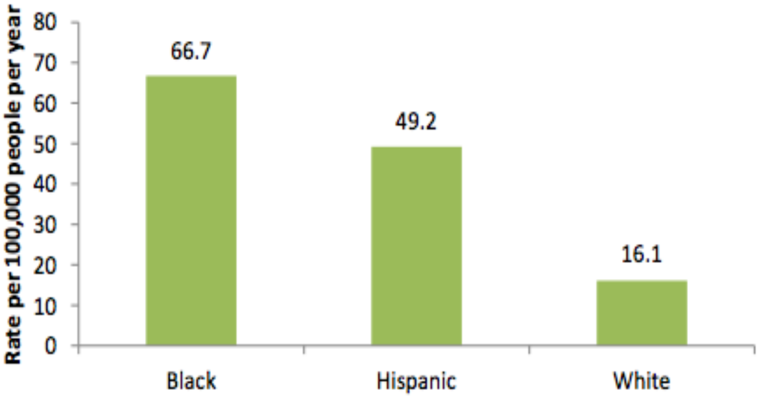
Biomedical advancements, such as Pre-exposure Prophylaxis (PrEP) and Post-exposure Prophylaxis (PEP), have become a cost-effective HIV prevention strategy. Under these strategies, an HIV-negative person can take antiretroviral medications, either daily or after a high-risk exposure, to prevent HIV. These novel prevention methods have been shown to dramatically decrease one's chance of acquiring HIV if taken correctly, up to 92% (Grant, Lama, Anderson, McMahan, Liu et al., 2011). A more recent study found no new HIV infections among a cohort of 657 MSM who started PrEP (Volk, Marcus, Phengrasamy, Blechinger, Nguyen, Follansbee and Hare, 2015). Even though the Food and Drug Administration (FDA) approved PrEP and PEP in 2012, uptake for PrEP has been slow, especially among BMSM (Krakower, Mimiaga, Rosenberger, Novak et al, 2012). This may be due to limited understanding of PrEP effectiveness, negative perception of potential side effects, or misconceptions about cost and accessibility (Krakower et al., 2012). Effective health messaging that addresses these barriers is essential to increase uptake and acceptability of PrEP as an effective HIV prevention strategy in BMSM populations.

Health departments around the country represent a critical link between effective health messaging, government funding and frontline HIV/AIDS programs by community based organizations, health organizations and other service providers. Since 2002, the CDC has supported health departments and their HIV-prevention efforts (Wilson & Moore, 2009). To reduce HIV infections among young, YBMSM, health departments must respond to the epidemic with effective individual, community and policy-level interventions that are culturally grounded. As public health departments are on the front line of disease prevention, they may be able to forward a deeper understanding of factors that facilitate or impede the development, implementation and effectiveness of HIV prevention strategies targeting YBMSM.

1.2 YBMSM and Risk of HIV in Philadelphia

These national trends of HIV infection in minority populations are reflected in the City of Philadelphia. In 2014, newly diagnosed HIV infections were highest among African Americans.

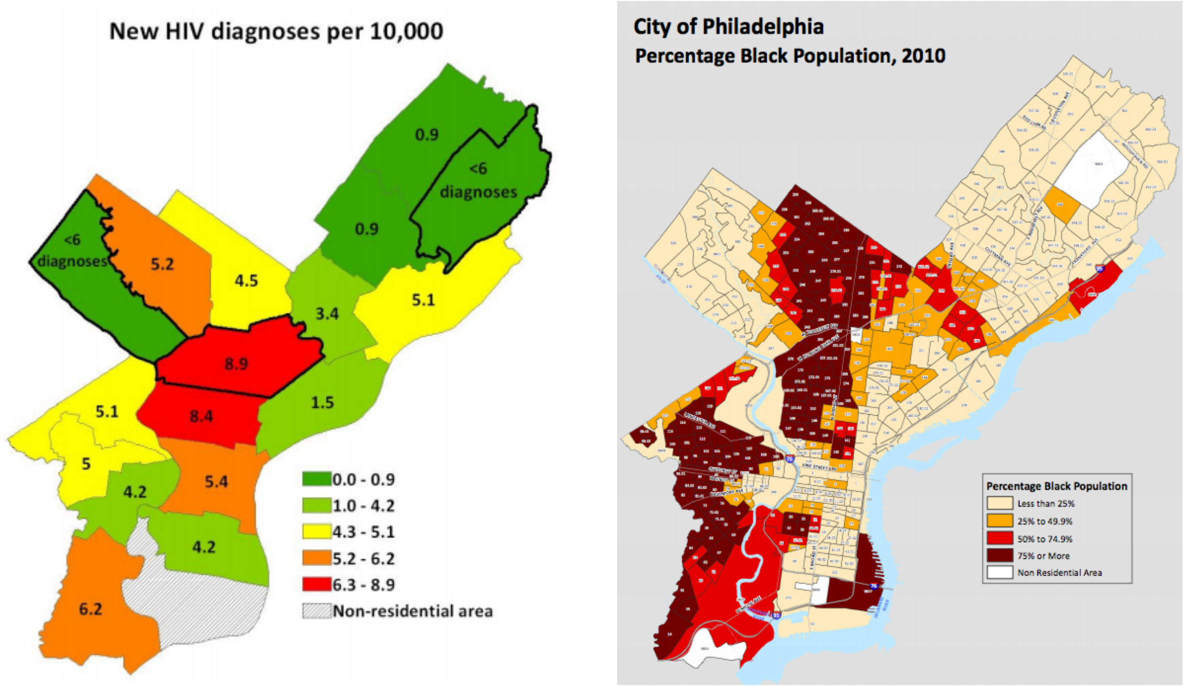
Figure 1: Rates of Newly Diagnosed HIV Disease by Race, Philadelphia Residents, 2014



In fact, BMSM in Philadelphia face an HIV infection rate that is five times the national average and infection rates increased 29% from 2007-2009 (AACO, 2014). In 2013, the AIDS Activity Coordinating Office of Philadelphia (AACO, 2014) reported that the highest incidence is found in Black, MSM 13-24 years old, which accounts for 44% of all new HIV infections in the City (AACO, 2014).

The same surveillance report by AACO (2014) found that among new HIV infections, male (79%), were reported as MSM (51%). In concordance with Sullivan et al. (2014), Figure 3 depicts new rates of HIV in Philadelphia compared to neighborhood demographics. In areas where rates are highest, the population composition is mostly Black and median household income is less than $20,000 (Census, 2010).

Figure 2: New HIV diagnosis per 10,000 and Black Population and Median Income in Philadelphia



While there is not extensive risk behavior data specifically to YBMSM in Philadelphia, Youth Risk Behavior Survey (YRBS) is a national surveillance system in which Philadelphia participants that can establish risk behavior indicators for HIV. In 2013, the Philadelphia YRBS indicated that 22 percent of sexually active students had sexual intercourse with four or more people in their lifetime. Of the same group of students, 42 percent of sexually active students did not use a condom during their last sexual encounter. The study also found that 18 percent of students stated they had never been taught about HIV/AIDS in school. Finally, almost a quarter of sexually active students reported using drugs before their last sexual encounter (CDC, 2015b).

The 2008 Morbidity and Mortality Weekly Report (CDC, 2010) demonstrated that Philadelphia ranks high among cities in which many gay and bisexual men lack knowledge of their HIV-positive status. Of the 440 Philadelphia men tested in 2008 who identified as MSM, 11 percent (48 men) tested positive for HIV. Of the men that tested positive, 71 percent (34 men) said they were unaware they had contracted the virus. This is compared to national statistics from the same report, which show a 28 percent prevalence of HIV in BMSM with 44 percent of the men who tested to be unaware of their infection (CDC, 2010).

Additionally, Philadelphia teenagers are disproportionately affected by sexually transmitted diseases. In 2014, male teenager and young adults had rates of gonorrhea and chlamydia at 2,458.6 per 100,000 and 6,343.7 respectively (Health Information Portal of Philadelphia, 2014). While this does not illuminate sexual risk of YBMSM specifically, it does demonstrate that the same population disproportionately affected by HIV, are also disproportionately affected by chlamydia and gonorrhea.

Figure 3: Rates of Gonorrhea per 100,000 by Age and Gender, Philadelphia, 2014

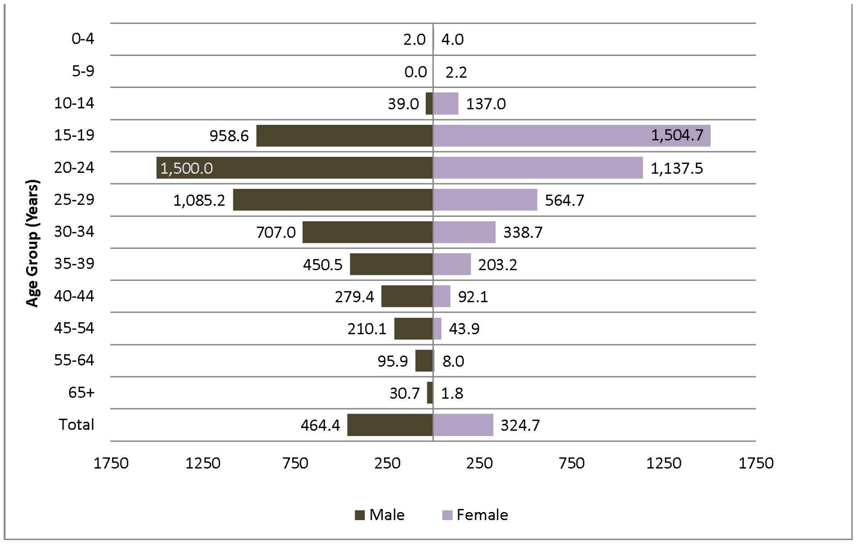
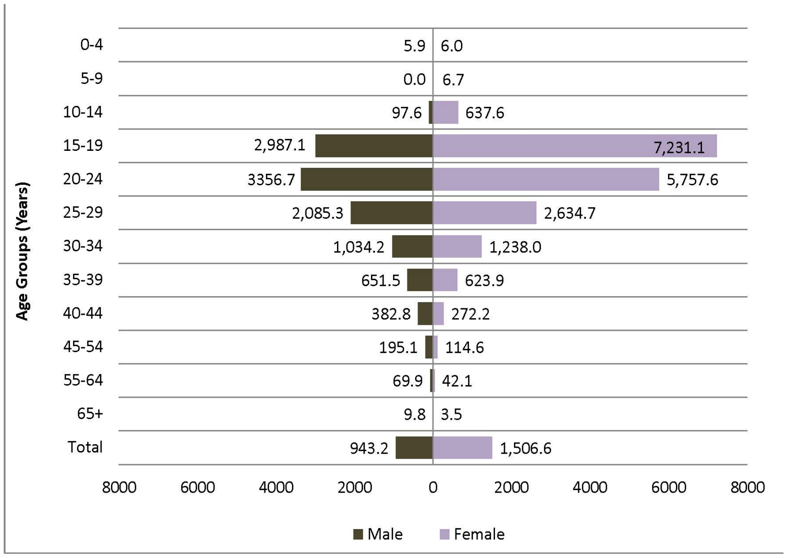


Figure 4: Rates of Chlamydia per 100,000 by Age and Gender, Philadelphia, 2014



Finally, during a recent community needs assessment conducted in 2010, health care providers in Philadelphia offering HIV related care and/ or HIV prevention services were asked to identify common factors that attributed to a client's risk for acquiring HIV (Office of HIV Planning, 2010). While their responses are not focused on BMSM or YBMSM specifically, poverty, mental health, history of a sexually transmitted disease, experiencing stigma/discrimination/homophobia and racism were top answers.

Even though information concerning YBMSM specific to Philadelphia is limited, data demonstrates complimentary trends in national analysis. Not only is the general Black male population disproportionately affected by HIV, but so are BMSM, YBMSM and in neighborhoods primarily occupied by Black populations. Finally, male teenagers ages 15-24 are experiencing extremely high rates of sexually transmitted disease, namely chlamydia and gonorrhea, both which are indicators for unprotected sex.

1.3 Problem Statement

Reasons for increased HIV rates in adolescents are complicated, and a combination of factors, including biological risk, high-risk behaviors, sexual encounters in high-prevalence networks, socioeconomic status, substance abuse stigma, discrimination and negative perceptions about

HIV testing, affect this population. Understanding some of the barriers in HIV prevention is essential in developing effective treatment and prevention programs. Recognizing those who are most at-risk can help public health officials identify more effective services, prevention messages and supplement evidence-based interventions. The “triple threat” of race, age and potentially riskier sexual behaviors associated with HIV transmission support the need for additional research into prevention efforts for YBMSM.

Health officials in Philadelphia trying to take the pulse of the local HIV epidemic are not only examining social determinants of health, but outlining available resources and prevention strategies and prevention efforts in the city are expansive and comprehensive (Office of HIV Planning, 2013). These prevention efforts will be outlined in greater detail in the literature review.

However, previous research and prevention efforts have missed the mark, as rates of new HIV infections continue to rise in YBMSM in Philadelphia. To date, there has been no qualitative research conducted in Philadelphia that examines the multi-dimensional phenomena regarding high-risk behavior in young MSM of color. A qualitative study involving young men in this population is a way of achieving a deeper understanding of the situations or contexts in which certain sexual risk behaviors occur. Such an understanding can help guide public health officials and allow the Philadelphia Department of Public Health to improve their HIV prevention efforts.

1.4 Purpose Statement

The purpose of this qualitative study is to better understand the perception of HIV infection, risks taken during sex, and gaps in HIV prevention services identified by YMSM of color in Philadelphia. This exploratory study utilizes the Integrated Behavioral Model (IBM) to frame qualitative domains and research findings. The primary aim was to explore sexual and protective behaviors in HIV-negative YBMSM, including interpersonal dynamics. The secondary aim was to identify health care services necessary in preventing HIV.

Qualitative methods were used in this study, because they help create a better understanding of the complicated social and emotional dynamics that might drive sexual risk and protective barriers. The research obtained during this study sought to supplement current knowledge and quantitative data about sexual risk taking in this subpopulation by examining personal and intensely private experiences and attitudes about HIV. Information collected focused on behaviors associated with risk of HIV, perceptions of HIV, identified health services currently accessed and health care services that may be desired but unavailable in the Philadelphia Health Department.

1.5 Theoretical Framework

In the field of public health, the use of theory is central to developing effective behavioral interventions (Green, 2000). Theory provides a roadmap of what factors to consider when designing, implementing and evaluating a health promotion program. It is vital to have a theoretical understanding of why people behave the way they do if public health programs are aiming to improve health status. Furthermore, theories provide clues as to why people and communities make health-related choices and offer a systematic way of understanding these situations, relationships and potential outcomes. Ultimately, theory makes complex interrelationships among multiple variables in different contexts easier to understand (King, 1999).

Over the last several decades, it has become abundantly clear that prevention of HIV/AIDS is not simply about using condoms, medication adherence or testing. HIV risk involves a complex web of behaviors influenced by multiple factors. An individual’s knowledge, attitude, emotions, power dynamics between partners, accessibility of services, socioeconomic inequalities and stigma are a tangled fabric where one dimensional determinants of health are near impossible to tease out. Sexual behavior and risk taking often operate in the context of these factors (King, 1999).

Historically, theoretical frameworks for HIV prevention have had a heavy focus on individual-level perspectives and have played prominent roles in guiding behavioral change interventions

(CDC, 2011). These frameworks are often based on the assumption that motivation and self-efficacy are enough for successful behavioral change and that individuals change behavior based on past success or failure in that activity (Baban & Craciun, 2007; DiClemente & Wingwood, 2000). These frameworks were created to predict health behaviors at particular points in time to pinpoint specific variables that affect specific behaviors (Baban & Craciun, 2007). Research connecting behaviors with specific variables helps public health officials consider how certain actors must be addressed to bring about the desired behavior change in the most effective way.

This study used the Integrated Behavioral Model (IBM), an extension of the Theory of Planned Behavior (TPB) and Theory of Reasoned Action (TRA) to identify the barriers and facilitators of behavior change (Glanz, Rimer & Viswanath, 2008). Originally developed by Martin Fishbein and Icek Ajzen, TPB started as the TRA to predict an individuals' intention to engage in a behavior at a specific time and place (Glanz et al., 2008). The TRA was originally intended to explain all behaviors over which people have the ability to exert self-control (King, 1999). It is based on the assumption that human beings are usually rational and consider the implications of their actions in specific contexts before deciding to engage in a behavior (AIDSCAP, 2002).

Fishbein et. al (1991) state that there are three components of the TRA: 1) *behavior,* defined as a combination of action in certain contexts and times; 2) *intention* represents a person's motivation to perform the desired behavior; and 3) *attitude* or a person's positive or negative feelings toward performing the behavior (pg. 835). According to Fishbein, intention to perform a behavior is a combination of attitude and subjective norms or social influence. Subjective norms represent a belief that people whose opinion is important (i.e. significant others) think a certain behavior should be adopted (Glantz et al., 2008). Some behavioral researchers consider norms as indicators of social pressure (Baban; Craciun, 2007).

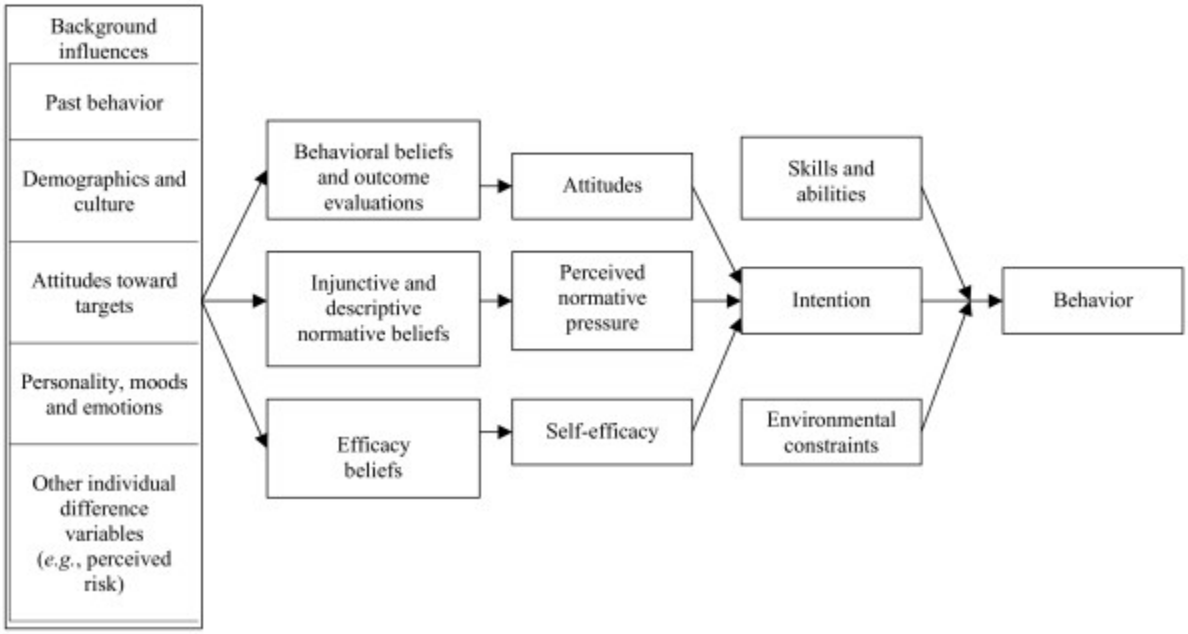
An individual's attitude toward the behavior is a combination of the outcome, subjective norms, normative beliefs and the motivation to comply with subjective norms (Yzar, 2012). If a person perceives that the outcome of a behavior is positive, he/she will be more likely to perform that behavior. Furthermore, if significant others, such as romantic partners, friends or family, believe the behavior is positive, and the individual wants to meet the expectations of others, then a positive subjective norm is expected (Glatnz et al., 2008). The opposite is true if the behavior is thought to be negative.

TPB was later developed in an attempt to broaden the framework of TRA (Glantz, 2008). The main difference between TRA and TPB is that TPB assumes that all behavior is not 100% voluntary. This notion, known as *perceived behavioral control*, refers to the degree to which an individual feels that the behavior is easy or difficult, similar to the concept of self-efficacy (Ajzen, 1991; Ajzen & Madden, 1986). According to the TRA, people are more likely to engage in behaviors over which they have control and are influenced by skills, information, emotions, as well as opportunities and dependence on significant others (Glantz, 2008). People are not likely to form a strong intention to perform a behavior if they believe there are no resources or opportunities to do so, despite having positive attitudes and believe that significant others would approve.

TPB posits that human action or intention is guided by three kinds of considerations: 1) behavioral beliefs, or beliefs about the potential consequences of the behavior; 2) normative beliefs, or beliefs about the expectations of others; and 3) control beliefs, or beliefs about the presence of factors that may facilitate or impede the behavior (Ajzen, 1991). According to these three considerations, behavioral beliefs can lead to positive or negative attitudes toward the behavior, normative beliefs can result in perceived social pressure or subjective norms, and control beliefs result in perceived ability to engage (not engage) in the behavior. Together, these beliefs result in *behavioral intent* (Carmack & Lewis-Moss, 2009).

The IBM is the most recent version of Fishbein and Ajzen's reasoned action approach and extends the scope behavior prediction by highlighting skills and environmental barriers as moderators of the intention-behavior relationship (Glantz, 2008). As an extension of TRA and TPB, IBM posits that a given behavior is most likely to occur if a person has a strong intention with the necessary skills and abilities necessary to perform the behavior. However, it expands to include the concept of environmental constraints and how those can impact behavior (Glantz, 2008). This model suggests that there are three primary determinants of intention: attitude, perceived norms and self-efficacy that relate to performing a specific behavior (Ajzen & Driver, 1991). Like other health behavior models, intention will depend upon the behavior and the population being studied as well as the environment in which the participants exist (Yzer, 2012).

Figure 5: Integrative Model of Behavioral Integration



The IBM model recognizes the relationship between attitudes, perceived norms and self-efficacy in that they are functions of *underlying beliefs* about the outcomes of a behavior; *perceived norms* of significant others; and the *specific barriers/facilitators* of a behavior. In other words, the more an individual believes that performing the behavior in question will lead to positive outcomes and/or prevent negative outcomes, the more favorable the individual's attitude should be toward the behavior (Yzer, 2012). On the other hand, the more a person believes that significant others think he or she should or should not perform the behavior, and the more likely a person is appeases them, and the stronger the subjective norm will be to engage or not engage in the behavior. Finally, the more a person perceives he or she has the necessary skills and abilities to perform the behavior, even if there are barriers, the stronger the person's self-efficacy will be with respect to performing the behavior (Yzer, 2012; Glantz et al., 2008).

IBM has been used many times to understand behavioral intention, condom use and other HIV/STD prevention efforts (Mantano & Kaspryzk, 2008**).** Specifically, this theory has been used to study sexual risk behaviors among African American adolescents, condom use among MSM and sexual negotiation, and HIV disclosure among MSM (Montano & Kaspryzk, 2008). In

2007, Buhi and Goodson conducted a literature review of IBM theoretical frameworks' role in adolescent protective and risky sexual behavior. This review found that intention, perceived norms and environmental constraints were strong predictors of sexual behavior outcomes (pg. 18). In a separate study on the predictors of HIV risk behavior among BMSM, higher levels of unprotected sex were predicted by weaker perceived norms by significant others for condom use and less risk reduction behavioral intentions (Kelly et al., 2013)

Part of this study will explore the normative and self-efficacy beliefs of condom use, anal sex without a condom, and testing behaviors in YBMSM as well as seek to understand their perceived risk of HIV. To use this model effectively, protective behaviors can be analyzed in the framework of beliefs, attitudes, norms, self-efficacy, and intention. For example, this framework may help the researcher determine whether YBMSM are having CAI because they have not formed an intention to use condoms or because they intend to use condoms but are unable to because of perceived social norms. Furthermore, the study may be able to determine whether intention to have CAI is influenced by attitudes, norms or self-efficacy.

Pinpointing specific behaviors in specific contexts may lead to the development of communication strategies to influence the attitudes, perceived norms or self-efficacy involving CAI, protective behaviors, testing behavior or condom use. Interventions will depend on understanding if the target population has formed an intention and acts accordingly, if they have formed an intention but are unable to act upon it for numerous reasons, or if they have little or no intention to perform the behavior. If people have not formed intention, an intervention should be directed at changing attitudes, norms and/or self-efficacy. If people have formed the desired intention but are not acting on it, the intervention should be directed at skills building or helping people overcome barriers (Albarracín, Johnson, Fishbein & Muellerleile, 2001).

1.6 Research Questions

For this qualitative investigation, four research questions guide the study:

1. What is the target population's perceived risk of contracting HIV?

2. What are the social and behavioral barriers that hinder individual HIV prevention efforts among YBMSM in Philadelphia?

3. Are services offered in Philadelphia, like PrEP and PEP, currently being accessed by target population to prevent HIV infection?

4. How can HIV prevention methods such as PrEP and PEP be improved in Philadelphia?

1.7 Significance Statement

The increase of HIV in YBMSM justifies the need for more augmented prevention programs. Current epidemiological data demonstrate that young people of color are in need of a comprehensive health system with an increased focus on both primary and secondary prevention efforts in Philadelphia. HIV prevention is not a one-time activity, but an iterative process that continues to strive to meet the individual's changing needs. However, past research has provided limited contextual and cultural insight on the occurrence and meaning behind certain risk-taking behavior of YBMSM in Philadelphia. This qualitative study will supplement current knowledge obtained through quantitative research by focusing on the experiences and social behaviors of the target population. It will examine sources of influence, interpersonal factors and contextual situations that go beyond traditional risk behavior. The deeper exploration of unique social situations, understanding how partners are selected and behavioral risks assessed are important components of developing more effective programs.

HIV prevention interventions effective in one YBMSM community may not be transferable to another BMSM community. Unique cultural contexts create environments where not all YBMSM communities are the same and may not respond to the same intervention consistently. Information from specific and lived experiences of this target population may yield important insights to complex; local and unique social contexts that can help develop and refine interventions specifically for health officials at the Philadelphia Health Department.

1.8 Definition of terms

1) Men who Have Sex with Men (MSM) - The Centers for Disease Control (CDC) use this term throughout surveillance, research studies and data reports to define a male population who engage in homosexual behaviors. Because sexual identity varies within this population, MSM is a general term that allows for variation and not used to define the sexual identity, sexual orientation or sexual culture.

2) AIDS Activities Coordinating Office (AACO) - This refers to the division of the Philadelphia Health Department responsible for collecting and reporting HIV surveillance data. It is also oversees the majority of medical case management for people infected with HIV and administers local and federal funds for HIV/AIDS prevention programs in Philadelphia.

3) Risk - A characteristic of decisions that is defined as the extent to which there is uncertainty about whether potentially significant and/or disappointing outcomes will be realized (Conceptualizing Determinants of Risk Behavior, 1992).

3) Risk Behavior - Risk is defined by the "probability of an individual becoming infected by HIV, either through his or her own actions, knowingly or not, or via another person's actions (UNAIDS, 1999).

4) HIV Risk-Reduction Strategies - Behavioral and educational strategies that are used to reduce the acquisition or transmission of HIV.

5) Condomless Anal Intercourse (CAI) - A form of sexual intercourse in which the penis is inserted into the anus without a condom or protective barrier. A person who practices unprotected receptive anal intercourse may be at higher risk of certain STDs. The person who is penetrated during anal sex is colloquially referred to as the "bottom." (CDC, 2012a)

6) STD Control Information Database (SCID) - This refers to the electronic information database used by the Philadelphia Health Department for reportable STDs and case management.

7) eHARS - This refers to the electronic HIV/AIDS Reporting System used by the Philadelphia Health Department to report HIV/AIDS related data.

8) Philadelphia Department of Public Health (PDPH) - Also known as District Health Center One, serves as one of the free district public health centers as well as the Division of Disease Control for Philadelphia.

9) Coding - Reducing data into meaningful segments and combining the codes into broader categories or themes to make comparisons in the data.

10) “Top” and “Bottom” - terms used to describe sexual roles during male same-sex behavior. “Top” refers to the insertive partner in a particular episode of anal intercourse and “bottom” refers to the receptive partner in a particular episode of anal intercourse. These terms can also be used as verbs; an insertive partner can be described as “topping” and the receptive partner can be described as “bottoming” during sex.

11) Black - term used in this study to include African American, Caribbean Americans, African and other persons of Black race who may not identify as “African American. (Sutton, Jones & Wolitski, 2009)”

12) PrEP (Pre-Exposure Prophylaxis) - A daily medication that can help prevent an HIV-negative person from getting infected with HIV.

13) PEP (Post-Exposure Prophylaxis) - A series of medications an HIV-negative individual can take after potentially being exposed to HIV to prevent becoming infected.

14) CTR (Counseling, Testing and Referral) - services that are intended to promote early knowledge of HIV status, provide education on transmission, prevention and results and promote access to medical, preventive and psychosocial support services.

Chapter 2 - Literature Review

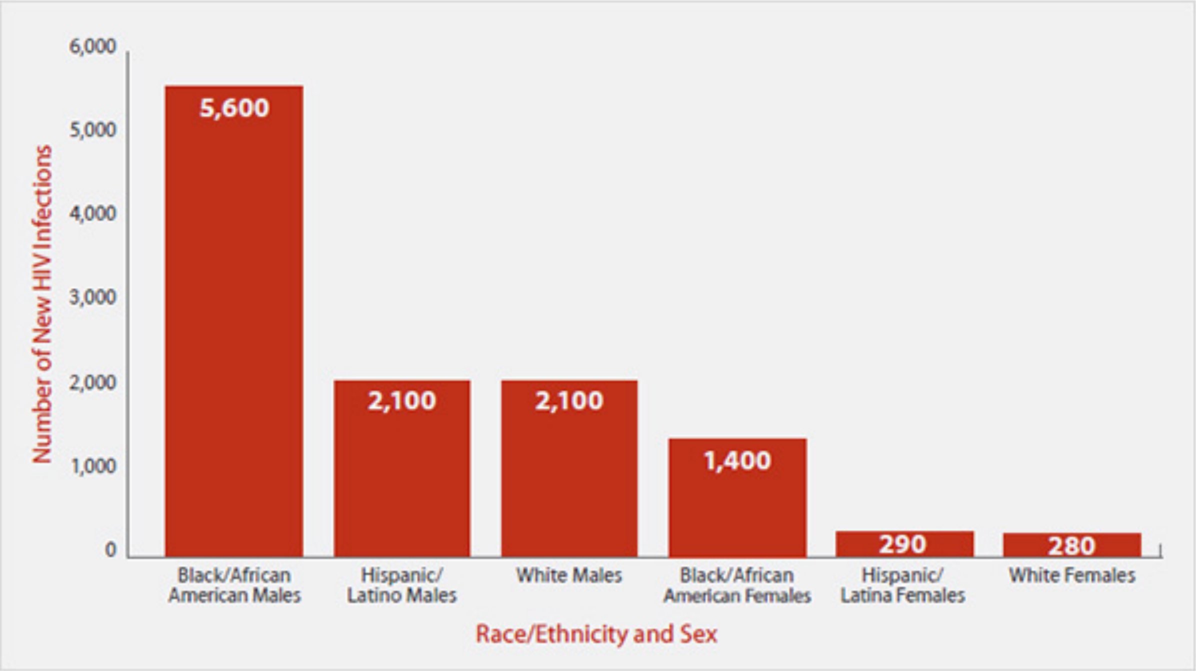
2. 1 Introduction

The objectives of this study are to 1) identify target population's perceived risk of contracting HIV, 2) explore individual and social barriers that hinder individual HIV prevention efforts, 3) identify services offered by public health centers that are currently being accessed by target population to prevent HIV infection and 4) identify services that public health centers should implement in order to help prevent HIV infection. National surveillance data has determined that YBMSM are disproportionately affected by HIV and numerous research studies have taken place to pinpoint individual-, interpersonal-, community-related factors that place this subpopulation at such risk. However, no prior studies have focused specifically on Philadelphia's YBMSM population. This chapter will discuss literature relevant to this issue, painting a broad picture of 1) general explanations for the disproportionate rates of HIV in the BMSM and YBMSM population, 2) interventions commonly aimed BMSM and YBMSM, and 3) barriers to success of interventions related to these populations. It will also discuss these broad categories in the scope of Philadelphia.

2.2 Overview of YBMSM HIV Epidemic:

Over the last several years, the CDC has prioritized reducing incidence of HIV in YMSM. According to the CDC, the number of new infections among YMSM (13-24) increased 22 percent from 7,200 infections in 2008 to 8,800 infections in 2010 (CDC, 2012a)**.** Young Black MSM bears a disproportionate burden of the HIV epidemic. This subpopulation accounted for more new infections in the United States than any other subgroup race, age, ethnicity or sex (CDC, 2012a).

Figure 6: Estimates of New Infections Among Youth Aged 13-24 Years, by Race/Ethnicity and Sex, United States 2010



YBMSM and Risk of HIV

Understanding the disparity of HIV infection between Black/African American and white MSM has been a priority for health officials and policy makers. There have been several large meta-analysis conducted by researchers that compare BMSM and YBMSM to other MSM populations. Findings between the reviews yield inconclusive or partial explanations for the HIV disparity between BMSM and YBMSM to other MSM. On average, however, they found that BMSM report similar or higher rates of protective behaviors such as less unprotected sex, fewer partners and less drug use than white MSM (Clerkin, Newcomb & Mustanski, 2010; Du Bois et al., 2010; Garolfalo, Mustanksi, Johnson & Emerson, 2010; Harawa et al., 2004; Ruiz, Facer & Sun, 1998). Other reviews focusing on YBMSM proposed that older partners, history of sexual abuse, younger sexual initiation and smaller sexual networks drove HIV rates rather than individual risk behaviors (Bingham et al., 2003; Clerkin et al, 2010; Harawa et al., 2004; Millet, Flores, Peterson & Bakeman, 2007). Despite these findings, however, BMSM and YBMSM were more likely to be have an unknown HIV-positive status than white counterparts (Mustanski, Newcomb, Du Bois, Garcia & Grov, 2011).

A literature review by Millet et al. (2006) developed twelve hypotheses that might explain the disparity, addressing factors beyond behavioral risk-taking, such as psychological, structural and biological. Among these hypotheses were that Black MSM was more likely to engage in high-risk behavior, less likely to disclose sexual identity, more likely to abuse substances, and less likely to get tested. After searching five online databases with keywords such as “Black, “African American,” MSM,” the researchers cross-referenced the sexual identity/behavior articles with articles on Black populations. Using quantitative studies only, they identified a total of 59 articles.

Despite predictions, Millet et al. (2006) found that BMSM do not engage in higher HIV risk behavior than other MSM, nor do they engage in greater use of substances (pg. 1009). However, they found BMSM to be more likely than other MSM to have sexually transmitted diseases, to be less likely to know their HIV status, and to be tested later on in the course of their infection (Millet et al., 2006). Unknown HIV status may have implications for higher rates of transmission (Oster et al, 2011). Previous research has shown that MSM who know their positive HIV status engage in fewer sexual risk behaviors (Feldman, 2010, Valleroy, MacKeller et al, 2000; CDC, 2000; Colfax, Buchbinder, Cornelisse et al, 2002). Additionally, knowing one’s HIV status can lead to the use of antiretroviral therapy which reduces viral load and infectiousness (Granich, Growley, Victoria et al., 2010). Other hypothesis proposed by Millet et al. (2006) did not find strong evidence supporting or negating structural factors such as sexual networks, health care access and incarceration or behavioral factors, such as having sex with known HIV-positive partners as contributors to HIV rates in BMSM.

Oster, Wiegand, Sionean et al. (2011) built off Millet et al. (2006)’s original findings to further investigate hypotheses that found insufficient or conflicting evidence. Among these hypotheses, Oster et al. (2011) further explored the hypothesis relating to exposure to, acquisition of or transmission of HIV not completely explained by Millet et al. (2006). Using data from the 2008 National HIV Behavioral Surveillance System (NHBS), the largest and most geographically diverse surveillance system that monitors HIV risk among MSM in the United States, Oster et al. (2011) found comparable findings to Millet et al (2006) in that sexual risk taking was not different in black or white populations.

Oster et al. (2011) did propose several important insights to HIV disparities in BMSM. For one, the research team found that not knowing one's most recent partner's HIV status was associated with HIV infection (pg. 1106). They also found that BMSM with a previous HIV-positive diagnosis were less likely to be on medication (pg. 1108). Antiretroviral Therapy (ART) has been shown to reduce viral load, which can significantly reduce the risk of transmission to one's partners. Furthermore, research has shown those that know their HIV status are more likely to exhibit protective behaviors (Millet et al., 2006; Oster et al., 2011).

Oster et al. (2011) also found that the high number of BMSM who do not know their status coupled with selecting partners of the same race and the number of highly infectious individuals in that community may contribute to ongoing HIV transmission in this population (pg. 1106). The evidence in the review supports the Millet et al (2006) hypotheses that BMSM are less likely to know to their HIV status and that BMSM are more likely to select partners of their own race than other MSM (Berry, Raymond & McFarland, 2007; Eaton, Kalichman, Cherry et al. 2010; Laumann & Youm, 1999; Oster et al., 2011). In other words, the prevalence of infection within a sexual network may have greater influence than individual risk behavior, but the association warranted further investigation (Oster et al., 2011).

In 2011, Mustanski, Newcomb, DuBois, et al. (2011) sought to review existing literature on HIV epidemiology, correlates of risk and intervention research specifically in YMSM populations. They compared individual, community and social perspectives on the HIV disparity, including drug and alcohol use, sensation seeking, intimate partner relationships, family characteristics, sexual abuse, community identity, and stigma. Drug/substance use in YMSM was the only individual level factor they found as having a strong association with sexual risk, which differs from other research studies reviewed for BMSM in general (Mustanski et al., 2011). They highlighted however, that there is limited research in the other factors including partner characteristics, self-efficacy for HIV prevention behaviors (i.e. condom use) and community identity (pg. 239).

The synthesis of existing research calls for further exploration to understand how these multifaceted and intertwined factors affect YMSM. In particular, Mustanskiet al. (2011) call for further research into relationship dynamics as they identified some evidence that indicates YMSM are more likely to engage in CAI with multiple partners (pg. 234). Naturally, this can cause other adverse health outcomes as multiple partners increase risks for contracting STDs and HIV (Gorbach & Holmes, 2003). Furthermore, Mustanski et al. (2011) suggest individual-level interventions as the best way to make a large impact in this population (pg. 237). While culture and community identity are nonetheless important, researchers should continue to identify risk and protective factors and apply them to larger cultural and social contexts to better target YMSM (pg. 237).

A second literature review specific to YMSM sought to apply Millet et al (2006) twelve hypothesis to YMSM. Feldman (2010) again found no evidence supporting the notion that YBMSM were significantly more likely to have multiple sex partners, as was found in adult BMSM populations (pg. 1206). Majority of the studies reviewed indicated that YBMSM reported significantly fewer lifetime and current male partners, significantly less drug use and just as likely to get tested for HIV as white YMSM (Behel, Mackeller & Valleroy, 2008; Bingham et al., 2003; Harawa, et al., 2004; Warren, Fernandez, Harper et al., 2008). Conflicting findings from Mustanski and Feldman (2010, 2011) in regards to substance abuse continues to leave open questions on how or if this factor affects sexual behavior. However, mirroring other literature reviews, these findings show that YBMSM are significantly more likely to be HIV infected and unaware of their status and have a history of an STD (MacKeller, Valleroy & Secura, 2005; Millet et al., 2006). A study mentioned in Feldman’s review found that in a sample of 5,649 YMSM, 91% of YBMSM who tested HIV-positive were unaware of their status (pg. 1215).

Other studies Feldman reviewed comprised of YBMSM conducted by Bingham et al. (2003) and Rothenburg, Peterson and Brown (2007) found that YBMSM were more likely to report having anal sex exclusively with black partners and with older partners (pg. 1218). According to previous research, sex with older partners enhances risk of contracting HIV infection (Morris, Zavisca & Dean, 1995; Service & Blower, 1995). If YBMSM are choosing older partners of the same race, a population with a high HIV prevalence, this could be one reason to explain the disparity.

One important distinction with Feldman's literature review was that pertaining to peer norms. He found that several studies identified a significant relationship between peer norms around condom use and HIV sexual risk behavior among YBMSM (Jones, Johnson & Wheeler, 2008; Hart & Peterson, 2004; Bakeman & Peterson, 2007). One study he focused on found that YBMSM who strongly agreed their male friends used condoms were significantly less likely to engage in HIV sexual risk behavior (Jones et al., 2008). This is important to this particular study as the research is structured around the IBM framework analyzing attitudes, perceived norms, personal agency and overall attitude. Peer norms that do not support condom use may also increase HIV risk behavior among YBMSM (Feldman, 2010).

Overall, Feldman (2010) demonstrated findings with YBMSM consistent with Millet et al. (2006) analysis of adult BMSM. Disproportionately high rates of HIV in YBMSM cannot be attributed to riskier sexual behavior, substance abuse, or testing history (pg. 1217). Both Millet et al. (2006) and Feldman (2010) found that unrecognized HIV infection were greater among BMSM and YBMSM than for other groups of MSM and that both BMSM and YMSM were more likely to have a history of STDs. However, Feldman (2010) postulated that YBMSM are more likely to face additional risk factors such as sexual networks and older partner selection (pg. 1218). More research is again needed to explore partner dynamics and how they relate to peer norms and protective behaviors in YBMSM.

Despite two thorough reviews of YBMSM risk behavior; there remains limited, conflicting or inconclusive research in this population. To further examine the disparity, Millet, Peterson, Flores et al. (2012) further explored the disparity of HIV by comparing compared disparities of risks of HIV infection in Black and other men who have sex with men in the UK, Canada and United States, including YMSM participants. Their review added several important findings to the growing body of knowledge about HIV disparity despite BMSM in this population following research trends: reporting less CAI, fewer male partners, more condom use, less substance abuse and more frequent testing (pg. 380).

However, across all studies analyzed, BMSM in this meta-analysis were less likely to report gay identity or report disclosing sexuality to others (pg. 343). This is different from what Feldman (2010) found about YBMSM and sexual disclosure (pg. 1211). However, like YBMSM, adult BMSM were more likely to report condom use, testing for HIV, fewer sex partners and less substance use before a sexual encounter (Millet, Peterson, Flores, et al., 2013). They were also found to have more frequent HIV testing, similar to YBMSM population (Feldman, 2010). Despite reporting these protective behaviors, Millet et al. (2012) found BMSM still had three times greater odds of testing positive for HIV, six-fold greater odds of having an undiagnosed HIV infection compared with other MSM in the study, as well as higher rates of other STDs (pg. 343). The small group of YBMSM studied in this review was found to be five times more likely to be HIV positive compared with other MSM despite engaging in similar risk behaviors (Millet et al., 2012). Furthermore, HIV-positive BMSM were less likely to have health insurance and adhere to ART medication, therefore, it can be postulated that low rates of successful treatment for HIV-positive BMSM could be another factor driving rates of new HIV in these networks and communities (pg. 345).

When looking at partner dynamics, Millet et al. (2012) found that BMSM were more likely to have same race partners, similar to YBMSM studies. However, HIV-uninfected BMSM were less likely than other MSM to serosort, meaning they were more likely to have CAI with partners of *any* status, not just perceived similar serostatus (Millet et al., 2012). These findings are in line with previously mentioned reviews in that BMSM have similar to more protective behaviors as white MSM, but face additional disadvantages as it relates to clinical care access and sexual partner characteristics (i.e. partners who are unaware of their status) (Millet et al., 2012).

While these studies have evaluated socio-behavioral factors (race of partner, substance abuse, incarceration) and biological factors (sexually transmitted infections), the most recent analysis completed by Mayer et al. (2014) evaluated the interaction between those different factors to compare their prevalence among previously diagnosed HIV, newly diagnosed HIV and HIV-uninfected at the time of enrollment. The sample was taken from HPTN 061, a study of the HIV Prevention Trials Network, where BMSM from six different US cities were enrolled in a program that offered HIV testing, STD screening and a peer health navigator. The study enrolled

1,553 participants, one of the largest cohorts of BMSM in the United States. Data analysis demonstrated that new HIV infection rates were associated with younger age, lack of employment, positive STD test and unprotected anal intercourse. Additionally, Mayer et al. (2014) suggested that lower levels of HIV awareness, delays in accessing clinical services and higher rates of sexually transmitted infections result in a larger number of individuals who could transmit or be susceptible to HIV (pg. 7).

The HPTN 061 study continues to highlight important characteristics about the BMSM population. First, newly diagnosed participants tended to be younger and reported having more unknown status partners than the other participants (Mayer et al., 2014). These findings are consistent with reports from CDC that Black youth tend have lower levels of HIV status awareness in themselves and their partners, (Mayer et al., 2014). Other studies by Baggaley et al. (2010) and Attia et al. (2009) support this notion and also found high rates of HIV transmission in settings where HIV prevalence is high and a substantial number of men are unaware that they or their partners are infected with HIV.

HPTN 061 also found that men in this cohort who were HIV-uninfected were more likely to have an undiagnosed sexually transmitted disease, similar to reviews found by Millet et al (2006) and Feldman (2010). STDs are a marker for unprotected sex, selection of high-risk partners and may also reflect a lack of engagement in healthcare (Mayer et al., 2014). Additional studies have found that anorectal gonorrhea and chlamydia have been associated with increased risk for HIV transmission (Bernstein, Marcus, Nieri, Klausner et al, 2010). While Bernstein et al. (2010) did not focus on BMSM specifically; findings did demonstrate that MSM with two prior positive rectal chlamydia or gonorrhea infections had an 8-fold increased risk for HIV acquisition (pg. 537).

Maulsby, Millet, Lindsey and Kelley (2013) augmented Millet's original literature review in 2006 by expanding on more recent literature, again focusing on behavioral, biomedical, structural, contextual and social networks that affect HIV rates among BMSM (pg. 10). Maulsby et al. (2013) confirmed again that high-risk sexual behavior and substance abuse did not contribute to the high rates of HIV in BMSM (pg. 12). Additionally, BMSM are equally as likely to have been seen by a healthcare provider and been offered an HIV test (Magnus, Kuo, Phillips, et al 2010). However, there were a few studies that indicated BMSM did not limit unprotected sex partners just to men who reported an HIV negative status (Eaton et al., 2010; Zablotska, Imrie, Prestage et al. 2009).

There are conflicting findings on whether BMSM are equally as likely to be on ART medication, or adhere to ART treatments (Dombrowski, Kerani, Stekler, Menza & Golden, 2010; Millet et al., 2006; Oster et al., 2011; Sullivan, Campsmith &, Nakamura, 2007). There is also conflicting evidence about medical mistrust and provider relationships and dynamics in social networks (i.e. same race partners or older partners) (Maulsby et al., 2013). Lack of conclusive evidence suggests that research on BMSM medical experiences within the HIV health care system and within social networks is limited and future studies should focus on these contextual environments as they relate to HIV prevention. However, Maulsby et al. (2013) did find that there is a need for comprehensive STD/HIV screening programs that focus on improved linkage and retention to care and external factors such as unemployment, mental health, stigma and substance abuse (pg. 20).

While attitudes in the African-American community are slowly changing, negative attitudes towards gay men still exist and may contribute to low self-esteem, lack of community and psychological distress -- all of which contribute to risk-taking behaviors in YBMSM. Men in the HPTN 061 reported multiple demonstrations of stigma, discrimination, homophobia and racism (Mayer, 2014). Beer et al. (2009) found that socio-cultural factors like stigma and homophobia may influence mental health and HIV risk behaviors (pg. 6). This research team found that less health coverage, higher poverty and lower education of BMSM partially explained the disparity in ART adherence and viral suppression (Beer et al., 2009). Additionally, they posit that differences in acceptance of ART can be influenced by negative feelings of health care in general, stigma and the impact of homophobia in Black communities (pg. 6). All these factors should be furthered studied as they are critical for developing interventions that increase retention in care for BMSM.

Most recently, a second large cohort of MSM (n=803) recruited in Atlanta called InvolveMENt utilized a multidimensional framework to understand racial disparities of HIV (Sullivan, Peterson, Rosenberg, Kelly et al., 2014). The findings from this study confirmed previous findings that BMSM do not exhibit riskier behaviors than white counterparts: they have reported fewer sex partners, including unprotected anal sex partners; less reported drug use and similar testing behaviors (pg. 6-7). Sullivan et al. (2014) did not find substantial evidence supporting the notion that BMSM are more likely to couple with someone of a significantly different age (pg. 9). The most striking finding from this research was that BMSM tend to live in areas with lower income, be less educated and also experience higher rates of poverty and unemployment, all of which contribute to health inequalities for minority groups in general (pg. 9). While the degree at which racism and stigma cause between BMSM being more likely to have sex with someone of the same race and be in the area in which they live is related to racism and stigma remains unclear, this study provides interesting insight on additional contextual factors that may drive the disparity.

Numerous bodies of research examining risk behaviors in Black MSM populations sought to explain racial disparities for HIV infection. However, these systematic reviews have continued to find no compelling evidence that suggests BMSM have more frequent unprotected sex, greater number of partners or less frequent condom use than white MSM. Findings are consistent, however, in that both BMSM and YBMSM have histories of sexually transmitted diseases, high rates of undiagnosed HIV infections and conclude that more information is needed on the social and economic barriers that drive the disparity. Further research is warranted to examine the situational and contextual settings in which Black MSM and YBMSM in particular interact with partners and the smaller sexual networks where HIV infections go undiagnosed (Kelly et al. 2014)

2.3 National Intervention Strategies - Progress and Barriers

The CDC is the federal epicenter for disease control and as such has employed a wide range of activities to not only better understand the disparity of HIV in the Black population as a whole, but to expand testing efforts, access to medical care, innovative interventions and unite the Black community to combat the epidemic (Sutton et al, 2009). The approach to HIV prevention includes 1) epidemiologic surveillance, 2) behavioral and biomedical research 3) science-based prevention programs 4) evaluations of programs and 5) public health policy (Beatty, Wheeler & Gaiter, 2004). Despite this multi-dimensional approach, it is not always clear what makes one intervention successful over another.

To gain further insights, the CDC partners with local health departments and community-based organizations who provide HIV-prevention services to minority populations. In 2010, the CDC launched a National HIV/AIDS Strategy that prioritizes goals, interventions and efforts on which those placed in local contexts can focus. The role of the health departments in implementing the outlined strategy is especially critical. Not only are they responsible for identifying effective community stakeholders but also responsible for enlisting the cooperation of the community, and overseeing the communication and coordination of services throughout the continuum of HIV prevention, care, and treatment (CDC, 2010).

Until recently, knowledge regarding the status of interventions in BMSM has been limited. Maulsby et al., (2013) provided a comprehensive review of literature on rigorously studied, specific interventions for BMSM. They identified 12 completed studies of national interventions for BMSM; eight of those studies aimed at reducing HIV sexual risk and five of those were found to significantly reduce HIV risk behavior. Four reviewed interventions focused on the use of HIV-related medical services (Maulsby et al., 2013). A majority of the behavioral interventions provided health information and skills-building sessions and were combinations of group settings and one-to-one counseling sessions. All interventions, however, addressed individual factors like condom use, relationship dynamics, and improving communication as well as addressed social contexts of HIV risk. These interventions included discussions on stigma, racism, masculinity and homophobia (pg. 2). While grounded in theory, these reviewed interventions saw minimal or inconclusive improvements on reported behavior before and after implementation (pg. 8).

The same review also identified health service interventions. These found that motivational interviewing, (likely to occur during partner services or counseling sessions), linkage to care programs, and feeling respected at the clinic was associated with retention in care (pg. 8). These health service interventions also found to increase self-efficacy; motivation and confidence for behavior change (Maulsby et al., 2013). One intervention in particular, STYLE (Strength Through Youth Livin' Empowered) was conducted in North Carolina demonstrated significant increases in care retention (Maulsby et al., 2013). Using social media marketing campaigns to reach YMSM, this program offered a peer outreach worker, physician, case manager and local support groups.

One major takeaway from Maulsby et al. (2013) is that despite the lack of evidence proving behaviors are driving the epidemic, behavioral interventions that focus on relationship dynamics and the social context in which risk behavior takes place are still important to prevention efforts (pg. 11). Maulsby et al., (2013) note that while relying solely on behavioral interventions will not materially impact the subpopulation as whole, increasing individual behaviors such as HIV testing or treatment is one step towards larger changes. The researchers also posit that additional research is needed to look at the environments that may impede retention in care, to test the effectiveness of interventions that offer outreach, ART adherence and other support services.

National Barriers to Success of Interventions

Hypothetically, interventions should be effective as long as they have clear guidelines, are grounded in theory and have been rigorously tested. In a meta-analysis conducted by Mustanski et al., (2012) found that HIV behavioral interventions for adult MSM are efficacious (pg. 25). Oftentimes, however, real-world constraints, such as lack of local resources and limited intervention options, have prohibited success (Sutton et al., 2009). Interventions specific to BMSM have historically been limited. In a review conducted by Beaty et al., (2004), results found that research methodologies had not necessarily focused on Black populations, and if they did, the theoretical frameworks did not address their unique cultural or social contexts (pg. 44).

Several studies have sought to examine why rates continue to rise despite numerous prevention programs with varying strategies. Similar to the inability to pinpoint specific causes of the disparity, is the inability to understand barriers in current prevention efforts. As recent as 2009, more than 50 HIV prevention efforts have been tested for the MSM population; however, only one focused directly on BMSM (Peterson & Jones, 2009). While that number of interventions targeting BMSM has increased, researchers can agree that interventions must move beyond individual risk behavior and examine the social contexts of BMSM.

According to Peterson and Jones (2009), HIV interventions have not typically focused on men of color or other minorities and when MSM of other ethnicities were finally considered, their social context was not well understood (pg. 976). This includes addressing stigma, racism, homophobia, peer norms and limited access medical care (Beaty, Wheeler & Gaiter, 2004; Millet & Peterson, 2007; Wheeler, Lauby, Liu, van Sluytman & Murrill, 2008).

Stigma as it relates to HIV can be associated in several different contexts, including negative self-image, public attitudes and concerns with disclosing status to another (Dowshen, Bins & Garofalo, 2009). Stigma is a huge barrier outlined by Peterson and Jones (2009). Their review finds BMSM to have more intense feelings of internalized homophobia and less disclosure sexual orientation than other MSM of different ethnicities (Kennamer, Honnold, Bradford & Hendricks, 2000; Montgomery, Mokotoff, Gentry et al., 2003; Stokes & Peterson. 1998). Perceived disapproval of homosexuality from friends and family has prevented some BMSM from disclosing sexual orientation to doctors or health care providers and inhibited proactive approaches to HIV prevention (Eaton et al., 2010; Wolitski & Fenton, 2011). Research has demonstrated that this internalized homophobia and negative self-image can create several barriers to HIV prevention efforts. Not only has it been associated with lower awareness of HIV prevention services, but it negatively affects one’s ability to want to use condoms and can cause feelings of isolation, denial, secrecy depression and shame (Huebner, Davis, Nemeroff & Aiken, 2002).

A plethora of studies have shown that discrimination faced by Black gay men and MSM is two-fold in that they face prejudice and discrimination based on not only their race in the gay community, but also their sexual identity in the Black community (Mays et al., 2004; Stokes & Peterson, 1998). Psychological distress caused by these identity conflicts are associated with higher levels of sexual risk taking among BMSM (Crawford, Allison, Zamboni et al. 2002;

Vanable, Carey, Blair Littlewood, 2006). Studies have also shown that stigma and shame associated with an HIV diagnosis has become a significant barrier to HIV screening, regardless of race.

In the same vein, racism creates another barrier for HIV prevention. Several researchers have studied the relationship between racial discrimination and mental health outcomes. For example, Eaton et al. (2015) found that out of 544 BMSM, 29 percent reported that they experienced not only mistrust about medical care in general, but had faced both race and sexual discrimination as well (pg. 78). While Eaton and his colleagues found less reported stigma from health care providers than originally thought, participants expressed higher rates of general mistrust in the healthcare system (pg. 79).

Another study using the HPTN 061 cohort found that 20 percent of BMSM reported they experienced racial discrimination in the healthcare setting (Irvin, Wilton, Scott, Beauchamp, Wang et al, 2014). These researchers posit that this type of racial discrimination creates mistrust between medical care provider and the patient (pg. 1274). Another study found that experiences of social discrimination such as racism and homophobia were not only associated with lack of social support, but participation in risky sexual situations among BMSM (Ayala, Bingham, Junyeop, Wheeler, Millet et al, 2012). Finally, Choi et al. (2013) found that BMSM experienced discrimination and homophobia not only in the general community, but within their family as well (pg. 871). Those that experienced racism from the general community were more likely to report depression and anxiety (pg. 872).

Interventions may also be unsuccessful because of barriers not only to access of health care but also utilization. Peterson and Jones (2009) found several studies that demonstrated that HIV-positive BMSM were less likely to have open dialogues with their healthcare provider about health needs, trust the quality of care received and to receive recommended frequency of HIV-related care appointments (pg. 977). Not adhering to HIV medication and/or being forthcoming with certain behavior to a medical care provider can have serious health implications. Mimiaga et al (2009) found that BMSM in their study were economically disadvantaged and their socioeconomic status prevented access to basic healthcare (pg. 829).

Despite federal and local engagement and focus on the Black population as a whole, the connection between risk and disease remains unclear. As stated before, complex and interconnected factors such as risk perception, unrecognized infection in BMSM, care retention and treatment access as well as incarceration, unemployment and stigma may be contributing to new HIV rates in this population more than individual risk behaviors (Mays, Cochran, Zamudio, 2004; Maulsby, Millet, Lindsey et al., 2013). The same factors that are driving the HIV epidemic in YBMSM are the same factors that are complicating prevention efforts. The CDC and local health departments are aware that new and more effective HIV prevention programs should not disregard individual behaviors completely, but should address stigma, discrimination and homophobia that have been shown to limit access and uptake to essential services.

2.4 Philadelphia Intervention Strategies and Barriers

Philadelphia continually ranks as one of the highest cities in the nation for new HIV diagnoses and has often been a focal point for CDC HIV prevention efforts (AACO, 2014). In 2011, Philadelphia was designated as one of twelve national local health departments participating in the CDC's first Enhanced Comprehensive HIV Prevention Planning project (ECHPP), which targets U.S. cities with high prevalence of AIDS. PDPH provided $13.3 million to 31 local agencies to implement 68 prevention programs (including HIV testing and counseling), 27 of which are evidence-based prevention interventions. The goals of this three-year program were to 1) reduce new HIV infections, 2) link people with HIV to care, 3) reduce HIV-related health disparities and 4) achieve a more coordinated national response to the HIV epidemic (CDC, 2016b).

Specifically, the ECHPP program in Philadelphia sought to dramatically increase HIV testing in order to increase the number of people who know their status with targeted efforts geared towards youth. Through coordination of PDPH resources, people who do test positive could be linked to medical care and supportive services they need to stay in care. The ECHPP interventions included expanding HIV/STD testing, increasing condom distribution, linking/retention to care for HIV-positive individuals, partner services, providing ART medication/post-exposure prophylaxis, and providing sexual health/HIV related communication or social marketing campaigns. While ECHPP does not necessarily target BMSM or YMSM, it has given Philadelphia the opportunity to combat the epidemic using multiple methods. An evaluation of the ECHPP program is currently in process.

Another analysis of HIV prevention services was conducted by the office of HIV Planning, a branch of the Philadelphia Health Department responsible for supporting decision-making bodies that plan HIV care and prevention services in the city. Primarily, this organization conducts community needs, provides logistical support to local organizations and works collaboratively with the Philadelphia AIDS Activities Coordinating Office (AACO, 2014). Recently, they conducted a community assessment with local HIV care providers, both nonclinical and clinical, to show provision services throughout the city. Their findings provide a solid snapshot of HIV prevention services in the City. While this is not a comprehensive analysis of HIV prevention efforts of YBMSM in Philadelphia, it does provide contextual information about the current status of collaborative efforts.

In the Office of HIV Planning analysis, the majority of providers stated that they are multi-service agencies that provide HIV/AIDS services in the form of case management, support groups, advocacy/peer counseling and mental health. Most respondents mentioned providing basic HIV/AIDS education, while 42 providers indicated providing counseling, testing and referrals. Eighteen respondents provided HIV primary care, and almost every agency that provides testing also provides case management services.

In addition to asking general service questions, each agency was asked to indicate what intervention they currently provide. Of the responses, there were 11 evidence-based interventions mentioned. Some of the interventions include: Bart, Be Proud, Be Responsible (BPBR), Healthy Relationships, Many Men, Many Voices (3VM), MPowerment, PALMS, Real AIDS Prevention Project, Safety Counts, Together Learning Choices (TLC), Video Opportunities for Innovative Condom Education & Safer Sex (VOICES). The interventions targeting Black male youth and/or YBMSM specifically include BART, 3MV, MPowerment and PALMS.

While each of the aforementioned interventions in Philadelphia seeks to change behavior, there are several notable barriers that prevent them from reaching their intended potential. The most common barriers for the interventions were attendance/participation, schedule, retention, and recruitment. Other effective prevention strategies, such as counseling, testing and referral (CTR), named staff shortage, stigma around testing, fear of the unknown, funding, and location of services as some of the main barriers. Other interesting impediments were acceptance of testing from participants, lack of free testing locations, confidentiality and reaching target populations because according to these care providers in Philadelphia, the target population is not knowledgeable about their risk. Finally, low literacy rates, lack of strong models to reach target populations and lack of knowledge about the resources available in the community were also mentioned.

Success of programs that provided CTR and Comprehensive Risk Counseling Services (CRCS) was attributed to positive provider experiences, comprehensive approaches, cultural competency and incentive-based testing for reaching target populations. Strong patient-case manager relationships, client-centered approaches and referrals were also main contributors to successful interventions (Philadelphia Care Plan, 2012).

Half of the agencies in Philadelphia that provide CTR or CRCS also experienced barriers in participation from youth, lack of patient follow through, not understanding HIV risk or risk behaviors and poor linkages to care or other services. For patients who test positive, barriers include lack of follow-up, stigma, mental health issues, inability to comprehend the healthcare system, inaccurate information and too few providers that are youth focused and sensitive. Philadelphia providers in general believe that using an individualized approach, providing accurate information and comprehensive strategies would address the disparity. It is interesting to note that providers were challenged in finding sensitive and competent resources for LGBTQ youth.

Summary

The literature review demonstrates several barriers for not only understanding the disparity of HIV in BMSM but in the subpopulation of YBMSM, both nationally and in the context of Philadelphia. Lack of evidence connecting behavioral risks to the HIV epidemic leads public health officials to take environmental and social constructs that propel rates of HIV into consideration. The same factors that are driving rates of infection are driving barriers in effective interventions. However, populations of YBMSM are not homogenous; individual cultural, socio-economic, and social constructs can sway a successful intervention in one group to be unsuccessful in another. While the goal is to undertake an ecological approach to HIV intervention in Philadelphia, it is important to start at the ground level and understand certain constructs from the micro-level. Like researchers before, health officials in Philadelphia need to better examine sexual networks, decision-making contexts and perceived risk and identify other barriers that put Philadelphia among the highest in the nation for rates of HIV in YBMSM (AACO, 2014).

Chapter 3 - Methodology

3.1 Introduction - Study Design

This study was an exploratory qualitative study. Semi-structured, in-depth interviews were conducted with 10 Black male youth, aged 18-24 living in Philadelphia who tested positive for a rectal chlamydia or gonorrhea test and a negative laboratory-confirmed HIV test as reported to the Philadelphia Health Department in 2015. Qualitative data points included in-depth, semi-structured interviews to answer the research questions and achieve the research aims. The information obtained from the interviews provided a contextual framework to explore and describe emerging trends in HIV prevention, sexual culture among YBMSM and the cultural contexts in which sexual risk-taking occurs in this target population.

3.2 Study Setting

The Philadelphia Health Department, also known as Health Center One, serves two purposes. It is the main hub for Division of Disease Control in the city, housing divisions such as disease surveillance, communicable disease, ambulatory health services and sexually transmitted disease. It also serves as one of the eight district health centers in Philadelphia offering only STD/HIV-related services. Health Center One is an ideal setting to conduct research on HIV prevention programs for several reasons. In 2015, this clinic tested and treated 20,546 people, 1,607 of them identifying as MSM, and 47% MSM patients identifying as Black. The clinic also identified 178 of new HIV cases, and 371 cases of either rectal chlamydia and/or gonorrhea. Furthermore, Health Center One receives significant funding from AACO specifically for HIV prevention programs. Finally, Health Center One is looking to expand prevention strategies in YBMSM that are in line with national HIV prevention strategies.

3.3 Population and sample

Unprotected anal sex is the central pathway for HIV transmission from HIV-positive to HIV-negative MSM (Baggaley et al, 2010). In fact, unprotected receptive anal sex is the riskiest sexual act for acquiring HIV and is 18 times more risky than receptive vaginal sex (Patel, Borkowf, Brooks et al., 2014). Rectal STDs, such as chlamydia and gonorrhea, represent a biological marker for one of the riskiest sexual behaviors. Therefore, young Black men who had a reported rectal infection and negative HIV test in 2015 were recruited for in-depth, semi structured interviews.

Sexual orientation was not an inclusion criterion for several reasons. For one, sexual orientation is fluid. One may feel homosexual feelings, but have casual sex with women; one may feel heterosexual feelings, but have commercial sex with men. One may also feel equally attracted to both sexes. Therefore, the population sample includes a spectrum of young Black men who have sex with men - from those who identify as heterosexual and only engage in "situational sex" with men, to those who are exclusively having sex with men, to those who fully disclose being attracted to both men and women. Another reason is because of human error when completing and/or entering medical chart data. It is possible that one can incorrectly input chart information during an appointment and misidentify an individual's sexual orientation. A positive rectal STD test is a scientific way to identify a subgroup of MSM who are engaging in the riskiest sexual behavior for HIV transmission.

The inclusion criteria for participants were: 1) African American who; 2) is between the ages of 18-24; 3) lives in Philadelphia; 4) has a positive, laboratory-confirmed rectal gonorrhea or chlamydia test in 2015 from a health center in Philadelphia; and 5) has a laboratory-confirmed negative HIV test. Purposive sampling methods were used in this process. According to Creswell (2009), purposive sampling means the researcher selects individuals because they can "purposefully" inform an understanding of the research problem (pg. 156). The sampling was limited to participants 18 years or older, because obtaining parental or guardian consent in situations where the minor had not shared information about sexual activity with men could have jeopardized confidentiality.

Prior to the interview, the participant also needed to provide oral consent, have the ability and willingness to undergo a semi-structured interview, and be fluent in English. It is important to note here that inclusion criteria did not ask that the participant identify as gay, homosexual or same-gender loving. For this particular study, sexual identity is not important but rather that the participant is exhibiting risk factors for HIV transmission (engaging in CAI indicated by a positive rectal STD). Even though the participants are referred to as YBMSM in this paper, it was important that the researcher did not categorize the participants in that way during the study.

The recruitment and interview process occurred over ten months between January and November 2015. There were 114 eligible young men extracted from the database code; 42 eligible young men were contacted, and data saturation was reached at ten interviews. Data saturation occurred when new interviews ceased adding unique information regarding the categories and themes of interest and when participants began repeating what was learned in the previous interviews (Creswell, 2009).

3.4 Procedures

With the supervision of a field advisor, the researcher implemented the data collection at the Philadelphia Public Health Department. Data from this study came from purposive sampling in the STD/HIV Control patient database. Purposive sampling is a type of nonprobability sampling when a researcher chooses specific people within the population to use for a particular study. This method concentrates on people with particular characteristics who will better be able to assist with the research at hand. In this research, the target population had very specific inclusion criteria, significantly minimizing the general pool of YMSM of color in Philadelphia. While this type of sampling quickly reaches the target population, results can be hard to generalize and defend the representativeness of the sample to the larger population (Creswell, 2009).

Recruitment for the study used two information sources: SCID and eHARS. These databases are specific to the Philadelphia Health Department Division of Disease Control. They are secure, password protected, web-based platforms located on a restricted server utilized for disease reporting and case management in Philadelphia. The participant’s laboratory tests, history of viral loads and locating information are reported to PDPH through these electronic reporting systems.

An STD/HIV control epidemiologist ran a code that extracted all eligible participants from the reports in 2015. Using individually generated patient IDs, the researcher was able to look up the eligible participant in SCID and ensure he met the eligibility criteria. His information was then submitted to a second database check, eHARS, to check if he had a reported viral load indicating a potentially positive HIV status.

Using phone numbers and other locating information in the patient database, the researcher contacted each eligible participant by phone. The researcher went down the list of eligible participants, which were organized chronologically by STD test date. If the participant was unable to be reached on the first phone call, two more phone calls were made at different times during the week. If the participant was reached, his identifying information was confirmed using the identifying information reported to the PDPH and stored in SCID. The researcher used current confidentiality protocols and procedures used in the STD/HIV prevention program to verify the patient over the phone.

All eligible participants who were reached on the phone were informed of the goals and aims of the specified study. How the researcher obtained their information, why they were contacted, and how the researcher would use the data was explained. If the subject remained interested, the researcher and participant discussed when and where the interview would take place.

Prior to the interview, each participant provided oral informed consent to participate (See Appendix A). If there were questions regarding research methods, the researcher could address those and provide clarifications. All participants were informed that their input was being used to guide the development of HIV prevention programs for young African American men in Philadelphia. It was made clear that they were free to decline any question that made them feel uncomfortable or to leave the interview at any point. It was also clearly stated that no identifying information would be recorded or connected with the interview in any way.

All enrolled participants completed face-to-face interviews using a semi-structured interview guide with the researcher (See Appendix B). The interviews took place at a location designated by the participant. Regardless of the setting, interviews were in a private space conducive for audio recording. Two interviews took place in the field, while the remaining eight interviews took place in a private exam room located at PDPH. The interviews lasted between 35 and 75 minutes. All interviews were digitally recorded using a USB recording device. This device offered a way to store and organize the data. Interviews were transcribed verbatim by the researcher. After the interview, all participants were given information about PrEP programs in Philadelphia. Once the interview was completed, it was transcribed within 48 hours. Afterwards, the researcher resumed data collection from the list of eligible participants, beginning with the next person on the contact list.

Participant privacy and comfort was of the utmost importance for the research team and project in general. The researcher served as the interviewer and conducted all of the semi-structured interviews. In order to ensure consistent review and data collection, two pilot interviews were conducted. At the end of the two pilot interviews, the researcher requested feedback. None of the participants offered constructive criticism on the content or structure of the interview.

3.5 Protection of Human Subjects

The research protocol was reviewed and approved by the Institutional Review Boards of the City of Philadelphia and Emory University. The researcher worked closely with the field advisor to ensure that the protection of human subjects was carried out successfully. It is unlikely that participants were at any risk for physical harm as a result of participating in the in-depth interview. Due to the sensitive nature of the questions, it is possible some participants experienced discomfort during the interview. If this was the case, doctors located at Health Center One were available to address any psychological distress experienced during data collection. However, none of the participants in this study requested access to these services.

3.6 Instrument

Because this study investigated sensitive, highly personal sexual behaviors with a high-risk target population, limited demographic information was collected. This was limited to age, employment status and highest educational level completed.

The semi-structured interview guide consisted of 15 open-ended questions divided into three sections (see Appendix B) with questions framed within the IBM framework as well as potential probes to facilitate more in-depth discussion. The first section had questions relating to his experience being seen and/or tested and treated at a health center located in Philadelphia. Beginning the interview with these questions help the participant begin to discuss a sensitive and personal topic of sexuality. The researcher encouraged the participant to provide as much or as little detail as he felt sharing. The initial questions explored motivations for testing, testing behavior, and overall testing experience. The second section had questions specifically relating to the time the subject had CAI and contracted the rectal infection. This is significant to the study, because it puts the experience of CAI into one specific event, rather than using a broad, long-term recall approach, which can lead to recall errors. This section also addressed perceptions of HIV, perception of his risk of HIV, and how certain feelings or contexts may influence behavior. Some questions in this section used a Likert-type response scale of 1 to 5: 5 = very happy or having a high risk of HIV transmission to 1 = very unhappy or having a low risk of HIV transmission. The final section consisted of questions about HIV prevention messages, HIV prevention strategies, and areas of improvement for HIV prevention at health centers in Philadelphia. The last questions provided participants the opportunity to share any additional information that was not discussed during the interview.

Open-ended core questions did not differ between interviews, but prompts to elicit more insightful responses did. Although the questions served as a guide for the interviewer, participants were encouraged to elaborate on topics that appeared to contain information relevant to the study. To indicate that the participant was being heard, the researcher would provide reflective questions like “What I am hearing you say is….” and “I want to make sure I understand you correctly…” To elicit more detailed information, the researcher would ask the participant to “describe that situation or feelings a little more.”

Before each interview, the researcher reviewed the questions and reflected on information generated from previous interviews. After each interview, the researcher noted major insights, thoughts and takeaways. This reflection helped prepare the researcher for future interviews, guided additional probing questions and provided a general framework for data interpretation.

3.7 Data Analysis Methodology

Each interview was transcribed verbatim by the researcher to create the data set. Digital recordings were stored without subject identifiers on a password-protected computer. This computer was restricted to only the researcher and field advisor. The digital recordings were immediately deleted from the USB recording device after they were downloaded on the password-protected computer and transcribed. The interview transcriptions were stored on the same password-protected computer and did not contain any participant identifiers. Only participants' voices were being recorded to maintain confidentiality.

A total of 10 interviews were completed. Before the coding process took place, the researcher listened to the audio-recorded interviews several times. Once transcriptions were compared to recordings to ensure credibility, the researcher read each transcribed interview multiple times in order to ascertain the comprehensiveness of the information. This helped the researcher grasp the entirety of the interview without feeling the need to apply meaning or draw conclusions. Insights, feelings and reflections were noted on each of the transcribed interviews, which helped the researcher begin to tease out themes or ideas. The transcribed interview notes were coupled with field notes for data collection as well.

Next, the researcher went through transcripts line-by-line, which helped further identify main themes. Most qualitative analysis involves this coding process, or identification of themes that appear in text passages (Hruschka, Schwartz, St John, Picone-Decaro, Jenkins, Carey 2004). Coding entails compiling a list of defined codes corresponding to themes observed in the specific text (Hruschka et al, 2004). Coding text entailed several steps: 1) segmentation of text, 2) codebook creation, 3) coding, 4) assessment of reliability, 5) codebook modification and 6) final coding. This is an iterative process and each step may experience adjustments.

1) Segmentation of text - In this research project, the responses to each question were reviewed line-by-line and categorized into common themes or ideas. This process of data analysis occurred for each interview.

2) Codebook creation - The raw data was reviewed throughout the data collection process to start to evaluate emerging themes or trends. Once data saturation was reached, the researcher began the process of a cross-case analysis in order to compare significant segmentations of text throughout all of the interviews. The main commonalities were organized into preliminary themes. The researcher proposed the initial list of codes, paying close attention to how relevant the codes were to the study goals and whether the codes actually emerged in the text. The researcher randomly selected two interviews to build the initial coding classification system. Additional topics pertinent to these themes emerged in subsequent interviews and were added to the coding larger classification scheme. Codebook creation was an iterative process. Data were reexamined, reclassified and regrouped several times before a cohesive code book was developed.

3) Coding - Once the codebook was created, the researcher then imported the transcripts into NVivo, a software system used to manage large amounts of textual data. This helped organize the data and subsequent codes. Field notes and memos were added to the data in the software program and compared across participants. The code book included definitions for the classification codes and coding guidelines (see Appendix C for the code book). By selecting certain text segments and key words from the remainder of the interviews, the researcher was able to apply the codes to the entire data set.

The themes that emerged were framed around the IBM theoretical framework: attitudes, perceived norms, personal agency, overall intention, knowledge, skills, habits, salience of behaviors and environmental constraints so that each theme included an IBM subheading. Using this methodology, salient themes were identified in a both a deductive (codebook) and inductive (theoretically framed) manner.

3.8 Data Analysis Framework

Participants who shared their experiences presented multiple perspectives regarding behavioral and contextual factors in which they participated in risky sexual behaviors. Therefore, the analysis was guided by principles of naturalistic inquiry, which focuses on describing unique or complex situations as represented in their natural and contextual forms. This methodology requires the researcher to engage in low-level inference when synthesizing and disseminating data (Creswell, 2009). Going through each transcript line-by-line required the researcher to stay immersed in the data and helped guide emerging patterns and themes.

A qualitative descriptive content analysis provided a contextual framework to explore and describe new or formative insights into the sexual risk taking of YMSM of color in Philadelphia (Sullivan-Bolyai, et al 2005). Qualitative Descriptive framework is an effective way for the researcher to seek an accurate account directly from the subjects about ways to manage a particular health issue. This decreases the likelihood that competing explanations or frameworks are responsible for data results (Sullivan-Bolyai et al., 2005). Qualitative descriptive analysis tends to draw from naturalistic inquiry, which maintains a commitment to studying something in its natural state (Sullivan-Bolyai et al., 2005). Other theoretical frameworks in qualitative research such as grounded theory, ethnography and phenomenology are not appropriate for this study. With qualitative description, there is no pre-selection of study variables, no manipulation of variables and no prior commitment to any other theoretical view of a phenomenon (Sullivan-Bolyai, et al 2005). Rather, the goal of qualitative descriptive analysis is to develop a rich description of the experience depicted in plain language (Sullivan-Bolyai, et al 2005).

3.9 Data Quality

In qualitative research, there are four commonly agreed criteria for ensuring validity: credibility transferability, dependability and conformability (Freemen thesis, Trochim 2006). Accurately representing each participant's perspective in the transcribed data and using direct quotes is essential to credibility. The researcher transcribed audio recordings verbatim and compared the content of the transcript back to the interview recording to ensure consistency.

There were several ways in which this study sought to improve reliability, or the ability for the research to be replicated. Not only did the researcher follow the interview guide in a consistent manner, the step-by-step research steps were clearly documented. This established a method for research to be replicated in the future or in a different geographic area. The researcher who conducted all of the interviews also maintained field notes about perceptions and reflections after each interview for each participant. Finally, the interview guide was slightly revised during the interview process since certain topics were covered in a different order, probes varied based on participant and some of the question wording were modified for the purpose of clarity.

In terms of internal validity, the researcher has over five years of experience in motivational interviewing with various trainings and certifications. The interview instrument was pilot tested to ensure the terminology, time duration, flow and other logistical concerns were addressed. None of the pilot interviews expressed problems with the interview structure or content.

Chapter 4 - Results

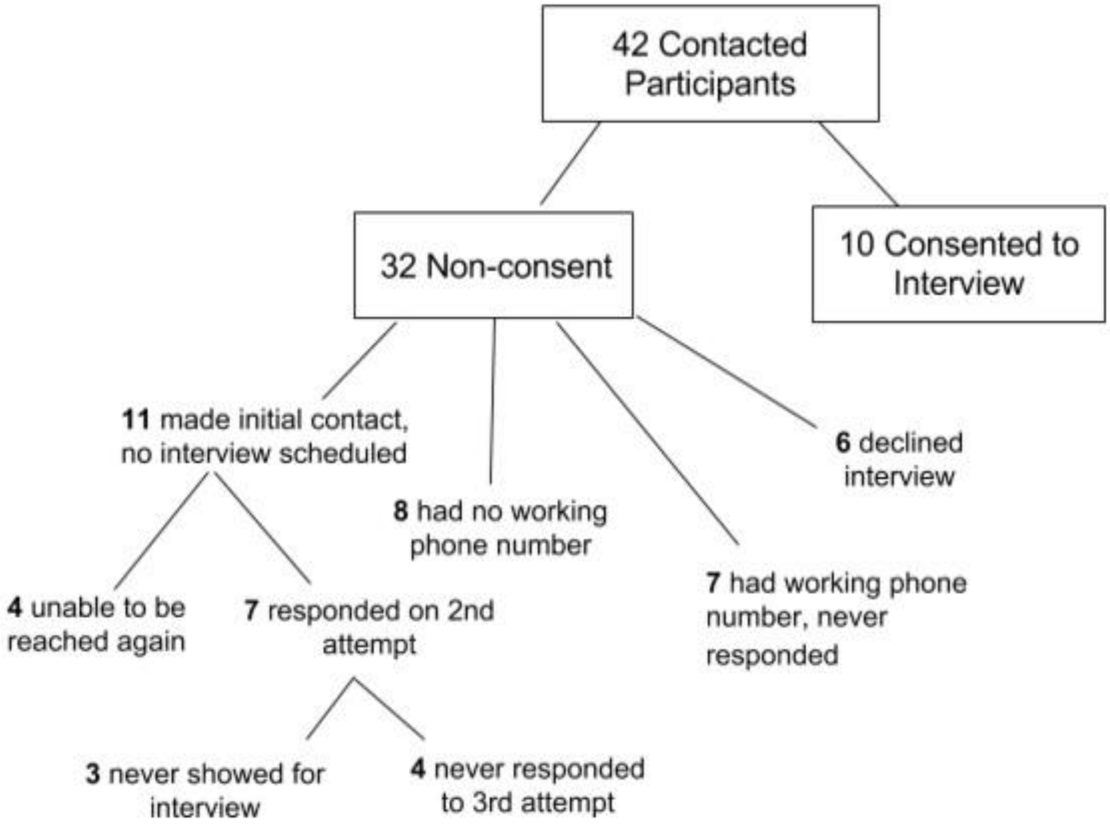
4.1 Introduction

This chapter provides findings from the content analysis of qualitative interview data with 10 YBMSM living in Philadelphia willing to participant in this research. Six major themes emerged from the data: 1) Partner dynamics; 2) Perception of HIV; 3) Conflict of CAI; 4) Improving relationships with providers and health messaging; 5) STD/HIV knowledge and skepticism with health care; and 6) Health is valued. All of these themes are analyzed within the constructs of IBM: attitudes, perceived norms, self-efficacy and intention.

4.2 Recruitment Results

From January 2015-November 2015, 42 eligible participants were contacted. Of the 32 participants who did not consent to the interview, 11 stated they were interested but were unable to schedule an interview at the time of the first phone call. Out of those 11 interested participants, seven responded to a second or third recruitment attempt and four were unable to be reached again due to a disconnected phone number. Of the seven who responded to another attempt, four were unable to schedule an interview and three never showed up for the scheduled interview. Eight of the 32 eligible participants did not have a working phone number in their record and were unable to be contacted. Seven of the eligible participants did have a working phone number, but did not respond to recruitment attempts and six declined to be interviewed.

Figure 7: Recruitment Results



4.3 Description of Participants

Interviews with ten YBMSM in Philadelphia took place from January 2015 - November 2015. All ten of the participants self-identified as African American. Their ages ranged from 18-24 years old with a mean age of 20.7 years. Six of the participants reported full-time employment, two were seeking employment, and two were students. Eight of the participants reported visiting a public health center, while two participants reported visiting an emergency room for their last HIV/STD testing experience. All ten participants stated they waited at least 45 minutes before being seen at any testing facility with three reporting their wait was over an hour. The longest wait time reported was two hours. Eight participants reported having mouth and anal swabs offered to them at their last medical appointment.

Sexual Behaviors

Four of the participants reported having steady male partners with whom they had sex regularly, but only one participant reported being in a mutually monogamous relationship. Eight of participants reported meeting the last CAI partner on the internet from either a social application or dating website. Three participants reported meeting partners on Instagram and five reported meeting their partners on Jack'd. All participants stated their male partner was older during the sexual encounter where they believed they were infected with gonorrhea or chlamydia. Nine of the participants did not know the exact age of their last partner. Two men discussed transactional sex acts for money. When asked about their perceived risk of getting HIV, most of the participants stated they had a moderate to low risk, with a mean of 2.3 on a 5-point Likert scale.

4.3 Themes

Participants shared a range of experiences, points of view and opinions during the interviews. Even with this variation, six key themes emerged as outlined by Table 1: 1) Partner dynamics; 2) Improving relationships with providers and health messaging strategies; 3) Perceptions of HIV; 4) Conflict of CAI; 5) STD/HIV knowledge and skepticism about health care; and 6) Testing is valued. Some of these overarching themes have subthemes that further expand the data.

Table 1: Emerging Themes and Number of Times Referenced

Theme I. Partner Dynamics - Engaging in CAI depends on the relationship type and partner characteristics. Subthemes: 1. Condom negotiation and efficacy 2. Trust and feelings of connectedness 3. Looking "clean"	64 References
Theme II. Improving Relationships with Providers and Health Messaging	42 References

Theme III. Perceptions of HIV Subthemes: 1. Views of people living with HIV 2. Views of being HIV-positive	33 References
Theme IV. Conflict of CAI - Engaging in risky sexual behaviors despite being aware of the risk of HIV, getting caught up in the moment and escaping reality	30 References
Theme V. STD/HIV Knowledge and Skepticism with Healthcare - Lack of information regarding STD/HIV transmission and distrust in treatment and prevention efforts	25 References
Theme VI. Testing is Valued	17 References

Theme 1: Partner Dynamics

Participants shared how these interactions and observations of their partners determined if they were going to have CAI. In this research, partner dynamics played a role in CAI in three main ways: 1) condom negotiation and efficacy; 2) trusting and feeling connectedness to their partner was a motivator for CAI; and 3) the "look" or "cleanliness" of their partner also determined whether or not they would participate in CAI. For some of these men, it was only one of those aspects, for others, it was multiple.

1) Partner's responsibility for safer-sex negotiation - When asked specifically about condom negotiation the time they believed they were infected with a rectal chlamydia or gonorrhea, participants stated they did not discuss condoms at all and/or it wasn't their responsibility to get a condom. Often there was a power differential between partners, where the participant felt compelled to follow the insertive partner's lead and was unable or unwilling to insert their own opinion. Three participants mentioned they meant to use a condom but didn't, and one participant mentioned his partner had condoms available yet a condom was not used. Others shared different experiences. One participant said, "I don't bring it up with my partner. If he wants to use a condom, that's on him." Another participant said, "We don't have conversations like that" and "if he doesn't want to get a condom, I don't think much of it." A third participant said, "we decided not to use a condom...well *they* decided not to use a condom...I guess they felt comfortable enough to do that." In all of these situations, the participant lacked self-efficacy in negotiating condom use.

Other participants implied that the underlying intention of meeting up determined whether or not they would use a condom. Several young men mentioned if they met up with a guy at a bar, or through a friend, they were more likely to build a connection with that person first. For the participants who reported this, the intention of using a condom was much less likely. For those who mentioned meeting their last CAI partner on the Internet or phone application, they had a stronger intention to use a condom. Whether they followed through with that intention varied. One participant in particular stated, "Let's say we are going to dinner, you know, other things can happen. But when you plan on sleeping with that person and you meet up with that person, I feel less likely to use condoms."

In the same vein, several participants reported condoms to be present during their last CAI, just not utilized. However, none of the participants mentioned bringing condoms or having condoms personally. One said, "There are some times when condoms are present and you just choose not to use them. It is just the little things that make me not use them. Maybe I want to see what it feels like, or maybe the guy is pushy about it or maybe he said he doesn't like them." Another participant said, "We actually did talk about condoms and he said he had some and that made me feel better. He also had lubricant which made me feel better too, so he was prepared...but you know…"

2) Trust and feeling of connectedness. Connectedness was a commonly cited factor influencing the participant's decision to have CAI. Several participants reported wanting to be connected to their partner during sex or that they were seeking a connection that goes beyond physical pleasure. One said, "I think it is more about my feelings and my connection with them that makes [bottoming] a little more tolerable. My connection with you and how attracted I am makes me want to do certain things." These same sentiments were echoed across other interviews.

Another participant stated, “I want personal affection. I would get it temporarily while someone is kissing on you and touching your body, but once it’s done and over, there’s no more touching...it is just over.” This statement illustrated the notion that engaging in CAI for some of these men will lead to deeper feelings of intimacy and emotional connection. Additionally, the idea of the insertive partner being the “right” person to bottom for was also a common thread. One participant exclaimed, “Depending on the person, I won’t do certain things, but for the right person, I’ll bottom. But it has to be the right person.”

In seeking that connectedness, a poorer state of mental health is associated with being more willing to engage in CAI and several participants stated that they were more depressed or anxious than normal during their last CAI encounter. One participant said, “If I am feeling sad or a lonely state of being, it makes me more willing to submit to my partner. Those are the times where I’m like, OK, I want to feel more penetrated.” A second participant said, “Sex is an emotional type of thing and so depending on what type of emotion you have, it can take a toll on you. It’s like, ‘oh I am feeling bad, so let me let this guy take advantage of me.” Similarly, when asked about feeling close to his partner, the participant exclaimed, “When we are having sex, I feel it is the only way to get him to feel close to me.” Along the same lines, another said, “I am more of the receiver and it is a control issue for me. Most of the times, I am more controlling, but in this way I am more submissive and it lets me lose control.”

Other participants were looking for some sort of authoritative figure in their lives to feel connected. One participant said, “I couldn’t run to you when I needed you or get that comfort I needed from you as a dad and so now, I am running to another man who is making me feel the same way I want you to make me feel….If I don’t have that man role model in my life, where am I going to get it from?” A second participant stated, “I desired more of a male influence like a man and those guys were mostly tops.” Finally, a third stated, “When I started having sex with guys, it would be like I did something bad at school or in the house and I wouldn't be acknowledged from my parent. So like, if I can't get someone to get on me about it, I would be looking for like a punishment. I would look for that same feeling of like if you do something bad, you need to get punished and bottoming hurts more than topping so.”

Trust with an insertive partner was another driving force behind the decision to have CAI. Participants believed it was safe to have unprotected sex with a partner he trusted and described having CAI with someone he established trust with was low-risk behavior. One participant said, "It was always a thought in my head I could get it, but it was just me taking a word from my partner or the other person I was having sex with to be like, 'You don't have nothing, right?'" Among participants, there was also a common assumption of believing the insertive partner would disclose HIV status to the participant. During another interview a participant said, "I feel confident that they know their status so to me, I don't think much of it [CAI]. I trust that person."

In the same vein, using condoms also seemed to imply distrust. A participant stated he didn't use condoms with his partner because "we came to an agreement where as though we are faithful, loyal and honest with each other that much that if I don't use a condom and you don't use a condom, then that's like saying basically we ain't going to get nothing." When talking about condom use and trust, a second participant stated, "If I am in a relationship with my partner and if I am going to be honest with you and you going to be honest with me, that is something [an STD] that should never come back to me." Finally, a third participant stated, "A lot of the time it is with people I knew and trusted so I feel I didn't need to talk to them about condoms." Participants seemed to think that asking their partner to use a condom implies that they think their partner is diseased and condom-free intercourse can be seen as a sign of trust. One interviewee stated that "I want to trust him and not using condoms is a part of the trust. I believe he will tell me if he has something."

3) "Look" or "Cleanliness" of Partner - This study showed that participants assessed the disease risk of a potential partner by their partner's appearance. While some participants did acknowledge they know they cannot discern if a partner has HIV, they were able to describe signs they felt might indicate if someone was HIV-positive. Often times they referred to their partner as "clean" and described physical attributes that related to cleanliness. If a partner appeared to look "clean" a participant would be more willing to bottom for him, especially when if they expressed not particularly enjoying bottoming. During one interview, a participant remarked, "You know, he looked nice and clean and we had good conversation." Another stated, "I see it like if the person looks clean, if they look good, you're going to do whatever." One participant even used the skin color to determine whether or not his partner was “sick.” He said, “I look at their skin if they are pale or in their face. I have a gut feeling and the person may look sick or appear sick and that is when I think to myself, ‘Oh he has something.’”

Partner Dynamics in the IBM Model

This section summarizes the participants’ experiences with partner dynamics and the decision to engage in CAI within the constructs of Integrated Behavior Model. Participants’ attitudes, perceived norms, personal agency and overall intention when engaging in CAI are outlined in this section.

Attitude: Overall, the young men in this study report having negative attitudes towards CAI. Some express pain, discomfort or reluctance about CAI. Only one participant expressed positive sentiments towards engaging in CAI stating that it was a “completely different sensation.” A common sentiment was that CAI was a lot of work and it took time to prepare their bodies for anal intercourse (AI) in general.

Perceived Norms (social pressure): All of the participants indicate the influence of their significant other (sexual partner) was a significant indicator in whether or not they would have CAI. It was not clear if there was a larger social pressure or social standard whether or not to have CAI; however, it was a social norm to believe that their partner would disclose his HIV status or sexual health history and/or that he would be the one to initiate condom use with the participant before engaging in CAI.

Personal Agency (sense of control): Most participants felt little control in talking to their partner about HIV status and condom use. In fact, none of the participants mentioned engaging in conversations about HIV status or condom use if their partner did not bring it up first.

Overall Intention: The majority of participants stated CAI was something they would do for their partner in certain circumstances, but not something they would actively seek. In fact, most of participants identified as being “versatile” and/or preferring the insertive sexual position. CAI was a situation that happened under specific circumstances for unique partners.

Theme II - Establishing a Relationship with A Provider and Health Messaging

During the second half of the interview, the participants were asked to describe their perfect medical care provider. Many of the participants offered detailed descriptions and thoughtful answers to what characteristics a medical care provider should encompass. Several participants discussed the type of relationship they would like to have with their primary care provider, and the majority of interviewees expressed the desire to have their doctor be personable and relatable. However, they felt as though sharing anecdotes or experiences with each other would help the participant open up to the provider. One participant stated, “I want someone in the medical field who can say, ‘I have been through what you’ve been through before and I know how it is.’” Another participant stated, “I want it to feel like a family thing to where they are checking up on you, maybe once a week.” Another expressed that it would be easier to receive information “from a person who you feel like has opened up to you.” Other answers reflected similar feelings. One participant said, “I think I just want to know people are caring about me. It can be hard to get tested and have the potential of finding out you may have something, but a doctor who treats you like a friend would be nice. I would feel more comfortable opening up and talking about the hard stuff.”

Several participants reported that getting factual information from a provider was extremely important. One in particular said that “Knowing facts, giving it to me straight. Relay it to me as clearly as possible, lay out my options and let’s find a solution” would be a way a provider could help keep him HIV-negative. Other similar sentiments were echoed in other interviews, and majority of respondents felt they wanted the information to be clear and “not sugar coated.”

Another important takeaway was the need for health messaging to move beyond the scope of condoms. Several participants expressed a desire to be told other protective behaviors aside from the importance of using condoms. For example, when talking about how a doctor or nurse could help him stay HIV-negative, one participant said “They were basically telling me don’t have sex or if you have sex, use a condom. What if I don’t want to use a condom?” The same theme was threaded throughout other interviews as well. A second participant asked, “There are people out there that don’t like condoms. Like so my thing is, how can I help prevent infections in myself and my partner without the answer being use condoms?” Another participant stated that he wanted his provider to just talk to him and say, “If you want to do this, here is a safer way to do it” and another said, “I don’t want to be told just to use condoms.” On why this would be important, one participant said, “I think it shows that the center or provider has a sense of reality of what is going on.” Having a deep understanding of what other protective behaviors are feasible in this community is an important characteristic of an ideal medical care provider.

It is interesting to note that there were some conflicting needs from participants. Some participants expressed that face-to-face connection was important in building trust and establishing rapport with a provider, while others stated that they preferred to talk to someone without disclosing their identity. One participant stated, “An anonymous person is the most comfortable person” and felt more at ease asking questions about his sex life to someone behind a screen. Finally, another participant expressed helplessness in that there wasn’t anything a medical provider could do for him. He stated, “You are already handing out condoms. That is all you can do. You can’t get into people’s bedrooms; into their cars...you can’t make someone do something they don’t want to do.”

Several participants noted how they would appreciate role models or social support groups in the community. They believed seeing someone who had shared similar experiences, who was HIV-positive; who could share their story would be helpful in changing their behaviors. The idea of someone being “on call” was brought up in more than one interview. One of them described this resource as, “Where you are in the heat of the moment and getting ready to do something, [you] need that person they can call to say, ‘Hey man, don’t do that’” like they could talk you out of it.” Another interviewee brought up the idea of having meetings or groups to talk about risks. He said, “I think it would be helpful to have some sort of buddy system or support system to turn to you when you need it.”

Half of the interviews stated they couldn’t remember the last HIV prevention message they saw. Those that did remember a message said it didn’t really resonate with them. Some said the messages they remembered felt antiquated, used a fear factor or had only a “get tested” sentiment that was not effective. However, almost all of the participants expressed a need for clear, direct messaging about transmission and living with HIV. Several participants noted that the media and internet scares them. One participant said, “I feel like any time you Google anything related to STD or HIV it is a big no-no. It is the worst thing you could ever do and you automatically assume the worst.” He continued to say, “You get freaked out. You go, ‘Oh my God, look at all these pictures. He has sores all over his face.’ when in reality, it isn’t like that.”

Establishing a Relationship with a Provider and Health Messaging in the IBM Context

Attitude: There were two participants who expressed great dissatisfaction in the quality of healthcare they received when they were diagnosed with their rectal STD. It is important to note, however, these two respondents received care at emergency rooms. The remainder of the participants stated they were satisfied with the care, primarily because they got treated and knew they were “OK.” No one seemed overtly enthusiastic or greatly satisfied with the care they received.

Perceived norms: There was no explicit indication of social pressure of maintaining a strong relationship with a health care provider, but the participants did feel having a role model in the community would be helpful in changing social norms.

Personal agency: There was no indication that this sample of YBMSM had the ability to find a health care provider that met their needs. In fact, the participants sought out testing locations based on convenience and location. One participant actively sought a testing clinic because he felt it was far away enough from his home that no one would recognize him there.

Overall intention: There did not seem to be a strong intention to seek out a healthcare provider with whom they feel connected to or with whom they feel they can share experiences. Even though friendship, openness and clear information is important participants did not seem to feel strongly about finding a provider like this on their own.

Theme III - Perceptions of HIV

Participants were asked to describe someone who had been diagnosed with HIV and how an HIV-positive diagnosis would affect their own life. All participants reported having negative perceptions of someone who was diagnosed with HIV. These types of responses fell into two categories: those that influenced how the respondent saw himself and those that influenced how they were seen by others or society as a whole. One participant compared it to being diagnosed with diabetes, but still expressed that HIV is an undesirable health outcome.

1) Perception of people living with HIV. Each participant expressed feelings of pity and lack of social acceptance of someone who has been diagnosed with HIV. When reflecting on seeing profiles on a dating application, one participant exclaimed, “I know there is a stigma on people who have HIV and that makes me sad. There are people who make it very well known they are poz...it affects how I look at them. I look at them in a negative view.” A second participant mirrored similar feelings stating, “It makes me sad that they have to label themselves with it and all the thoughts go through your mind about what kind of sex life they had.” Finally, a third man said, “I think the sketchiest thing I can about them 99.9% of the time...they look like regular people...I guess they are regular people.”

Upon self-reflection, the participants noted that severe stigma associated with a positive diagnosis would put severe limitations on their future. Participants felt certain they would face rejection from partners and society as a whole. On thinking about testing positive for HIV themselves, most participants became distressed and expressed fearing huge obstacles if he had a positive test. One participant stated “I was thinking if I had HIV, I don’t want to live. I don’t want to tell my friends and family I had it.” Another participant stated “I wouldn’t be OK with myself. I wouldn’t tell anybody and I wouldn’t have sex anymore because it is a lot to talk about and everyone isn’t with it right now.” A third participant stated, “What was going through my mind was how scared I felt if he was going to accept me for what I have?” Finally, another participant had similar feelings about rejection from a partner, stating “I don’t want to be denied by a lover because I have a life changing disease.” Only one participant expressed neutral feelings about HIV due to his familial support.

2) Views of being HIV-positive. Living a life with limitations was another underlying thread when asked about testing positive for HIV. Several participants expressed how their lives would be negatively affected if they were to have HIV. One said, “I can’t do the things I want to do because HIV puts limitations on everything. I don’t want to live with those limitations.” A second participant expressed fear for his future, stating that he has a “fear of not having children, fear of a shorter lifespan and what if he doesn’t want to take medication. He asked, “what if I just want to be regular?” During one interview, a participant reflected. “You just be more conscious of how you live and the choice you make…the things you eat, the interactions you have.”

Along with experiencing significant stigma from families, participants reported experiencing rejection from sexual partners and social networks as a whole. When asked about what he thinks of someone becoming HIV-positive, one participant stated, “I think it is scary because it scares a lot of people. Everyone says it isn’t a death sentence, but in the gay world, when it happens, you might as well just mark yourself off because I feel like people reject you.” Another participant stated, “I feel like as a black, gay person, it would be the worst thing that could happen to me. Not necessarily because of the actual disease, but how people would treat me”

Pride was a common term used to describe being HIV-positive and several participants talked about how a positive HIV test would bring about feelings of shame. One participant described, “It wouldn’t be something I am proud of. It would be something I was more shameful of…” A second participant had similar feelings of becoming HIV-positive, stating, “I am proud to be a black person, proud to be a gay person, but those aren’t things that I chose in my life. It would be another statistic that I fall under, but this one wouldn’t be positive you know…It just isn’t something I would be proud of.”

It is important to note that three out of the ten participants stated testing positive for HIV isn’t something they think about. One participant stated, “With one time partners? We just do it and move on. [HIV] isn’t something I think about.” Another participant expressed that he would be grateful to test HIV-positive so he could stop having anxiety about testing.

Perception of Testing Positive for HIV in the IBM Context

This section includes participant's descriptions of their perceptions of testing positive for HIV within the IBM context. It includes summations of participants' attitudes, perceived norms, personal agency and overall intention of staying HIV negative.

Attitude: The general attitude of testing HIV-positive was detrimental to the participant. Most young men felt HIV would impact every aspect of their life in a negative way. They reflected heavily on how society would view them, the rejection they would face and limitations placed on their future.

Perceived norms: All participants felt that HIV is viewed negatively in their community. During some interviews, young men considered living a life with an HIV-positive diagnosis. They rationalized that HIV is no longer a "death sentence" and that there are treatments available, but that they themselves would not want to experience stigmatization and rejection.

Personal Agency: Participants did not feel they had the ability to prevent a positive HIV diagnosis. In fact, participants expressed a sense of victimization if they were to have a positive HIV test.

Overall Intention: The majority of respondents believed that they are exhibiting protective behaviors to stay HIV negative by using partner heuristics, such as appearance and safe sex/condom negotiating by a partner.

Theme IV - Conflict during CAI - Cultural Norms of Safe Sex and Sexual Desires

Participants were asked to talk about the specific time they had CAI and believed they became infected with chlamydia and/or gonorrhea. Most of the participants were forthcoming and comfortable discussing this question; only one participant refused to answer. The majority of participants expressed feelings of conflict each time they had CAI. In fact, none of the participants reported particularly enjoying being the receptive partner, often times admitting that they didn't want to do it or that they try not to do it often.

There were a few motivating factors of engaging in CAI. Some of the participants seemed to be personally and internally gratified when they felt they pleased their partners. One participant in particular stated, “If he get off and I don’t, it’ll still make me feel like I did my job or I got what I wanted to get done in the situation.” Other participants stated it was a way of “escaping reality” or relinquishing control. One in particular described his feelings as, “The feeling at that time was more important than sitting on the hospital table or taking pills for the rest of my life. I don’t hear the ‘you need to use protection.’ I hear the, ‘you need to be in this alternate world for a minute.’”

The participants also described how they let go of certain inhibitions during sexual encounters. Oftentimes they referred to “the heat of the moment” and talked about their inability to stop and get a condom. There was a drive for immediate sexual pleasure at the risk of a potentially poor health outcome. These feelings could be compared to a tipping scale: on one side, there is the drive for immediate and intimate sexual pleasure, but on the other are the feelings of guilt that are felt after participating in a risky event. Participants described acting in discordance with a perceived norm - that CAI is risky. One interviewee said, “I know it is bad, but in that moment, it is just like I want to F*** and it isn’t like I don’t care, it is just like in that intimate moment…” Another one said, “I don’t even think about it. I just think about it afterwards and I be beatin’ myself up.” He continued to say, “You not even thinking about yourself if you HIV-negative and you havin’ sex without a condom...but like...the moment outweighs thinking about that.” Finally, one man described a natural urge that takes over thoughts of protecting yourself. One participant said, “It is basically your dick vs. your brain. Your dick is going to win out you can think things through, but there is going to be this invincible mentality thing.”

Despite engaging in CAI, all participants were aware that HIV could be transmitted through CAI and that there was increased risk of HIV transmission by having CAI with men and specifically, being the receptive partner. One participant stated, “People told me, how can you have sex with a female and have sex with a male? Don’t you know if you have sex with a man, you’re going to contract AIDS?”

Among all the participants, there seemed to be a general awareness of risks associated with their sexual behavior, but that pleasure and sexual gratification outweigh any risk. One participant stated, “I was weighing I am I going to do it and catch something or get my pleasure out and for me, it was pleasure.” Another participant said, “When you’re in the act and you’re doing it, you know there is a possibility of something happening, but you have the temptation and think, ‘oh well maybe it won’t happen this time.” The same sentiments resonated throughout the participants where they perceived their actions as “risky” but that they did not think about consequences of actions during those times.

While most of participants reported having feelings of guilt or regret after a sexual encounter where they had CAI, those feelings do not prevent them from engaging in CAI again. One said, “I have been really fearful and really weary for a day or two after something. But worrying about it constantly isn’t realistic...this is what I want, this is what my body is telling me I want, so those feelings don’t last very long.” Another said, “If I was clear, I would wait a good month or two before having sex again and then once I do engage, it is like a spiral and I get into a pattern of a lot of sex back-to-back.” One participant said “I don’t understand the things people do and why they do them and I don’t understand the things I do and why I do them” but continued to say, “Like once all the clothes are off, it’s like why am I doing this?’...but then it’s like, ‘OK, I’m bottoming and then that is pleasurable and that is all I need to push me over the edge to rationalize...but then after, you’re like, ‘Why do I keep doing this to myself?’” These expressions highlight the internal conflict felt by participants.

Conflict of CAI in the IBM Context

Attitudes: The overall attitude of CAI was that the pleasure outweighs the risk, and that despite awareness of HIV transmission or importance of condom use, individuals will have CAI if it is the right person.

Perceived Norms: It is clear through participants’ answers that there was a known greater risk for STDs and/or HIV by sleeping with men. There were also underlying tones of stigma related to having sex with men.

Personal Agency: There were varying motivations for engaging in CAI with a partner. Some of these motivators include escaping reality and pleasuring a partner. There was no indication that the participant did not have control over being the receptive partner, only that he didn't have control over getting/using a condom as discussed in the first theme.

Overall Intention: CAI was circumstantial and there are several factors that play into the decision to have CAI: partner dynamics, perception of "cleanliness" in a partner and sexual satisfaction. It is not apparent in this study that these YBMSM actively seek CAI, but that it is a situation resulting in specific circumstances they can sometimes not predict.

Theme V - STD and HIV Knowledge and Skepticism in Health Care Exists.

The power of increased knowledge to motivate logical sexual behaviors to reduce HIV infection constitutes the crux of most HIV/AIDS campaigns. Providing information has been believed to help empower at-risk populations to make healthier decisions and reduce risky behaviors. While there were no questions directly related to HIV knowledge, this study indicated an overall lack of knowledge about HIV/AIDS transmission in this sample population. Additionally, there also was a high level of mistrust in current treatment and prevention methods. The internet was the main source of information for participants. While it was not clear which websites they specifically accessed, "Googling" was a common term used by participants when they talked about getting information about HIV and HIV prevention.

Throughout discussions regarding HIV, sexual health and partner dynamics, there were several questions and clarifications asked by the participants. One participant said, "My schools didn't really explain to me as far as going into details. All they said were you get HIV, you die. It wasn't like you can still do it and get the pleasure for it." Another said he didn't know how to answer a certain question and stated, "I don't know if you have to have HIV in order to contract it or does it contract when like his DNA and my DNA comes together?" In a different interview, a participant remarked, "Like I don't have the definition of exactly what HIV is and symptoms that people tell me, like you'll die or get skinny and cough and throw up." These sentiments demonstrate a severe gap in knowledge. Participants know HIV is sexually transmitted and that it can cause adverse health outcomes, but there remain steep obstacles in clarifying some of the information.

Participants were asked about protective behaviors they would be willing to try, including being on PrEP. The majority of participants reported hearing about PrEP before and they expressed an interest in the medication, however, several of them had misconceptions about PrEP. One participant thought it was only available to certain people, others had no idea how they could pay for that kind of treatment and finally almost everyone said they would need more information about PrEP before making a decision to take it.

When asked if they would try it, several participants said it was either not something they thought they needed and/or they would not trust it could help prevent HIV. One expressed his disbelief by saying, "If I take this medicine, what else are they not telling me? [It feels] like we are going to let you have sex with someone who we know is HIV positive and you are going to see if it works." Another said, "If you think that it really did prevent you from getting something you didn't want, you'd think everyone would be on it, but people aren't so…" One even stated that "the government has a cure for it, and they just want you to spend money." These sentiments express severe skepticism and lack of information about PrEP as a prevention method.
The unknown side effects of PrEP were also identified as a barrier to taking it. One participant said, "Maybe those pills will make my HIV and AIDS go down, but my fear would be that it would bring cancer or a tumor…[it] won't talk about brain this and heart side effect that. That's enough for me not to take it. Everything has a side effect."

Several participants said they think taking a pill after an exposure would be better for them and expressed that they didn't think they needed taking a pill every day. Often times, participants stated that they "didn't have sex like that" or didn't have a lot of "regular" partners as reasons why PEP would be a better option for them over PrEP.

Low HIV/STD Knowledge and Skepticism in PrEP in the IBM Context

Attitude: Most participants were willing to ask questions if they were unclear about information regarding disease etiology or treatment. This demonstrates an eagerness to learn facts and better inform themselves. The majority of participants felt untrustworthy about the side effects and overall effectiveness of PrEP as a prevention method. They also did not feel PrEP was an appropriate prevention method for them.

Perceived norms: There was no indication that learning more about STD/HIV transmission was important to significant others (sexual partners, friends, family) in their social groups. However, accessing the internet for information was a common thread between interviews. No one indicated that PrEP was common among their peers or stated they knew anyone who was on PrEP.

Personal agency: The participants sought information on the internet on their own; however, that information caused more fear in their feelings about HIV.

Overall intent: The answers provided during interviews demonstrate a general willingness to learn the right information about STD/HIV transmission. The majority also expressed interest in PrEP, but would need more information about side effects and effectiveness before deciding to take the medication. It is interesting to note that almost all of the participants are interested in PEP, but did not express any hesitation about effectiveness, side effects or mistrusting that method of prevention.

Theme VI - Testing is Valued

While there is an apparent gap in knowledge about HIV/STD transmission etiology, participants in this sample all reported getting tested for HIV/STDs at least two times a year, sometimes up to four times a year. This follows current HIV screening guidelines set by the CDC. Most of the interviews reported that health is important and staying healthy is a priority in their lives. There did not seem to be any one underlying reason for getting tested among this sample. A few reported getting tested because a partner told them, a few others because they “felt” something was wrong and the remainder because they knew it was something they needed to do. Another important commonality was that almost all men were offered STD testing for both their rectum and throat regardless of where they were tested.

A common thread was getting tested to protect the wellbeing of others. One participant stated, “It is important to me to get checked because I need to protect my own health and the health of my partners.” Another expressed the same sentiment, “I just want to know what is going on. It can be scary, but it is important. For myself and for other people.” Finally a third said, “I just want to know what is going on and to protect myself and others around me. I don’t want to have nothing and not know.”

Value of Testing and Protective Barriers in the IBM Context

Attitude: All of the participants felt strongly about not only protecting their own health, but the health of others with whom they are interacting. It is clear that no matter what the motivation for testing is, testing was important and participants test according to recommendations.

Perceived norms: Most participants expressed that STD/HIV testing can be scary and daunting, but it is better to know.

Personal agency: Participants expressed sentiment that testing and knowing their health status was in their control. They did not report any barriers or challenges that affect their self-efficacy or perceived control over getting tested regularly.

Overall intent: The majority of participants in this study stated they want to stay healthy, health is valued and keeping others around them healthy is something they feel responsible for.

Chapter 5: Discussion

5.1 Introduction

This study provides qualitative data that illuminate the lives of 10 HIV-negative YBMSM living in Philadelphia who engages in high-risk behavior through unprotected anal sex. The research aims that guided the research were to 1) identify the target population's perceived risk of contracting HIV; 2) explore social and behavioral barriers that hinder individual HIV prevention efforts; 3) identify if services offered by public health centers, like PrEP and PEP, are currently being accessed by target population to prevent HIV infection; and 4) explore how HIV prevention methods such as PrEP and PEP could be more effectively implemented at the public health department. The perspectives of these young men have been synthesized and interpreted using qualitative descriptions and analyzed in the IBM framework.

The IBM framework provided a way to contextualize the data from interviews. It allowed the researcher to place participant's experiences into both indirect (attitudes, perceived norms and personal agency) and direct (intentions, behavior, knowledge and environmental barriers) factors that influence the likelihood of performing certain protective behaviors. These include discussing HIV status, using condoms and getting tested. While each arm of the IBM framework weighed differently for each participant, attitudes, personal agency and perceived norms influenced one another and ultimately impacted the participant's overall intention.

The data collected during this investigation was sensitive, personal and explicit. The findings indicate that sexual health among YBMSM is much more than just the presence or absence of a disease, or more than just using a condom or talking about HIV with a partner. This research sheds light on circumstantial, multi-faceted, complex and culturally embedded barriers that help maintain high rates of HIV in this target population. As a result of this study, certain factors that put these YBMSM at risk and the underlying causes of risk behavior are divided into six salient themes. While these are not necessarily new insights for this general target population, it is certainly helpful in how to specifically tailor HIV prevention programs in Philadelphia.

Understanding situations that increase HIV risk among YMSM requires consideration of the context in which the risky behavior occurs. Previous research has demonstrated there is no significant racial or ethnic differences in the rates of CAI among MSM, but that there are contextual factors surrounding sexual risk behavior that are important to understand. Relationships and partner dynamics are one such context. Given that the sexual transmission of HIV is dyadic in that it requires the participation of two individuals in a sexual act, investigating relationship dynamics and sexual risk behavior is an important theme.

5.2 Partner Dynamics - Age of Partner and Sexual Role

The insights provided about partner dynamics were complicated and circumstantial. As stated before, understanding the context in which risky behavior takes place is essential to not only better understand risk taking, but also to develop better interventions that target this interpersonal influence. The data reveal several important points on which to focus. First, each of the participants reported that their last CAI partner was older. This finding could add to the growing body of literature suggesting that condom decision-making may be influenced by a power differential between older and younger men related to age and by the sex roles these men assume (Feldman, 2010; Fields et al., 2015; Mustanski et al., 2011). Fields et al (2015) specifically found that partners of a "lower status", meaning young age, more feminine or taking on the role of being the receptive partner, would be more likely to submit to the wants of a partner with a "higher status" who presented as more dominant, older, masculine, and insertive partner. The vulnerability and lack of self-efficacy in these YMSM has placed them at a disadvantage to their older, more powerful male partners.

Another study conducted by Mustanksi and Newcomb (2013) also found that older partners in sexual networks of Black YMSM may be driving rates of HIV infection. This qualitative study found that YBMSM are more likely to not only have partners of the same race, but that they are older. The motivating factors to have an older partner range from seeking emotional maturity to someone who can introduce them to the LGBT community. They found that unprotected sex with older Black partners, a population with a high rate of HIV, could be associated with HIV seroconversion in YBMSM. Finally, Arrington-Sanders et al. (2013) found similar trends in partner selection in that YBMSM seek two benefits from older partners: the ability to be exposed to life experiences by the older partner and emotional support.

Along the same line, several men mentioned participating in CAI to find a deeper connection with a partner. Balan, Carballo-Dieguez, Ventuneac and Remien (2009) also found that not using condoms allows for more intimacy, more satisfaction and connectedness with a partner. While not explored thoroughly in this research project, the need for connections with a partner could be driven from the general feelings of rejection in certain community groups. Research has shown conflict in YBMSM sense of identity and social acceptance in that they have been found to be particularly vulnerable to social isolation and lack of social support due to experiences with racism and homophobia, which may have implications for riskier sexual confusion (LeGrand, Muessing, Pike, Baltiera et. al 2014; Han, Ayala, Paul, et al., 2015) However, having sex with men can compound this isolation especially as it may go against the grain of normative masculine Black culture (Fields, 2015). While the concepts of identity, sense of community and Black culture were outside of the scope of the project, it warrants further investigation in Philadelphia.

Data collected from this study may support the notion that men associate gender roles with the sexual role one plays in sexual encounters. According to a study completed by Malebranche et al (2007), being the receptive partner was seen as a feminine role while being the insertive partner is typically seen as the masculine role**.** These associations determined the type of sexual behavior the study respondents were willing to engage in as well as the type of partner they selected. Men in this study expressed that engaging in CAI was not something they ever intended to do or particularly enjoyed, but rather, it came about to do the circumstance with the partner.

The recent study conducted by Fields et al. (2015) found rigid expectations of masculinity from their families, peers and communities experienced by YBMSM in three New York cities and Atlanta, GA. YBMSM in this study stated they equate homosexuality with femininity and the psychological conflict and strain this places on the young adult negatively affects self-esteem and self-worth, both of which have been associated with increased HIV risk. These risks are particularly relevant to youth because they face the challenge of identity development and exploration, seeking affirmation from families, peers and other significant others. Young adulthood is a time where social norms and impressions from significant others are crucial. Philadelphia prevention efforts should take into consideration these character identity developments in their youth to better target services, health messaging and prevention efforts.

5.3 Partner Dynamics - Communication and Condom Use

The data derived from this research does not necessarily demonstrate negative feelings towards condoms, but emphasizes a lack of self-efficacy in using them. The absence of reported willingness to ask a partner to use a condom reveals a clear disconnect: participants are aware of HIV and risk of testing positive for HIV, but do not take proactive steps to protect themselves in terms of condom negotiation. This study revealed that consequences of testing positive for HIV do not influence respondents' willingness to ask their partner to use a condom or willingness to ask their partner's HIV status. In fact, some participants reported it was their partner's responsibility to initiate condom use.

It is possible that personal responsibility is closely tied to social norms associated with unprotected sexual encounters. A qualitative study conducted by Peterson, Bakeman, Blackshear and Stokes (2003) identified that half of the African American men in their sample felt that friends in their social network did not have favorable attitudes toward condom use.
Carlos, Bingham, Stueve, Lauby, Ayala et al. (2010) and Kelly, St Lawrence, Amirkhanian et al (2013) found that there was low peer support of condom use and this is associated with increased odds of CAI among Black and Latino MSM. Kelly et al (2013) specifically found that weaker perceived peer norms for condom use and lower intention to use condoms were significantly and consistently associated with the number of CAI acts and number of partners with whom CAI acts took place. Lacking support from significant others in a social network has been shown to be correlated with low self-efficacy to perform protective sex behaviors, such as consistently using condoms (Berg, 2008). Finally, a study conducted by Parsons, Halkitis, Wolitski et al (2003) showed that men reporting unprotected anal insertive sex perceived less responsibility to protect their partners from HIV. This concept is consistent with findings in our study and further adds to the complex social norms in sex roles among MSM and may show that neither partner feels responsible for HIV prevention.

Peterson et al (2003) also found that condoms are used less in a "committed relationship," which is also the case in our study. YBMSM in Philadelphia seem to have a mentality that a "known partner is a safe partner" and feelings of trust and commitment with their partner were associated with lower intentions, personal agency and perceived norms to use condoms. The finding from our study are in line with a study completed by Thornburn, Harvey and Ryan (2010) who found that YBMSM do not consider condoms necessary when one "knows" their partner. They found that when a connection is established, the rate of condom use is dramatically decreased. Newcomb & Mustanski (2015) describe this as a "paradigm shift in terms of sexual partnerships" in that previously defined "risk behavior" was with anonymous or casual partners. Since YMSM are likely to be unaware they are infected and perceive risk of HIV transmission in their relationship to be low, not using condoms with a trusted partner can have implications for HIV transmission. Furthermore, studies conducted by Otto-Salaj et al (2010), demonstrate a concept that HIV communication remains taboo and discussing sexual health with a potential sexual partner is often times perceived as a sign of distrust.

Data from our research is consistent with another study by Bauermeister et. al (2014) who found that condom self-efficacy was dependent on the type of partner and condom negotiation of safer sex varies across partner types. In addition to having inaccurate perceptions of their risk, spontaneous or "heat of the moment sex" seemed to be a barrier to condom use in this sample from our research and in other studies (Balan et al, 2009; Newcomb & Mustanski 2015). While public health efforts have focused on increasing HIV knowledge with the hope of changing behavior, knowledge does not seem to be a strong enough motivator to use condoms or talk about HIV status. Philadelphia can use this information to formulate health messages and targeted interventions that focus on perceived risk. Prevention efforts should take into account partner and relationship characteristics, serosorting, sexual roles and sexual networks to better target messages and appeal to the myriad number of reasons why one does not use condoms during CAI.

5.4 Perceptions about HIV

Participants discussed their feelings and opinions about HIV testing in depth with candid responses. While participants valued testing, and reported testing within the recommended guidelines, they felt little control over, or desire in, discussing HIV status with a partner or engaging in protective behaviors beyond assuming a partner is negative or “clean.” While most of the participants eventually acknowledged that they couldn’t tell if their partner was positive or negative based on looks, his physical appearance was an impetus for engaging in CAI. To this study population, looking “sick” or being physically “dirty” was associated with “having something.” Due to this flawed perception about a partner’s serostatus, conversations prompting condom use and HIV disclosure were rarely reported this sample population.

These assumptions about a partner’s HIV status may lead to higher levels of sexual transmission risk taking (Golden, Brewer, Kurth, Holmes & Handsfield, 2004; Van de Ven, Kippax, Crawford, Rawstorne, Prestige et al., 2002; Wolitski, Parsons & Gomez, 2004). This research has demonstrated that if HIV-infected MSM assume their sexual partners are negative, then it is likely that CAI might occur with the belief or thought that they could not become infected with something their partners do not have. Further exploring how YBMSM make relatively automatic decision-making rules when deciding on a protective behavior is important in framing health prevention messages. Strategies should begin to address these presumptuous conclusions about a partner’s HIV status and work towards building better communication skills between partners.

There were also consistent feelings between the participants that the impact of testing positive for HIV would include isolation, rejection and decreased sexual activity. Participants reported that they would face huge barriers from not only friends and family, but also partners and other members in the community. Harawa, Williams, Ramamurthi and Bingham (2006) found similar findings in their mixed methods study. They found that feelings of being associated with both a racial and sexual minority are factors that increase feelings of intense rejection if they were to test positive for HIV. The perceived stigma of HIV is present in the Philadelphia participants as they expressed a fear of rejection from potential sexual partners if they were to disclose their status. Consistent with Harawa et al (2006), some men in the Philadelphia study were concerned with telling their partner *how* they got infected and therefore being associated with a “gay disease.”

5.5 Health Care Providers and Health Messaging

The data demonstrate having a medical care provider with whom the target population can relate to is extremely important. Previous research has demonstrated that black MSM in general experience stigma and discrimination, especially as it relates to medical care (Eaton et al., 2015). When providing medical care to YBMSM, one should have an increased awareness of previous experiences of stigma and work to make individuals feel comfortable. This means addressing difficult conversations, such as sexual role and partner heuristics. Young men in this sample expressed a desire to have open conversations with providers regarding sensitive topics as it shows the provider not only has an idea of what is going on in the community, but establishing rapport will allow these YBMSM in Philadelphia to be more forthcoming with information. Having a trusting relationship with one healthcare provider may negate the impact of prior negative experiences with health care (Eaton et al., 2015).

Respondents in this study perceived their risk of HIV to be moderate to low, despite engaging in risky behaviors (CAI with older, male, Black partners). These feelings of risk for HIV were based on multiple factors, including “my partner looks clean and healthy” heuristic. However, these men are at heightened risk for HIV infection because of their age, race and sexual roles. This finding is consistent with other research studies (Mackeller et al., 2005) and further demonstrates that awareness and education are not enough to prevent engaging in sexually risky behavior. Instead, outreach and community groups should closely mirror the unique experiences of YBMSM. The use of peer role models or facilitators that share the same culture experiences and sexual orientation could be a successful way in developing support networks. As mentioned by this study’s participants, they are expressing the need for an influential person to be honest and accepting of their behaviors. Finding this local spokesperson is perhaps a way for this target population to feel connected a community, or group of people with similar backgrounds and shared experiences. Ideally, this connection can help YBMSM resolve identity conflicts and feelings of stigma or discrimination.

A qualitative study conducted by Rhoades et. al (2012) found similar findings in that YBMSM want informed social role models. Our data shows a significant desire to seek credible health information from a trusted source or local role model/opinion leader. Not only could this help build a relationship between someone at risk for HIV, it may also help establish stronger self-efficacy in using condoms, or not engaging in CAI with a partner of an assumed HIV serostatus. Expanding the prevention message to include local and culturally appropriate venues is important. This includes barber shops, non-gay settings (clubs, bars, and organizations), social service agencies and non-HIV related community health events.

5.6 *Implications for PrEP & nPEP*

Participants indicated a deep sense of distrust of government and medical institutions in the U.S. Information from this research regarding misconceptions about PrEP is consistent with a recent article published by Kirby and Thorner-Dunwell (2014). They stated that PrEP uptake will be slow until knowledge becomes widely known in the MSM community and general population. Results from Philadelphia participants mirror these predictions. While participants felt apprehensive about the efficacy of PrEP, they seemed interested in wanting more information. Perez-Figueroa et al. (2015) found similar attitudes around uptake and adherence to PrEP. In their study, there was an incomplete understanding about what PrEP is, skepticism regarding HIV prevention and its potential short and long-term side effects.

Rectifying assumptions about PrEP represents a crucial opportunity for public health officials to engage the community about its potential, especially YBMSM who may be less exposed to health messages regarding PrEP. It is important these messages stress the potential of PrEP as an effective HIV prevention method for this target population, as they are the group that would most benefit from multiple prevention methods. Furthermore, participants in this study expressed a need for more protective options other than condoms, giving PrEP the necessary leverage in this target population. Messaging should try to normalize PrEP and promptly address perceived barriers such as cost, accessibility and eligibility. Condoms have been the primary prevention message and the development of PrEP introduces an entirely new concept in preventing HIV. It is unsurprising there is skepticism regarding this advancement, however, stressing the benefits of PrEP and clarifying misconceptions is critical in uptake for YBMSM.

Health care providers at public health clinics, especially STD clinics, are in a unique position to have discussions about PrEP. Discussing PrEP with a family doctor may lead to awkward conversations about unprotected sex and sexual behavior. However a specialist in STDs/HIV may be able to have more open conversations with the target population about risk taking and the importance of PrEP as another prevention tool.

This study also reveals important insights on the use of nPEP. The majority of participants felt that nPEP was better biomedical option for HIV prevention; it was cited as more convenient and conducive to their sexual behavior and perceived risk of HIV. While this finding warrants further investigation, it does point to other studies conducted around intermittent PrEP. The IPERGAY study found that on-demand PrEP, or PrEP taken around times of sexual activity instead of every day, reduced risk of HIV infection by 86 percent (Molina, Capitant, Bruno-Spire et al., 2015). While this method does not offer the highest level of protection against HIV, it does have the potential to offer other biomedical prevention methods to meet the needs of at-risk populations.

5.7 Testing is Valued

All YBMSM in this study thought getting tested for HIV and other STDs was important, not only in protecting their own health but others around them. While this could be because the study sample was recruited based on test results, it is in line with a qualitative study conducted by Hussen, Stephenson, del Rio Wilton et al., (2013) which found that BMSM could be categorized in four groups based on their testing intentions and behaviors: 1) maintenance testers who test regularly as part of routine care; 2) risk-based testers, who tested depending on sexual behavior; and 3) infrequent testers. In this study, maintenance testers were on average between 20-30 years old (pg. 6). These results found that like Hussen et al.'s (2013) findings, most of the study population fit into either maintenance testers or risk-based testers. They also support findings outlined in the literature review, that YBMSM are testing frequently (Millet et al., 2006; Oster et al., 2011).

5.8 Limitations

This study is not without limitations. Although the data provides insight that is consistent with previously published research, it lacks an important component of qualitative research quality in that there was no intercoder reliability. Different coders may vary in their interpretation of the text's content. A coding process, or intercoder reliability, assesses the degree to which coding of text by multiple coders are similar (Creswell, 2009). Since there was only one coder, individual code definitions may have influenced the reliability process. In addition to this, some of the participant's responses were lengthy and increased the complexity of coding tasks. These two limitations may have reduced intercoder reliability and validation of the code book tool. Finally, one person conducted and transcribed the interviews. This could have led to certain biases in data analysis.

There were also limitations with the sample. Those who participated in this study agreed in part to talk about their sexuality, sexual risk taking and personal anecdotes. Men who are less likely to talk about sexual experiences in this context may have provided different insights to research questions and illuminated other factors unbeknown to the researcher. Risk behaviors and sexual experiences were self-reported. This may result in memory bias, socially desirable responses, and concealment of information (Creswell, 2009).

Along the same line, an inclusion criterion was that the participant needed to have a reported rectal STD in 2015. YBMSM who do engage in CAI, but did not have a reported rectal infection were missed. It is possible that those who seek STD/HIV screening, and rectal screening specifically, may have different experiences than those who do not. Therefore, HIV prevention for this subgroup of YBMSM may be different than for BMSM in general. Finally, majority of young men who participated in this study were also seen at one of the public health centers in Philadelphia and the experiences of YBMSM who were seen at other community based organizations or testing centers were not explored in this study. While it is impossible to make general inferences to the entire YBMSM community, they are at a high risk for HIV and remain an important group to study.

In regards to data analysis, accurate coding and theme development was dependent upon the honesty of the participants. It is possible participants felt compelled to answer in a desirable way or was dishonest about some of their behaviors. However, the researcher has years of experience in motivational interviewing and stressed the importance of anonymity in this study.

A final shortcoming of the research was the failure to explore the important factor of substance abuse and history of traumatic events during the interview. Previous research has demonstrated that YBMSM experience alienation and isolation as a result of racism, negative attitudes about homosexuality in the Black community, conflicts of faith, concepts of masculinity and thoughts about gender role expectations (Bingham et al, 2003; Rosario et al, 2006). While no participant specifically mentioned it, child abuse was not addressed during this research. Other studies have demonstrated that experiences with child sexual abuse has been historically considered a factor that place MSM at risk for sexual risk behaviors (Rosario et al, 2006). These topics were not covered in-depth and could have provided further insights into the lives of YBMSM in Philadelphia.

Despite the limitations noted, this study did provide helpful insights for health officials in Philadelphia. It is one of the few qualitative studies done on YBMSM in Philadelphia on behalf of the Philadelphia Department of Public Health, giving voice to an often marginalized and stigmatized subpopulation. The knowledge gained from this study has expanded knowledge on the social and sexual experiences of this target population.

5.9 Future Direction:

This thesis work gave an in-depth perspective into the lives of ten YBMSM in Philadelphia. Protective heuristics such as trust, connection with a partner and partner’s physical appearance are some of the individual factors that may affect rates HIV rates in this population. Insufficient knowledge, mistrust in health care advancements, such as PrEP, and lack of health messaging are some of the interpersonal factors identified. Despite having negative or sympathetic thoughts about someone who has HIV, despite high reported testing frequently, despite the intention to not have CAI, this population continues to engage in behaviors that put them at risk for HIV. The perceived low-to-moderate threat of HIV should pique Philadelphia health official's interest to further investigate this phenomenon.

On-going research using qualitative methods should delve deeper into the themes that emerged from this study and address some of the limitations identified. Extending the focus to include psychological and behavioral impact of family support, coping methods, community identity and additional partner heuristics would be essential in expanding knowledge. The findings of this study demonstrate the need to move beyond the stereotypic prevention messages of using condoms to a more dynamic appreciation of the factors that influence risk taking behavior.

Furthermore, topics such as masculinity, community identifications and stigma warrant further exploration in the Philadelphia context in both quantitative and qualitative methods. Development of more effective intervention strategies requires a better understanding of factors driving sexual risk taking among YBMSM. While this study found relationship dynamics to deeply influence the quality of the relationship and potentially have a bearing on the agreements individuals make to prevent HIV, there is far more to learn about the contexts in which behaviors take place.

While negative thoughts and fear about HIV do not seem to influence self agency in using condoms, talking about HIV status, or other protective heuristics, prevention efforts need to do a better job of addressing stigma and social rejection in this population. Philadelphia needs to expand prevention efforts outside of the traditional sense of clinical settings. There also needs to be a greater community awareness of sexual diversity and sexual identity from a wide range of local organizations. These programs should consider the unique social and cultural norms surrounding gender roles, masculinity, stigma and sexual identity that exists in Philadelphia. Expanding community-level collaborations are one way in which Philadelphia can improve these efforts, including organizations that address mental health, housing, faith-based initiatives and substance abuse.

The health department plays a key role in helping YBMSM reduce risk behaviors and maintain safer sex practices. Not only is the health department a liaison between national agendas and prevention efforts, they have their own hand on the pulse of the community. Having the ability to select key stakeholders coupled with the access to surveillance data and the ability to develop unique and specific interventions puts these agencies in a prime position to curb rates of HIV. Clinically, health departments can improve access to care, offering better testing environments and provide improved patient-provider relationships. Flooding the community with tailored and culturally relevant prevention messages that address behavioral factors, dispel myths about HIV/STD transmission, and clarify preventative services is only the tip of the iceberg for health department potential in addressing HIV disparities. This includes improved targeted messages about PrEP as an additional HIV prevention strategy. They just need to know more about unique situations, feelings and dynamics within this population before employing these strategies.

Addressing complex, interrelated and circumstantial situations creates a challenge for public health officials to develop comprehensive strategies that counteract various barriers in HIV prevention. Through countless studies, literature reviews, intervention evaluation and program planning, the imbedded cultural and social factors continue to remain in question. The plethora of data suggests that YBMSM operate within complicated constructs rampant with HIV stigma, racial and economic marginalization (Mays et al, 2009). These environments are dynamic and the reality for many YMSM is that the interactive nature of their sexuality, race, perceived norms and culture intertwine, leaving public health officials with no other choice than to address other constructs of the ecological model. Building social support networks, improving communication strategies, and building self-esteem within this subpopulation should be on the long-term agenda for HIV prevention in Philadelphia.

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Appendix A: Consent form

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

Study Title: Improving Philadelphia Health Department Services to Prevent HIV Infection in African American Male Youth who Have Sex with Men (YMSM)

Principal Investigator: Caitlin Hoffman

Introduction and Study Overview

Thank you for your interest in our HIV prevention 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 make Philadelphia health department services better at preventing HIV infection in young men. The study will enroll 10 participants.
2. This study will take about 45 minutes to complete.
3. If you join, you will be asked to answer 17 questions about medical history, risk you may take during sex, thoughts about HIV and what you do to stay healthy. None of your personal information will be collected or recorded during the interview. This includes your name, address, date of birth or phone number.
4. Some of the questions are personal in nature and you may feel uncomfortable answering them.
5. This study is not intended to benefit you directly, but we hope the answers you give will help people in the future.
6. Your privacy is very important to us.
7. Your health information that identifies you is your "protected health information" (PHI).
8. The PHI for this study includes past STD/HIV test results reported to the health department.
9. To protect your PHI, we will follow federal and state privacy laws, including the Health Insurance Portability and Accountability Act (HIPAA).
10. The following persons or groups may use and /or disclose your PHI for this study:
    a. The Principal Investigator and the research staff.
    b. Emory offices who are part of the Human Research Participant Protection Program, and those who are involved in research-related administration and billing

    c. Any government agencies that regulate the research including Emory University and Philadelphia Department of Public Health Institutional Review Boards.

11. 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.
12. You may revoke your authorization at any time by calling the Principal Investigator, Caitlin Hoffman, or by writing to the address listed on the information sheet that we will send to you.
13. 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.
14. 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 about this.
15. Every effort will be made to protect your identity as an interview participant. Your name will not be linked to your recorded interview. This will help prevent a risked breach of confidentiality.
16. 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:

- Caitlin Hoffman: 215-685-6585
- Dr. Felicia Lewis: 215-685-6613
- 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

Appendix B: Interview Guide

Thank you for agreeing to participate in this interview. I want to remind you that some of the answers you provide are private and nothing you say will be traced back to you. Some of the questions I am asking are sensitive in nature, so please feel free to stop me if at any time you feel uncomfortable. Do you have any questions before we begin?

1) Tell me about your most recent testing experience
    a) What services did you receive at this appointment?
    b) How often do you go to this health center?
    c) When did you last go to this health center?
    d) At your last visit:
        i) how long did you have to wait to be seen?
        ii) Did you make an appointment? If so, how hard was it to make an appointment?
        iii) Did you have to pay?
        iv) Did you have trouble getting there?
        v) What did you think about the care you received? What makes you feel this way?
        vi) What was the worst part of your visit? What makes you feel this way?
        vii) What was the best part of your visit? What makes you feel this way?
        viii) Did they offer you testing in your butt and your throat?

2) In a perfect world, what do you most want from a medical care provider?
    a) What makes those things important to you?

3) Let’s switch gears a little bit and talk about the last time you had unprotected anal sex. Tell me a little more about this partner.
    a) How old was he?
    b) What was his race?
    c) How did you meet?

4) You tested positive for an infection that you usually get from bottoming without a condom. Tell me more about how you and the last unprotected anal sex partner you had decided not to use condoms?
    a) Describe the moment.

5) What is the best part about bottoming?
    a) What makes that the best?

6) What is the worst part about bottoming?

    a) What makes that the worst

7) How often would you say you get checked for HIV/STDs?
    a) Explain why getting checked is or is not something that is important to you?

8) Tell me about a time you were worried about getting HIV?
    a) Explain the event
    b) Describe the situation
    c) What made you scared?

9) How would testing positive for HIV affect your own life?
    a) What makes you think that?

10) On a scale of 1-5, one being the least risky, 5 being the most risky, what do you think your risk of getting HIV is?
    a) What makes you think that?

11) When you last bottomed without a condom, how happy were you on a scale of 1 to 5, 1 being not happy at all and 5 being the happiest?
    a) What made you feel that way?
    b) How depressed or anxious did you feel?
    c) What was making you feel those things?

12) Describe how your sex life changes when you're feeling depressed, anxious or insecure?

13) In an ideal world, what are some things a doctor, nurse or social worker could do to help you not get HIV?
    a) What makes these things helpful?

14) Think back to the last HIV prevention message you saw. What did you like about that message?
    a) What did you not like?
    b) What could make it better?

15) There are some things that have been shown to reduce your risk of getting HIV like taking medication every day to prevent HIV (PrEP) - have you heard of this? There is also a medication you can take after you have sex without a condom to prevent HIV (nPEP) - Have you heard of this?
    a) Are you willing to try any of these?
    b) Explain why or why not

16) Is there anything we haven’t talked about that you think is important in HIV prevention?

17) Do you have any questions about anything that came up in the interview?

Appendix C: Code Book

Code	**Definition**	**Keyword**
Sexual position	Refers to any sexual position preferences, thoughts about what those positions mean	Tops, verse, bottom, versatile, fully verse, full penetration, anal cavity, homosexual, bareback, raw sex, oral sex, being submissive
Judgment	Refers to the perceived ability to judge someone's HIV/health status based on physical appearance,	Cleanliness, dirtiness, dirty, looking sick
Pleasure	Refers to any positive feelings as a result of having sex, sexual behaviors, relationship with another person in a physical, emotional or social way	Feeling good,
Guilt	Refers to any negative feelings as a result of having sex, sexual behaviors, relationship with another person in a physical, emotional or social way	Regret, mistakes,
Trust	Refers to any feelings of trust, responsibility for an action, disclosing the truth	
Information	Refers to any factual or non-factual information from a source	Internet searching, something someone told another, something someone heard
Communication	Refers to any verbal or nonverbal exchange between two or more people	Talking. Conversation, opening up, sharing experiences,
Testing	Refers to getting tested or "checked out" to know one's HIV status or to know if one has an STD	Swab, anal test, getting checked
Stigma	Refers to any kind of stigma,	

	judgement within social or clinical contexts relating to HIV, being HIV-positive, living with HIV	
Control	Refers to perceptions of control in any sexual or testing situation	Saying no, letting go
CAI Initiation	Refers to contexts, motivators, feelings, perceptions and reasons for CAI	
Gay Black Identity	Refers to any discussion about exploration of gay identity, self-conceptions, coming out, definitions of being gay, Black stereotypes or social norms,	
Release of Inhibition	Refers to any descriptions of overcoming barriers, feelings of loneliness, isolation during sex	Heat of the moment
Cognitive/Emotional Escape	Refers to any description of seeking an alternative reality during CAI	Indulging in another world, escaping reality
Closeness	Refers to feelings of intimacy with another, being comfortable, open, honest,	Relationship, being together, monogamy, being monogamous
Security	Refers to any discussion about feeling secure financially, in a relationship, with family/friends/social networks	
Health	Refers to any discussion regarding health, staying healthy, being sick, getting sick,	Looking sick, taking medication
Condom	Refers to any discussion regarding condom	Unprotected, without a condom,

	negotiation, condom use, availability, condom agreement	
Fear	Refers to any discussion regarding fear of testing, testing positive for HIV	Caution, conscious, scare, scared, hesitant
Perception	Refers to any discussion about how one is perceived in the community, social group, how one perceives themselves and others	View, see myself, how others see me
Risk	Refers to any discussion about risks taken during sex	
Protective heuristic	Any protective behavior that reduces the risk of acquiring HIV	

Abstract

Purpose - Nationally, HIV incidence is increasing among young Black men who have sex with men (YBMSM) despite relatively stable rates in other populations and rates in Philadelphia are following national trends. Health departments and public health centers in Philadelphia are in a unique position to curb rates of infection, as they are responsible for partnering with local HIV-prevention organizations and allocating funding to increase the availability of ongoing HIV prevention interventions. Studying the contexts in which sexual HIV-risk and protective behaviors occur helps public health officials better understand relationships between environments, interpersonal relationships and decision making. The purpose of this study is to explore the social and behavioral barriers that hinder HIV prevention efforts and to identify gaps in health care that could better prevent HIV in this small subset of the general population.

Methods - We analyzed semi-structured interviews with 10 YBMSM (18-24) in Philadelphia. A qualitative description approach was used to guide inductive and deductive qualitative analysis.

Results - Six main themes emerged from data analysis: 1) Partner Dynamics, 2) Improving Relationships with Providers and Health Messaging, 3) Perception of HIV, 4) Conflict of receptive anal sex without a condom (CAI), 5) STD/HIV Knowledge and Skepticism with Health Care and 6) Testing is Valued. Perceived norms, attitudes and self-agency were influential in participant's intentions of having CAI, condom negotiation and testing for HIV/STDs in the context of IBM framework. Participants identified friendship with health care providers and having community role models as necessary elements of effective HIV prevention.

Conclusions - Partner dynamics may play a large role in the decision to use condoms, in defining sex roles, and in discussing sexual health, including HIV status and other protective heuristics in this target population. Understanding how perceived norms and self-agency shape the intention to engage in receptive anal sex without a condom could be used to augment traditional HIV prevention in Philadelphia, creating new and specific risk-reduction strategies for this high-risk group. Prevention programs could include community role models and improved direct health messaging.

Keywords: Black/African American; men who have sex with men (MSM); youth, adolescent; HIV/AIDS; health department; HIV prevention; condomless anal sex; HIV risk

Introduction

Research shows gay, bisexual and other men who have sex with men (MSM) are disproportionately affected by HIV. According to recent data from the Centers for Disease Control and Prevention (CDC), gay and bisexual men represent approximately 4% of the population, but account for almost 78% of all new HIV infections found in men in 2010 and 63% of all new infections in the general population [2,3,4]. There was a 12% increase from 2008 to 2010 of HIV infection in all MSM in the United States [4]. Even more disproportionately affected are Black/African American gay and bisexual men. In 2010, Black MSM (BMSM) accounted for 72% of all new infections among all Black men and 36% of all new HIV infections among all gay and bisexual men in general [5].

What is more concerning is the rate at which young men who have sex with men (YMSM) are becoming disproportionately affected by HIV. Between the years 2008-2010, there was a 22% increase in new HIV infection among young gay and bisexual men [4]**.** The CDC's National HIV Behavioral Surveillance system study of MSM found the HIV prevalence to be about 7% in 18-19 year olds and 12% in 20-24 year olds and higher among Black young MSM (BYMSM) at 9% and 20% in those respective age groups [4]. More new infections occurred among African American youth ages 13-24 than any other subgroup of MSM. In fact, this population accounted for 45% of all new HIV infections among BMSM and 55% of new HIV infections among YMSM overall in the United States [4]. This is more than twice as many estimated new infections in young White or young Hispanic/Latino MSM [6]. Between the years 2001-2006, there was a 93% increase in HIV diagnoses among black MSM [1]. Moreover, although the rates of unprotected anal intercourse are similar, YBMSM have an odds ratio of HIV infection that is 9 times that of young White MSM [7].

Paradoxical findings from previous research studies suggest complex contextual factors, such as socioeconomic status, sexual networks, stigma, homophobia and discrimination that may drive rates of HIV in BMSM and results are typically not well studied or well understood on intrapersonal, interpersonal and macro levels. Researchers have several explanations, including previous assessments of risk behavior, higher HIV prevalence in BMSM sexual networks, and greater HIV infectiousness of sex partners, and structural barriers such as incarceration rates and lack of healthcare services available to BMSM [4,8,9]. Researchers evaluating these hypotheses did not find any definitive differences in risk factors between BMSM and other MSM populations, despite evidence of greater STD prevalence and greater unknown HIV infections among BMSM [10].

These complex issues create prevention challenges facing healthcare professionals in curbing rates of HIV, especially in YBMSM, a population that is not greatly understood. Disparities are further compounded by health determinants in the community, social networks, culture and socio-economic environments. Often times this subpopulation has limited access to and use of quality health care, lower income levels, higher rates of unemployment and incarceration [2]. Because BMSM men tend to have partners of the same race, and because of the high prevalence of HIV in that population, BMSM may have a greater statistical risk of being exposed to HIV [2, 11, 12]. Finally, Black populations face greater stigma, homophobia and discrimination than other racial populations, which can in turn affect whether they seek and feel comfortable receiving health services [2].

The economic burden that results from living with and receiving treatment for HIV is another concern for public health officials. A large fraction of this comes from the medical costs of treating people with HIV. According to a recent cost analysis, the estimated that a lifetime of HIV treatment costs $379,668 (in 2010 USD) per individual [13]. The recent study conducted by Schackman et al (2015) found that the medical cost of avoiding one HIV infection is $229,800 and the cost saved if all HIV-infected individuals presented early and remained in care would reach $338,400 per person [13]. Therefore, the economic value of HIV prevention in the United States is substantial given the high cost of HIV disease treatment and the sizable savings of prevention.

Biomedical advancements, such as Pre-exposure Prophylaxis (PrEP) and Post-exposure Prophylaxis (PEP), have become a cost-effective HIV prevention strategy. Using antiretroviral therapies, an HIV-negative person can take PrEP or PEP if he or she believes there was an exposure to HIV. These novel prevention methods have been shown to dramatically decrease one's chance of acquiring HIV if taken correctly, up to 92% [14]. Even though the Food and Drug Administration (FDA) approved PrEP and PEP in 2012, uptake for PrEP has been slow, especially among BMSM [15]. Reasons for this suggest that there is limited understanding of PrEp effectiveness, negative perception of potential side effects, misconceptions about cost and accessibility [15]. Effective health messaging addressing these barriers is essential to increase uptake and acceptability of PrEP as an effective HIV prevention strategy, especially in BMSM populations.

Health departments around the country represent a critical link between effective health messaging, government funding and frontline HIV/AIDS programs by community based organizations, health organizations and other service providers. Since 2002, the CDC has supported health departments and their HIV-prevention efforts [16]. To reduce HIV infections among young, African American MSM, health departments must respond to the epidemic with individual, community and policy-level interventions that are culturally grounded and serve to increase protective health behaviors that reduce HIV risk factors among this population. Public health departments are on the front line and are responsible for having a deeper understanding of factors that facilitate or impede the development, implementation and effectiveness of HIV prevention strategies targeting YBMSM.

HIV in Philadelphia

Surveillance data from the Philadelphia AIDS Activities Coordinating Office (AACO) in 2014 found that among new HIV infections, male (79%), were reported as MSM (51%). Similar to national studies, new rates of HIV in Philadelphia are highest in neighborhoods that are mostly Black and median household income is less than $20,000 [17].

While there is not extensive risk behavior data specifically to YBMSM in Philadelphia, Youth Risk Behavior Survey (YRBS) is a national surveillance system in which Philadelphia participants that can establish risk behavior indicators for HIV. In 2013, the Philadelphia YRBS indicated that 22 percent of sexually active students had sexual intercourse with four or more people in their lifetime. Of the same group of students, 42 percent of sexually active students did not use a condom during their last sexual encounter. The study also found that 18 percent of students stated they had never been taught about HIV/AIDS in school. Finally, almost a quarter of sexually active students reported using drugs before their last sexual encounter (CDC, 2015b).

The 2008 Morbidity and Mortality Weekly Report (CDC, 2010) demonstrated that Philadelphia ranks high among cities in which many gay and bisexual men lack knowledge of their HIV-positive status. Of the 440 Philadelphia men tested in 2008 who identified as MSM, 11 percent (48 men) tested positive for HIV. Of the men that tested positive, 71 percent (34 men) said they were unaware they had contracted the virus. This is compared to national statistics from the same report, which show a 28 percent prevalence of HIV in BMSM with 44 percent of the men who tested to be unaware of their infection (CDC, 2010).

Additionally, Philadelphia teenagers are disproportionately affected by sexually transmitted diseases. In 2014, male teenager and young adults had rates of gonorrhea and chlamydia at 2,458.6 per 100,000 and 6,343.7 respectively (Health Information Portal of Philadelphia, 2014). While this does not illuminate sexual risk of YBMSM specifically, it does demonstrate that the same population disproportionately affected by HIV are also disproportionately affected by chlamydia and gonorrhea.

The purpose of this qualitative study is to better understand the perception of HIV, risks taken during sex, and gaps in health care services identified by YMSM of color in Philadelphia. This exploratory study utilizes the Integrated Behavioral Model (IBM) to frame qualitative domains and research findings. The primary aim was to explore sexual and protective behaviors in HIV-negative YBMSM, including interpersonal dynamics. The secondary aim was to identify health care services necessary in preventing HIV.

The research obtained during this study sought to supplement current knowledge and quantitative data about sexual risk taking in this subpopulation by examining personal and intensely private experiences and attitudes about HIV. Information collected focused on behaviors associated with risk of HIV, perceptions of HIV, identified health services currently accessed, and health care services that may be desired but unavailable in the Philadelphia Health Department. By obtaining this information about HIV prevention efforts in Philadelphia, health officials can better develop prevention strategies, health programs and evidence-based interventions to help curb the rates of new HIV infection in this target population residing in Philadelphia.

Methods

Study Population and Design

Unprotected anal sex is the central pathway for HIV transmission from HIV-positive to HIV-negative MSM [18]. In fact, unprotected receptive anal sex is the riskiest sexual act for acquiring HIV and is 18 times more risky than receptive vaginal sex [19]. Rectal STDs, such as chlamydia and gonorrhea, represent a biological marker for one of the riskies behaviors. Therefore, young Black men who had a reported rectal infection and negative HIV test in 2015 were recruited for in-depth, semi structured interviews [17].

The inclusion criteria for participants were: 1) African American who; 2) is between the ages of 18-24; 3) lives in Philadelphia; 4) has a positive, laboratory-confirmed rectal gonorrhea or chlamydia test in 2015 from a health center in Philadelphia; and 5) has a laboratory-confirmed negative HIV test. Purposive sampling methods were used in this process.

The target population includes a spectrum of young Black men who have sex with men - from those who identify as heterosexual and only engage in “situational sex” with men, to those who are exclusively having sex with men, to those who fully disclose being attracted to both men and women. The sampling was limited to participants 18 years or older, because obtaining parental or guardian consent in situations where the minor had not shared information about sexual activity with men could have jeopardized confidentiality.

Participant Recruitment and data collection

The recruitment and interview process occurred over ten months between January and November 2015. There were 114 eligible young men extracted from the database code; 42 eligible young men were contacted, and data saturation was reached at ten interviews.

Recruitment for the study used two information sources: SCID and eHARS. These databases are specific to the Philadelphia Health Department Division of Disease Control. They are secure, password protected, web-based platforms located on a restricted server utilized for disease reporting and case management in Philadelphia. The participant's laboratory tests, history of viral loads and locating information are reported to PDPH through these electronic reporting systems.

An STD/HIV control epidemiologist ran a code that extracted all eligible participants from the reports in 2015. Using individually generated patient IDs, the researcher was able to look up the eligible participant in SCID and ensure he met the eligibility criteria. His information was then submitted to a second database check, eHARS, to check if he had a reported viral load indicating a potentially positive HIV status.

Using phone numbers and other locating information in the patient database, the researcher contacted each eligible participant by phone. If the participant was unable to be reached on the first phone call, two more phone calls were made at different times during the week. If the participant was reached, his identifying information was confirmed using the identifying information reported to the PDPH and stored in SCID. The researcher used current confidentiality protocols and procedures used in the STD/HIV prevention program to verify the patient over the phone.

All eligible participants who were reached on the phone were informed of the goals and aims of the specified study. How the researcher obtained their information, why they were contacted, and how the researcher would use the data was explained. If the subject remained interested, the researcher and participant discussed when and where the interview would take place.

Prior to the interview, each participant provided oral informed consent to participate. All participants were informed that their input was being used to guide the development of HIV prevention programs for young African American men in Philadelphia. It was made clear that they were free to decline any question that made them feel uncomfortable or to leave the interview at any point. It was also clearly stated that no identifying information would be recorded or connected with the interview in any way.

All enrolled participants completed face-to-face interviews using a semi-structured interview guide with the researcher. The interviews took place at a location designated by the participant. Regardless of the setting, interviews were in a private space conducive for audio recording. Two interviews took place in the field, while the remaining eight interviews took place in a private exam room located at PDPH. The interviews lasted between 35 and 75 minutes. All interviews were digitally recorded using a USB recording device. This device offered a way to store and organize the data. Interviews were transcribed verbatim by the researcher. After the interview, all participants were given information about PrEP programs in Philadelphia.

Participant privacy and comfort was of the utmost importance for the research team and project in general. The researcher served as the interviewer and conducted all of the semi-structured interviews. In order to ensure consistent review and data collection, two pilot interviews were conducted. At the end of the two pilot interviews, the researcher requested feedback. None of the participants offered constructive criticism on the content or structure of the interview.

The semi-structured interview guide consisted of 15 open-ended questions divided into three sections with questions framed within the IBM framework as well as potential probes to facilitate more in-depth discussion. The first section had questions relating to his experience being seen and/or tested and treated at a health center located in Philadelphia. Beginning the interview with these questions help the participant begin to discuss a sensitive and personal topic of sexuality. The researcher encouraged the participant to provide as much or as little detail as he felt sharing. The initial questions explored motivations for testing, testing behavior, and overall testing experience. The second section had questions specifically relating to the time the subject had CAI and contracted the rectal infection. This is significant to the study, because it puts the experience of CAI into one specific event, rather than using a broad, long-term recall approach, which can lead to recall errors. This section also addressed perceptions of HIV, perception of his risk of HIV, and how certain feelings or contexts may influence behavior. Some questions in this section used a Likert-type response scale of 1 to 5: 5 = very happy or having a high risk of HIV transmission to 1 = very unhappy or having a low risk of HIV transmission. The final section consisted of questions about HIV prevention messages, HIV prevention strategies, and areas of improvement for HIV prevention at health centers in Philadelphia. The last questions provided participants the opportunity to share any additional information that was not discussed during the interview.

Each interview was transcribed verbatim by the researcher to create the data set. Digital recordings were stored without subject identifiers on a password-protected computer. This computer was restricted to only the researcher and field advisor. The digital recordings were immediately deleted from the USB recording device after they were downloaded on the password-protected computer and transcribed. The interview transcriptions were stored on the same password-protected computer and did not contain any participant identifiers. Only participants' voices were being recorded to maintain confidentiality.

A total of 10 interviews were completed. Before the coding process took place, the researcher listened to the audio-recorded interviews several times. Once transcriptions were compared to recordings to ensure credibility, the researcher read each transcribed interview multiple times in order to ascertain the comprehensiveness of the information. This helped the researcher grasp the entirety of the interview without feeling the need to apply meaning or draw conclusions. Insights, feelings and reflections were noted on each of the transcribed interviews, which helped the researcher begin to tease out themes or ideas. The transcribed interview notes were coupled with field notes for data collection as well.

Next, the researcher went through transcripts line-by-line, which helped further identify main themes. The raw data was reviewed throughout the data collection process to start to evaluate emerging themes or trends. Once data saturation was reached, the researcher began the process of a cross-case analysis in order to compare significant segmentations of text throughout all of the interviews. The main commonalities were organized into preliminary themes. The researcher proposed the initial list of codes, paying close attention to how relevant the codes were to the study goals and whether the codes actually emerged in the text. The researcher randomly selected two interviews to build the initial coding classification system. Additional topics pertinent to these themes emerged in subsequent interviews and were added to the coding larger classification scheme. Data were reexamined, reclassified and regrouped several times before a cohesive code book was developed.

Once the codebook was created, the researcher then imported the transcripts into NVivo, a software system used to manage large amounts of textual data. This helped organize the data and subsequent codes. Field notes and memos were added to the data in the software program and compared across participants. The code book included definitions for the classification codes and coding guidelines. By selecting certain text segments and key words from the remainder of the interviews, the researcher was able to apply the codes to the entire data set.

Results

Recruitment

From January 2015-November 2015, 42 eligible participants were contacted. Of the 32 participants who did not consent to the interview, 11 stated they were interested but were unable to schedule an interview at the time of the first phone call. Out of those 11 interested participants, seven responded to a second or third recruitment attempt and four were unable to be reached again due to a disconnected phone number. Of the seven who responded to another attempt, four were unable to schedule an interview and three never showed up for the scheduled interview. Eight of the 32 eligible participants did not have a working phone number in their record and were unable to be contacted. Seven of the eligible participants did have a working phone number, but did not respond to recruitment attempts and six declined to be interviewed.

Participants

Interviews with ten YBMSM in Philadelphia took place from January 2015 - November 2015. All ten of the participants self-identified as African American. Their ages ranged from 18-24 years old with a mean age of 20.7 years. Six of the participants reported full-time employment, two were seeking employment, and two were students. Eight of the participants reported visiting a public health center, while two participants reported visiting an emergency room for their last HIV/STD testing experience. All ten participants stated they waited at least 45 minutes before being seen at any testing facility with three reporting their wait was over an hour. The longest wait time reported was two hours. Eight participants reported having mouth and anal swabs offered to them at their last medical appointment.

Sexual Behaviors

Four of the participants reported having steady male partners with whom they had sex regularly, but only one participant reported being in a mutually monogamous relationship. Eight of participants reported meeting the last CAI partner on the internet from either a social application or dating website. Three participants reported meeting partners on Instagram and five reported meeting their partners on Jack'd. All participants stated their male partner was older during the sexual encounter where they believed they were infected with gonorrhea or chlamydia. Nine of the participants did not know the exact age of their last partner. Two men discussed transactional sex acts for money. When asked about their perceived risk of getting HIV, most of the participants stated they had a moderate to low risk, with a mean of 2.3 on a 5-point Likert scale.

Theme 1: Partner Dynamics

Participants shared how these interactions and observations of their partners determined if they were going to have CAI. In this research, partner dynamics played a role in CAI in three main ways: 1) condom negotiation and efficacy; 2) trusting and feeling connectedness to their partner was a motivator for CAI; and 3) the "look" or "cleanliness" of their partner also determined whether or not they would participate in CAI. For some of these men, it was only one of those aspects, for others, it was multiple.

Partner's responsibility for safer-sex negotiation - When asked specifically about condom negotiation the time they believed they were infected with a rectal chlamydia or gonorrhea, participants stated they did not discuss condoms at all and/or it wasn't their responsibility to get a condom. Often there was a power differential between partners, where the participant felt compelled to follow the insertive partner's lead and was unable or unwilling to insert their own opinion. Three participants mentioned they meant to use a condom but didn't, and one participant mentioned his partner had condoms available yet a condom was not used. Others shared different experiences. One participant said, "I don't bring it up with my partner. If he wants to use a condom, that's on him." Another participant said, "We don't have conversations like that" and "if he doesn't want to get a condom, I don't think much of it." A third participant said, "we decided not to use a condom...well *they* decided not to use a condom...I guess they felt comfortable enough to do that." In all of these situations, the participant lacked self-efficacy in negotiating condom use.

Other participants implied that the underlying intention of meeting up determined whether or not they would use a condom. Several young men mentioned if they met up with a guy at a bar, or through a friend, they were more likely to build a connection with that person first. For the participants who reported this, the intention of using a condom was much less likely. For those who mentioned meeting their last CAI partner on the Internet or phone application, they had a stronger intention to use a condom. Whether they followed through with that intention varied. One participant in particular stated, "Let's say we are going to dinner, you know, other things can happen. But when you plan on sleeping with that person and you meet up with that person, I feel less likely to use condoms."

Several participants reported condoms to be present during their last CAI, just not utilized. However, none of the participants mentioned bringing condoms or having condoms personally. One said, "There are some times when condoms are present and you just choose not to use them. It is just the little things that make me not use them. Maybe I want to see what it feels like, or maybe the guy is pushy about it or maybe he said he doesn't like them." Another participant said, "We actually did talk about condoms and he said he had some and that made me feel better. He also had lubricant which made me feel better too, so he was prepared...but you know…"

Trust and feeling of connectedness. Connectedness was a commonly cited factor influencing the participant's decision to have CAI. Several participants reported wanting to be connected to their partner during sex or that they were seeking a connection that goes beyond physical pleasure. One said, "I think it is more about my feelings and my connection with them that makes [bottoming] a little more tolerable. My connection with you and how attracted I am makes me want to do certain things." These same sentiments were echoed across other interviews. Another participant stated, "I want personal affection. I would get it temporarily while someone is kissing on you and touching your body, but once it's done and over, there's no more touching...it is just over." This statement illustrated the notion that engaging in CAI for some of these men will lead to deeper feelings of intimacy and emotional connection. Additionally, the idea of the insertive partner being the "right" person to bottom for was also a common thread. One participant exclaimed, "Depending on the person, I won't do certain things, but for the right person, I'll bottom. But it has to be the right person."

In seeking that connectedness, a poorer state of mental health is associated with being more willing to engage in CAI and several participants stated that they were more depressed or anxious than normal during their last CAI encounter. One participant said, "If I am feeling sad or a lonely state of being, it makes me more willing to submit to my partner. Those are the times where I'm like, OK, I want to feel more penetrated." A second participant said, "Sex is an emotional type of thing and so depending on what type of emotion you have, it can take a toll on you. It's like, 'oh I am feeling bad, so let me let this guy take advantage of me." Similarly, when asked about feeling close to his partner, the participant exclaimed, "When we are having sex, I feel it is the only way to get him to feel close to me." Along the same lines, another said, "I am more of the receiver and it is a control issue for me. Most of the times, I am more controlling, but in this way I am more submissive and it lets me lose control."

Other participants were looking for some sort of authoritative figure in their lives to feel connected. One participant said, "I couldn't run to you when I needed you or get that comfort I needed from you as a dad and so now, I am running to another man who is making me feel the same way I want you to make me feel….If I don't have that man role model in my life, where am I going to get it from?" A second participant stated, "I desired more of a male influence like a man and those guys were mostly tops." Finally, a third stated, "When I started having sex with guys, it would be like I did something bad at school or in the house and I wouldn't be acknowledged from my parent. So like, if I can't get someone to get on me about it, I would be looking for like a punishment. I would look for that same feeling of like if you do something bad, you need to get punished and bottoming hurts more than topping so."

Trust with an insertive partner was another driving force behind the decision to have CAI. Participants believed it was safe to have unprotected sex with a partner he trusted and described having CAI with someone he established trust with was low-risk behavior. One participant said, "It was always a thought in my head I could get it, but it was just me taking a word from my partner or the other person I was having sex with to be like, You don't have nothing, right?" Among participants, there was also a common assumption of believing the insertive partner would disclose HIV status to the participant. During another interview a participant said, “I feel confident that they know their status so to me, I don’t think much of it [CAI]. I trust that person.”

Using condoms also seemed to imply distrust. A participant stated he didn’t use condoms with his partner because “we came to an agreement where as though we are faithful, loyal and honest with each other that much that if I don’t use a condom and you don’t use a condom, then that’s like saying basically we ain’t going to get nothing.” When talking about condom use and trust, a second participant stated, “If I am in a relationship with my partner and if I am going to be honest with you and you going to be honest with me, that is something [an STD] that should never come back to me.” Finally, a third participant stated, “A lot of the time it is with people I knew and trusted so I feel I didn’t need to talk to them about condoms.” Participants seemed to think that asking their partner to use a condom implies that they think their partner is diseased and condom-free intercourse can be seen as a sign of trust. One interviewee stated that “I want to trust him and not using condoms is a part of the trust. I believe he will tell me if he has something.”

“Look” or “Cleanliness” of Partner. This study showed that participants assessed the disease risk of a potential partner by their partner’s appearance. While some participants did acknowledge they know they cannot discern if a partner has HIV, they were able to describe signs they felt might indicate if someone was HIV-positive. Often times they referred to their partner as “clean” and described physical attributes that related to cleanliness. If a partner appeared to look “clean” a participant would be more willing to bottom for him, especially when if they expressed not particularly enjoying bottoming. During one interview, a participant remarked, “You know, he looked nice and clean and we had good conversation.” Another stated, “I see it like if the person looks clean, if they look good, you’re going to do whatever.” One participant even used the skin color to determine whether or not his partner was “sick.” He said, “I look at their skin if they are pale or in their face. I have a gut feeling and the person may look sick or appear sick and that is when I think to myself, ‘Oh he has something.’”

Theme II - Establishing a Relationship with A Provider and Health Messaging

Many of the participants offered detailed descriptions and thoughtful answers to what characteristics a medical care provider should encompass. Several participants discussed the type of relationship they would like to have with their primary care provider, and the majority of interviewees expressed the desire to have their doctor be personable and relatable. However, they felt as though sharing anecdotes or experiences with each other would help the participant open up to the provider. One participant stated, “I want someone in the medical field who can say, ‘I have been through what you’ve been through before and I know how it is.’” Another participant stated, “I want it to feel like a family thing to where they are checking up on you, maybe once a week.” Another expressed that it would be easier to receive information “from a person who you feel like has opened up to you.” Other answers reflected similar feelings. One participant said, “I think I just want to know people are caring about me. It can be hard to get tested and have the potential of finding out you may have something, but a doctor who treats you like a friend would be nice. I would feel more comfortable opening up and talking about the hard stuff.”

Several participants reported that getting factual information from a provider was extremely important. One in particular said that “Knowing facts, giving it to me straight. Relay it to me as clearly as possible, lay out my options and let's find a solution" would be a way a provider could help keep him HIV-negative. Other similar sentiments were echoed in other interviews, and majority of respondents felt they wanted the information to be clear and "not sugar coated."

Another important takeaway was the need for health messaging to move beyond the scope of condoms. Several participants expressed a desire to be told other protective behaviors aside from the importance of using condoms. For example, when talking about how a doctor or nurse could help him stay HIV-negative, one participant said "They were basically telling me don't have sex or if you have sex, use a condom. What if I don't want to use a condom?" The same theme was threaded throughout other interviews as well. A second participant asked, "There are people out there that don't like condoms. Like so my thing is, how can I help prevent infections in myself and my partner without the answer being use condoms?" Another participant stated that he wanted his provider to just talk to him and say, "If you want to do this, here is a safer way to do it" and another said, "I don't want to be told just to use condoms." On why this would be important, one participant said, "I think it shows that the center or provider has a sense of reality of what is going on." Having a deep understanding of what other protective behaviors are feasible in this community is an important characteristic of an ideal medical care provider.

There were some conflicting needs from participants. Some participants expressed that face-to-face connection was important in building trust and establishing rapport with a provider, while others stated that they preferred to talk to someone without disclosing their identity. One participant stated, "An anonymous person is the most comfortable person" and felt more at ease asking questions about his sex life to someone behind a screen. Finally, another participant expressed helplessness in that there wasn't anything a medical provider could do for him. He stated, "You are already handing out condoms. That is all you can do. You can't get into people's bedrooms; into their cars...you can't make someone do something they don't want to do."

Several participants noted how they would appreciate role models or social support groups in the community. They believed seeing someone who had shared similar experiences, who was HIV-positive; who could share their story would be helpful in changing their behaviors. The idea of someone being "on call" was brought up in more than one interview. One of them described this resource as, "Where you are in the heat of the moment and getting ready to do something, [you] need that person they can call to say, 'Hey man, don't do that'" like they could talk you out of it." Another interviewee brought up the idea of having meetings or groups to talk about risks. He said, "I think it would be helpful to have some sort of buddy system or support system to turn to you when you need it."

Half of the interviews stated they couldn't remember the last HIV prevention message they saw. Those that did remember a message said it didn't really resonate with them. Some said the messages they remembered felt antiquated, used a fear factor or had only a "get tested" sentiment that was not effective. However, almost all of the participants expressed a need for clear, direct messaging about transmission and living with HIV. Several participants noted that the media and internet scares them. One participant said, "I feel like any time you Google anything related to STD or HIV it is a big no-no. It is the worst thing you could ever do and you automatically assume the worst." He continued to say, "You get freaked out. You go, 'Oh my God, look at all these pictures. He has sores all over his face.' when in reality, it isn't like that."

Theme III - Perceptions of HIV

Participants were asked to describe someone who had been diagnosed with HIV and how an HIV-positive diagnosis would affect their own life. All participants reported having negative perceptions of someone who was diagnosed with HIV. These types of responses fell into two categories: those that influenced how the respondent saw himself and those that influenced how they were seen by others or society as a whole. One participant compared it to being diagnosed with diabetes, but still expressed that HIV is an undesirable health outcome.

Perception of people living with HIV. Each participant expressed feelings of pity and lack of social acceptance of someone who has been diagnosed with HIV. When reflecting on seeing profiles on a dating application, one participant exclaimed, "I know there is a stigma on people who have HIV and that makes me sad. There are people who make it very well known they are poz...it affects how I look at them. I look at them in a negative view." A second participant mirrored similar feelings stating, "It makes me sad that they have to label themselves with it and all the thoughts go through your mind about what kind of sex life they had." Finally, a third man said, "I think the sketchiest thing I can about them 99.9% of the time...they look like regular people...I guess they are regular people."

Upon self-reflection, the participants noted that severe stigma associated with a positive diagnosis would put severe limitations on their future. Participants felt certain they would face rejection from partners and society as a whole. On thinking about testing positive for HIV themselves, most participants became distressed and expressed fearing huge obstacles if he had a positive test. One participant stated "I was thinking if I had HIV, I don't want to live. I don't want to tell my friends and family I had it." Another participant stated "I wouldn't be OK with myself. I wouldn't tell anybody and I wouldn't have sex anymore because it is a lot to talk about and everyone isn't with it right now." A third participant stated, "What was going through my mind was how scared I felt if he was going to accept me for what I have?" Finally, another participant had similar feelings about rejection from a partner, stating "I don't want to be denied by a lover because I have a life changing disease." Only one participant expressed neutral feelings about HIV due to his familial support.

Views of being HIV-positive. Living a life with limitations was another underlying thread when asked about testing positive for HIV. Several participants expressed how their lives would be negatively affected if they were to have HIV. One said, "I can't do the things I want to do because HIV puts limitations on everything. I don't want to live with those limitations." A second participant expressed fear for his future, stating that he has a "fear of not having children, fear of a shorter lifespan and what if he doesn't want to take medication. He asked, "what if I just want to be regular?" During one interview, a participant reflected. "You just be more conscious of how you live and the choice you make…the things you eat, the interactions you have."

Along with experiencing significant stigma from families, participants reported experiencing rejection from sexual partners and social networks as a whole. When asked about what he thinks of someone becoming HIV-positive, one participant stated, "I think it is scary because it scares a lot of people. Everyone says it isn't a death sentence, but in the gay world, when it happens, you might as well just mark yourself off because I feel like people reject you." Another participant stated, “I feel like as a black, gay person, it would be the worst thing that could happen to me. Not necessarily because of the actual disease, but how people would treat me”

Pride was a common term used to describe being HIV-positive and several participants talked about how a positive HIV test would bring about feelings of shame. One participant described, “It wouldn’t be something I am proud of. It would be something I was more shameful of…” A second participant had similar feelings of becoming HIV-positive, stating, “I am proud to be a black person, proud to be a gay person, but those aren’t things that I chose in my life. It would be another statistic that I fall under, but this one wouldn’t be positive you know…It just isn’t something I would be proud of.”

Three out of the ten participants stated testing positive for HIV isn’t something they think about. One participant stated, “With one time partners? We just do it and move on. [HIV] isn’t something I think about.” Another participant expressed that he would be grateful to test HIV-positive so he could stop having anxiety about testing.

Theme IV - Conflict during CAI - Cultural Norms of Safe Sex and Sexual Desires

Participants were asked to talk about the specific time they had CAI and believed they became infected with chlamydia and/or gonorrhea. Most of the participants were forthcoming and comfortable discussing this question; only one participant refused to answer. The majority of participants expressed feelings of conflict each time they had CAI. In fact, none of the participants reported particularly enjoying being the receptive partner, often times admitting that they didn’t want to do it or that they try not to do it often.

There were a few motivating factors of engaging in CAI. Some of the participants seemed to be personally and internally gratified when they felt they pleased their partners. One participant in particular stated, “If he get off and I don’t, it’ll still make me feel like I did my job or I got what I wanted to get done in the situation.” Other participants stated it was a way of “escaping reality” or relinquishing control. One in particular described his feelings as, “The feeling at that time was more important than sitting on the hospital table or taking pills for the rest of my life. I don’t hear the ‘you need to use protection.’ I hear the, ‘you need to be in this alternate world for a minute.’”

The participants also described the relinquishing of control of inhibitions during certain sexual encounters. Oftentimes they referred to “the heat of the moment” and talked about their inability to stop and get a condom. There was a drive for immediate sexual pleasure at the risk of a potentially poor health outcome. These feelings could be compared to a tipping scale: on one side, there is the drive for immediate and intimate sexual pleasure, but on the other are the feelings of guilt that are felt after participating in a risky event. Participants described acting in discordance with a perceived norm - that CAI is risky. One interviewee said, “I know it is bad, but in that moment, it is just like I want to F*** and it isn’t like I don’t care, it is just like in that intimate moment…” Another one said, “I don’t even think about it. I just think about it afterwards and I be beatin’ myself up.” He continued to say, “You not even thinking about yourself if you HIV-negative and you havin’ sex without a condom...but like...the moment outweighs thinking about that.” Finally, one man described a natural urge that takes over thoughts of protecting yourself. One participant said, “It is basically your dick vs. your brain.

Your dick is going to win out you can think things through, but there is going to be this invincible mentality thing."

Despite engaging in CAI, all participants were aware that HIV could be transmitted through CAI and that there was increased risk of HIV transmission by having CAI with men and specifically, being the receptive partner. One participant stated, "People told me, how can you have sex with a female and have sex with a male? Don't you know if you have sex with a man, you're going to contract AIDS?"

Among all the participants, there seemed to be a general awareness of risks associated with their sexual behavior, but that pleasure and sexual gratification outweigh any risk. One participant stated, "I was weighing I am I going to do it and catch something or get my pleasure out and for me, it was pleasure." Another participant said, "When you're in the act and you're doing it, you know there is a possibility of something happening, but you have the temptation and think, 'oh well maybe it won't happen this time." The same sentiments resonated throughout the participants where they perceived their actions as "risky" but that they did not think about consequences of actions during those times.

While most of participants reported having feelings of guilt or regret after a sexual encounter where they had CAI, those feelings do not prevent them from engaging in CAI again. One said, "I have been really fearful and really weary for a day or two after something. But worrying about it constantly isn't realistic...this is what I want, this is what my body is telling me I want, so those feelings don't last very long." Another said, "If I was clear, I would wait a good month or two before having sex again and then once I do engage, it is like a spiral and I get into a pattern of a lot of sex back-to-back." One participant said "I don't understand the things people do and why they do them and I don't understand the things I do and why I do them" but continued to say, "Like once all the clothes are off, it's like why am I doing this?'...but then it's like, 'OK, I'm bottoming and then that is pleasurable and that is all I need to push me over the edge to rationalize...but then after, you're like, 'Why do I keep doing this to myself?'" These expressions highlight the internal conflict felt by participants.

Theme V - STD and HIV Knowledge is Low and Skepticism in Health Care Exists

The power of increased knowledge to motivate logical sexual behaviors to reduce HIV infection constitutes the crux of most HIV/AIDS campaigns. Providing information has been believed to help empower at-risk populations to make healthier decisions and reduce risky behaviors. While there were no questions directly related to HIV knowledge, this study indicated an overall lack of knowledge about HIV/AIDS transmission in this sample population. Additionally, there also was a high level of mistrust in current treatment and prevention methods. The internet was the main source of information for participants. While it was not clear which websites they specifically accessed, "Googling" was a common term used by participants when they talked about getting information about HIV and HIV prevention.

Throughout discussions regarding HIV, sexual health and partner dynamics, there were several questions and clarifications asked by the participants. One participant said, "My schools didn't really explain to me as far as going into details. All they said were you get HIV, you die. It wasn't like you can still do it and get the pleasure for it." Another said he didn't know how to answer a certain question and stated, “I don’t know if you have to have HIV in order to contract it or does it contract when like his DNA and my DNA comes together?” In a different interview, a participant remarked, “Like I don’t have the definition of exactly what HIV is and symptoms that people tell me, like you’ll die or get skinny and cough and throw up.” These sentiments demonstrate a severe gap in knowledge. Participants know HIV is sexually transmitted and that it can cause adverse health outcomes, but there remain steep obstacles in clarifying some of the information.

Participants were asked about protective behaviors they would be willing to try, including being on PrEP. The majority of participants reported hearing about PrEP before and they expressed an interest in the medication, however, several of them had misconceptions about PrEP. One participant thought it was only available to certain people, others had no idea how they could pay for that kind of treatment and finally almost everyone said they would need more information about PrEP before making a decision to take it.

When asked if they would try it, several participants said it was either not something they thought they needed and/or they would not trust it could help prevent HIV. One expressed his disbelief by saying, “If I take this medicine, what else are they not telling me? [It feels] like we are going to let you have sex with someone who we know is HIV positive and you are going to see if it works.” Another said, “If you think that it really did prevent you from getting something you didn’t want, you’d think everyone would be on it, but people aren’t so…” One even stated that “the government has a cure for it, and they just want you to spend money.” These sentiments express severe skepticism and lack of information about PrEP as a prevention method.
The unknown side effects of PrEP were also identified as a barrier to taking it. One participant said,“Maybe those pills will make my HIV and AIDS go down, but my fear would be that it would bring cancer or a tumor…[it] won’t talk about brain this and heart side effect that. That’s enough for me not to take it. Everything has a side effect.”

Several participants said they think taking a pill after an exposure would be better for them and expressed that they didn’t think they needed taking a pill every day. Often times, participants stated that they “didn’t have sex like that” or didn’t have a lot of “regular” partners as reasons why PEP would be a better option for them over PrEP.

Theme VI - Testing is Valued

While there is an apparent gap in knowledge about HIV/STD transmission etiology, participants in this sample all reported getting tested for HIV/STDs at least two times a year, sometimes up to four times a year. This follows current HIV screening guidelines set by the CDC. Most of the the interviews reported that health is important and staying healthy is a priority in their lives. There did not seem to be any one underlying reason for getting tested among this sample. A few reported getting tested because a partner told them, a few others because they “felt” something was wrong and the remainder because they knew it was something they needed to do. Another important commonality was that almost all men were offered STD testing for both their rectum and throat regardless of where they were tested.

A common thread was getting tested to protect the wellbeing of others. One participant stated, “It is important to me to get checked because I need to protect my own health and the health of my partners." Another expressed the same sentiment, "I just want to know what is going on. It can be scary, but it is important. For myself and for other people." Finally a third said, "I just want to know what is going on and to protect myself and others around me. I don't want to have nothing and not know."

Discussion

The findings indicate that sexual health among YBMSM is much more than just the presence or absence of a disease, or more than just using a condom or talking about HIV with a partner. This research sheds light on circumstantial, multi-faceted, complex and culturally embedded barriers that help maintain high rates of HIV in this target population. As a result of this study, certain factors that put these YBMSM at risk and the underlying causes of risk behavior are divided into six salient themes. While these are not necessarily new insights for this general target population, it is certainly helpful in how to specifically tailor HIV prevention programs in Philadelphia.

Understanding situations that increase HIV risk among YMSM requires consideration of the context in which the risky behavior occurs. Previous research has demonstrated there is no significant racial or ethnic differences in the rates of CAI among MSM, but that there are contextual factors surrounding sexual risk behavior that are important to understand. Relationships and partner dynamics are one such context. Given that the sexual transmission of HIV is dyadic in that it requires the participation of two individuals in a sexual act, investigating relationship dynamics and sexual risk behavior is an important theme.

Partner Dynamics - Age of Partner and Sexual Role

The insights provided about partner dynamics were complicated and circumstantial. As stated before, understanding the context in which risky behavior takes place is essential to not only better understand risk taking, but also to develop better interventions that target this interpersonal influence. The data reveal several important points on which to focus. First, each of the participants reported that their last CAI partner was older. This finding could add to the growing body of literature suggesting that condom decision-making may be influenced by a power differential between older and younger men related to age and by the sex roles these men assume [21,22]. Other studies found that partners of a "lower status", meaning young age, more feminine or taking on the role of being the receptive partner, would be more likely to submit to the wants of a partner with a "higher status" who presented as more dominant, older, masculine, and insertive partner [24]. The vulnerability and lack of self-efficacy in these YMSM has placed them at a disadvantage to their older, more powerful male partners.

Another study conducted by Mustanksi and Newcomb [25] also found that older partners in sexual networks of Black YMSM may be driving rates of HIV infection. This qualitative study found that YBMSM are more likely to not only have partners of the same race, but that they are older. The motivating factors to have an older partner range from seeking emotional maturity to someone who can introduce them to the LGBT community. They found that unprotected sex with older Black partners, a population with a high rate of HIV, could be associated with HIV seroconversion in YBMSM. Finally, Arrington-Sanders et. al [26] found similar trends in partner selection in that YBMSM seek two benefits from older partners: the ability to be exposed to life experiences by the older partner and emotional support.

Along the same line, several men mentioned participating in CAI to find a deeper connection with a partner. Balan, Carballo-Dieguez, Ventuneac and Remien [27] also found that not using condoms allows for more intimacy, more satisfaction and connectedness with a partner. While not explored thoroughly in this research project, the need for connections with a partner could be driven from the general feelings of rejection in certain community groups. Research has shown conflict in YBMSM sense of identity and social acceptance in that they have been found to be particularly vulnerable to social isolation and lack of social support due to experiences with racism and homophobia, which may have implications for riskier sexual confusion [28, 29]. However, having sex with men can compound this isolation especially as it may go against the grain of normative masculine Black culture [24]. While the concepts of identity, sense of community and Black culture were outside of the scope of the project, it warrants further investigation in Philadelphia.

Data collected from this study may support the notion that men associate gender roles with the sexual role one plays in sexual encounters. According to a study completed by Malebranche et al [30], being the receptive partner was seen as a feminine role while being the insertive partner is typically seen as the masculine role**.** These associations determined the type of sexual behavior the study respondents were willing to engage in as well as the type of partner they selected. Men in this study expressed that engaging in CAI was not something they ever intended to do or particularly enjoyed, but rather, it came about to do the circumstance with the partner.

The recent study conducted by Fields et al. [24] found rigid expectations of masculinity from their families, peers and communities experienced by YBMSM in three New York cities and Atlanta, GA. YBMSM in this study stated they equate homosexuality with femininity and the psychological conflict and strain this places on the young adult negatively affects self-esteem and self-worth, both of which have been associated with increased HIV risk. These risks are particularly relevant to youth because they face the challenge of identity development and exploration, seeking affirmation from families, peers and other significant others. Young adulthood is a time where social norms and impressions from significant others are crucial. Philadelphia prevention efforts should take into consideration these character identity developments in their youth to better target services, health messaging and prevention efforts.

Partner Dynamics - Communication and Condom Use

The data derived from this research does not necessarily demonstrate negative feelings towards condoms, but emphasizes a lack of self-efficacy in using them. The absence of reported willingness to ask a partner to use a condom reveals a clear disconnect: participants are aware of HIV and risk of testing positive for HIV, but do not take proactive steps to protect themselves in terms of condom negotiation. This study revealed that consequences of testing positive for HIV do not influence respondents' willingness to ask their partner to use a condom or willingness to ask their partner's HIV status. In fact, some participants reported it was their partner's responsibility to initiate condom use.

It is possible that personal responsibility is closely tied to social norms associated with unprotected sexual encounters. A qualitative study conducted by Peterson, Bakeman, Blackshear

and Stokes [31] identified that half of the African American men in their sample felt that friends in their social network did not have favorable attitudes toward condom use.
Carlos, Bingham, Stueve, Lauby, Ayala et al. [32] and Kelly, St Lawrence, Amirkhanian et al [33] found that there was low peer support of condom use and this is associated with increased odds of CAI among Black and Latino MSM. Kelly et al [34] specifically found that weaker perceived peer norms for condom use and lower intention to use condoms were significantly and consistently associated with the number of CAI acts and number of partners with whom CAI acts took place. Lacking support from significant others in a social network has been shown to be correlated with low self-efficacy to perform protective sex behaviors, such as consistently using condoms [35]. Finally, a study conducted by Parsons, Halkitis, Wolitski et al [36] showed that men reporting unprotected anal insertive sex perceived less responsibility to protect their partners from HIV. This concept is consistent with findings in our study and further adds to the complex social norms in sex roles among MSM and may show that neither partner feels responsible for HIV prevention.

Peterson et al [31] also found that condoms are used less in a "committed relationship," which is also the case in our study. YBMSM in Philadelphia seem to have a mentality that a "known partner is a safe partner" and feelings of trust and commitment with their partner were associated with lower intentions, personal agency and perceived norms to use condoms. The finding from our study are in line with a study completed by Thornburn, Harvey and Ryan [37] who found that YBMSM do not consider condoms necessary when one "knows" their partner. They found that when a connection is established, the rate of condom use is dramatically decreased. Newcomb & Mustanski [38] describe this as a "paradigm shift in terms of sexual partnerships" in that previously defined "risk behavior" was with anonymous or casual partners. Since YMSM are likely to be unaware they are infected and perceive risk of HIV transmission in their relationship to be low, not using condoms with a trusted partner can have implications for HIV transmission. Furthermore, studies conducted by Otto-Salaj et al [39], demonstrate a concept that HIV communication remains taboo and discussing sexual health with a potential sexual partner is often times perceived as a sign of distrust.

Data from our research is consistent with another study by Bauermeister et. al [40] who found that condom self-efficacy was dependent on the type of partner and condom negotiation of safer sex varies across partner types. In addition to having inaccurate perceptions of their risk, spontaneous or "heat of the moment sex" seemed to be a barrier to condom use in this sample from our research and in other studies [41, 42]. While public health efforts have focused on increasing HIV knowledge with the hope of changing behavior, knowledge does not seem to be a strong enough motivator to use condoms or talk about HIV status. Philadelphia can use this information to formulate health messages and targeted interventions that focus on perceived risk. Prevention efforts should take into account partner and relationship characteristics, serosorting, sexual roles and sexual networks to better target messages and appeal to the myriad number of reasons why one does not use condoms during CAI.

Perceptions about HIV -

Participants discussed their feelings and opinions about HIV testing in depth with candid responses. While participants valued testing, and reported testing within the recommended guidelines, they felt little control over, or desire in, discussing HIV status with a partner or engaging in protective behaviors beyond assuming a partner is negative or "clean." While most of the participants eventually acknowledged that they couldn't tell if their partner was positive or negative based on looks, his physical appearance was an impetus for engaging in CAI. To this study population, looking "sick" or being physically "dirty" was associated with "having something." Due to this flawed perception about a partner's serostatus, conversations prompting condom use and HIV disclosure were rarely reported this sample population.

These assumptions about a partner's HIV status may lead to higher levels of sexual transmission risk taking [43, 44, 45]. This research has demonstrated that if HIV-infected MSM assume their sexual partners are negative, then it is likely that CAI might occur with the belief or thought that they could not become infected with something their partners do not have. Further exploring how YBMSM make relatively automatic decision-making rules when deciding on a protective behavior is important in framing health prevention messages. Strategies should begin to address these presumptuous conclusions about a partner's HIV status and work towards building better communication skills between partners.

There were also consistent feelings between the participants that the impact of testing positive for HIV would include isolation, rejection and decreased sexual activity. Participants reported that they would face huge barriers from not only friends and family, but also partners and other members in the community. Harawa, Williams, Ramamurthi and Bingham [46] found similar findings in their mixed methods study. They found that feelings of being associated with both a racial and sexual minority are factors that increase feelings of intense rejection if they were to test positive for HIV. The perceived stigma of HIV is present in the Philadelphia participants as they expressed a fear of rejection from potential sexual partners if they were to disclose their status. Consistent with Harawa et al [46], some men in the Philadelphia study were concerned with telling their partner *how* they got infected and therefore being associated with a "gay disease."

Health Care Providers And Health Messaging

The data demonstrate having a medical care provider with whom the target population can relate to is extremely important. Previous research has demonstrated that black MSM in general experience stigma and discrimination, especially as it relates to medical care [47]. When providing medical care to YBMSM, one should have an increased awareness of previous experiences of stigma and work to make individuals feel comfortable. This means addressing difficult conversations, such as sexual role and partner heuristics. Young men in this sample expressed a desire to have open conversations with providers regarding sensitive topics as it shows the provider not only has an idea of what is going on in the community, but establishing rapport will allow these YBMSM in Philadelphia to be more forthcoming with information. Having a trusting relationship with one healthcare provider may negate the impact of prior negative experiences with health care [47].

Respondents in this study perceived their risk of HIV to be moderate to low, despite engaging in risky behaviors (CAI with older, male, Black partners). These feelings of risk for HIV were based on multiple factors, including "my partner looks clean and healthy" heuristic. However, these men are at heightened risk for HIV infection because of their age, race and sexual roles. This finding is consistent with other research studies [48] and further demonstrates that awareness and education are not enough to prevent engaging in sexually risky behavior. Instead, outreach and community groups should closely mirror the unique experiences of YBMSM. The use of peer role models or facilitators that share the same culture experiences and sexual orientation could be a successful way in developing support networks. As mentioned by this study's participants, they are expressing the need for an influential person to be honest and accepting of their behaviors. Finding this local spokesperson is perhaps a way for this target population to feel connected a community, or group of people with similar backgrounds and shared experiences. Ideally, this connection can help YBMSM resolve identity conflicts and feelings of stigma or discrimination.

A qualitative study conducted by Rhoades et. al [49] found similar findings in that YBMSM want informed social role models. Our data shows a significant desire to seek credible health information from a trusted source or local role model/opinion leader. Not only could this help build a relationship between someone at risk for HIV, it may also help establish stronger self-efficacy in using condoms, or not engaging in CAI with a partner of an assumed HIV serostatus. Expanding the prevention message to include local and culturally appropriate venues is important. This includes barber shops, non-gay settings (clubs, bars, and organizations), social service agencies and non-HIV related community health events.

Implications for PrEP & nPEP

Participants indicated a deep sense of distrust of government and medical institutions in the U.S. Information from this research regarding misconceptions about PrEP is consistent with a recent article published by Kirby and Thorner-Dunwell [50]. They stated that PrEP uptake will be slow until knowledge becomes widely known in the MSM community and general population. Results from Philadelphia participants mirror these predictions. While participants felt apprehensive about the efficacy of PrEP, they seemed interested in wanting more information. Perez-Figueroa et al. [51] found similar attitudes around uptake and adherence to PrEP. In their study, there was an incomplete understanding about what PrEP is, skepticism regarding HIV prevention and its potential short and long-term side effects.

Rectifying assumptions about PrEP represents a crucial opportunity for public health officials to engage the community about its potential, especially YBMSM who may be less exposed to health messages regarding PrEP. It is important these messages stress the potential of PrEP as an effective HIV prevention method for this target population, as they are the group that would most benefit from multiple prevention methods. Furthermore, participants in this study expressed a need for more protective options other than condoms, giving PrEP the necessary leverage in this target population. Messagings should try to normalize PrEP and promptly address perceived barriers such as cost, accessibility and eligibility. Condoms have been the primary prevention message and the development of PrEP introduces an entirely new concept in preventing HIV. It is unsurprising there is skepticism regarding this advancement, however, stressing the benefits of PrEP and clarifying misconceptions is critical in uptake for YBMSM.

Health care providers at public health clinics, especially STD clinics, are in a unique position to have discussions about PrEP. Discussing PrEP with a family doctor may lead to awkward conversations about unprotected sex and sexual behavior. However a specialist in STDs/HIV may be able to have more open conversations with the target population about risk taking and the importance of PrEP as another prevention tool.

Testing is Valued

All YBMSM in this study thought getting tested for HIV and other STDs was important, not only in protecting their own health but others around them. While this could be because the study sample was recruited based on test results, it is in line with a qualitative study conducted by Hussen, Stephenson, del Rio Wilton et al., [52] which found that BMSM could be categorized in four groups based on their testing intentions and behaviors: 1) maintenance testers who test regularly as part of routine care; 2) risk-based testers, who tested depending on sexual behavior; and 3) infrequent testers. In this study, maintenance testers were on average between 20-30 years old. These results found that like Hussen et. al's [52] findings, most of the study population fit into either maintenance testers or risk-based testers. They also support findings outlined in the literature review, that YBMSM are testing frequently [10, 11]

Limitations

This study has several limitations. Although the data provides insight that is consistent with previously published research, it lacks an important component of qualitative research quality in that there was no intercoder reliability. Different coders may vary in their interpretation of the text's content. A coding process, or intercoder reliability, assesses the degree to which coding of text by multiple coders are similar [49]. Since there was only one coder, individual code definitions may have influenced the reliability process. In addition to this, some of the participant's responses were lengthy and increased the complexity of coding tasks. These two limitations may have reduced intercoder reliability and validation of the code book tool. Finally, one person conducted and transcribed the interviews. This could have led to certain biases in data analysis.

There were also limitations with the sample. Those who participated in this study agreed in part to talking about their sexuality, sexual risk taking and personal anecdotes. Men who are less likely to talk about sexual experiences in this context may have provided different insights to research questions and illuminated other factors unbeknown to the researcher. Risk behaviors and sexual experiences were self-reported. This may result in memory bias, socially desirable responses, and concealment of information [49]. Along the same line, an inclusion criterion was that the participant needed to have a reported rectal STD in 2015. YBMSM who do engage in CAI, but did not have a reported rectal infection were missed and it is possible that those who seek STD/HIV screening may have different experiences than those who do not. Finally, majority of young men who participated in this study were also seen at one of the public health centers in Philadelphia and the experiences of YBMSM who were seen at other community based organizations or testing centers were not explored in this study. While it is impossible to make general inferences to the entire YBMSM community, they are at a high risk for HIV and remain an important group to study.

In regards to data analysis, accurate coding and theme development was dependent upon the honesty of the participants. It is possible participants felt compelled to answer in a desirable way or were dishonest about some of their behaviors. However, the researcher has years of experience in motivational interviewing and stressed the importance of anonymity in this study.

Finally, this study did not explore substance abuse and history of traumatic events during the interview. Previous research has demonstrated that YBMSM experience alienation and isolation as a result of racism, negative attitudes about homosexuality in the Black community, conflicts of faith, concepts of masculinity and thoughts about gender role expectations [51, 52]. While no participant specifically mentioned it, child abuse was not addressed during this research. Other studies have demonstrated that experiences with child sexual abuse has been historically considered a factor that place MSM at risk for sexual risk behaviors [52]. These topics were not covered in-depth and could have provided further insights into the lives of YBMSM in Philadelphia.

Despite the limitations noted, this study did provide helpful insights for health officials in Philadelphia. It is one of the few qualitative studies done on YBMSM in Philadelphia on behalf of the Philadelphia Department of Public Health, giving voice to an often marginalized and stigmatized subpopulation. The knowledge gained from this study has expanded knowledge on the social and sexual experiences of this target population.

Future Direction:

Protective heuristics such as trust, connection with a partner and partner’s physical appearance are some of the individual factors that may affect rates HIV rates in this population. Lack of knowledge, mistrust in health care advancements, such as PrEP, and lack of health messaging are some of the interpersonal factors identified. Despite having negative or sympathetic thoughts about someone who has HIV, despite high reported testing frequently, despite the intention to not have CAI, this population continues to engage in behaviors that put them at risk for HIV. The perceived low-to-moderate threat of HIV should pique Philadelphia health official’s interest to further investigate this phenomenon.

On-going research using qualitative methods should delve deeper into the themes that emerged from this study and address some of the limitations identified. Extending the focus to include psychological and behavioral impact of family support, coping methods, community identity and additional partner heuristics would be essential in expanding knowledge. The findings of this study demonstrate the need to move beyond the stereotypic prevention messages of using condoms to a more dynamic appreciation of the factors that influence risk taking behavior.

Furthermore, topics such as masculinity, community identifications and stigma warrant further exploration in the Philadelphia context in both quantitative and qualitative methods. Development of more effective intervention strategies requires a better understanding of factors driving sexual risk taking among YBMSM. While this study found relationship dynamics to deeply influence the quality of the relationship and potentially have a bearing on the agreements individuals make to prevent HIV, there is far more to learn about the contexts in which behaviors take place.

While negative thoughts and fear about HIV do not seem to influence self agency in using condoms, talking about HIV status, or other protective heuristics, prevention efforts need to do a better job of addressing stigma and social rejection in this population. Philadelphia needs to expand prevention efforts outside of the traditional sense of clinical settings. There also needs to be a greater community awareness of sexual diversity and sexual identity from a wide range of local organizations. These programs should consider the unique social and cultural norms surrounding gender roles, masculinity, stigma and sexual identity that exists in Philadelphia. Expanding community-level collaborations are one way in which Philadelphia can improve these efforts, including organizations that address mental health, housing, faith-based initiatives and substance abuse.

The health department plays a key role in helping YBMSM reduce risk behaviors and maintain safer sex practices. Not only is the health department a liaison between national agendas and prevention efforts, they have their own hand on the pulse of the community. Having the ability to select key stakeholders coupled with the access to surveillance data and the ability to develop unique and specific interventions puts these agencies in a prime position to curb rates of HIV. Clinically, health departments can improve access to care, offering better testing environments and provide improved patient-provider relationships. Flooding the community with tailored and culturally relevant prevention messages that address behavioral factors, dispel myths about HIV/STD transmission, and clarify preventative services is only the tip of the iceberg for health department potential in addressing HIV disparities. This includes improved targeted messages about PrEP as an additional HIV prevention strategy. They just need to know more about unique situations, feelings and dynamics within this population before employing these strategies.

Addressing complex, interrelated and circumstantial situations creates a challenge for public health officials to develop comprehensive strategies that counteract various barriers in HIV prevention. Through countless studies, literature reviews, intervention evaluation and program planning, the imbedded cultural and social factors continue to remain in question. The plethora of data suggests that YBMSM operate within complicated constructs rampant with HIV stigma, racial and economic marginalization [56]. These environments are dynamic and the reality for many YMSM is that the interactive nature of their sexuality, race, perceived norms and culture intertwine, leaving public health officials with no other choice than to address other constructs of the ecological model. Building social support networks, improving communication strategies, and building self-esteem within this subpopulation should be on the long-term agenda for HIV prevention in Philadelphia.

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