BLACK MSM ORAL HEALTH BEHAVIORS AND IMPLICATIONS FOR HIV RISK

by

Darrin Keith Johnson, Jr.

A dissertation submitted to the faculty of
The University of North Carolina at Charlotte
in partial fulfillment of the requirements
for the degree of Doctor of Philosophy in
Health Services Research

Charlotte

2017

Approved by:

_____
Dr. Diana Rowan

_____
Dr. Suzanne Boyd

_____
Dr. Teresa Scheid

_____
Dr. Judith Cornelius

_____
Dr. Stephanie Woods

ABSTRACT

DARRIN KEITH JOHNSON, JR. Black MSM oral health behaviors and implications of HIV risk. (Under the direction of DR. DIANA ROWAN)

The primary goal of this qualitative and quantitative mixed methods exploratory pilot study is to determine the oral health behaviors of Black men who have sex with men (MSM). The secondary goal of this mixed methods study is to determine if Black MSM report lack of access to and low utilization of oral health care services. The sample population was recruited in partnership with a local community-based organization in Charlotte, North Carolina to a focus group and for participation in online surveys. Paper 1 is a thorough description of the population of focus, which for this study includes Black MSM, ages 18 and older, who live in North Carolina. Paper 2 describes the Johnson conceptual framework, which utilizes the social cognitive theory for health promotion and potential behavior change. Paper 3 discusses an integrated service delivery model that could be used by community-based organizations as a model to decrease new HIV infections and engage Black MSM living with HIV into care. This paper emphasizes why integrated services like oral healthcare should be included in HIV prevention and care models.

The research questions for this study are: 1) What are oral health behaviors of Black MSM; 2) What is the level of health literacy about oral health among Black MSM; and 3) What is the level of access to and utilization of oral care services for Black MSM. A semi-structured focus group with members of the community of focus was conducted to help develop the Black MSM Oral Health Behavior Survey. Quantitative data were gathered using the Black MSM Oral Health Behavior survey, and were collected

December 2016 through March 2017.

The three papers together demonstrate a significant relationship between oral health behaviors, oral sex practices, and the need for culturally engaged integrated services when working with Black MSM in HIV prevention and linkage to healthcare. The findings from this dissertation provide data that could be used to enhance prevention and care strategies for this population of focus, and if further studied could be potential reasoning for a need to focus on oral health in HIV prevention.

ACKNOWLEDGMENTS

It is my privilege to extend my sincerest gratitude to Dr. Diana Rowan who has been an excellent mentor and advisor in my journey to obtaining a doctoral degree. Dr. Rowan and the leadership of each committee member (Dr. Suzanne Boyd, Dr. Teresa Scheid, Dr. Judith Cornelius, and Dr. Stephanie Woods) is to be commended. Thank you to Dr. Pilgrim Spikes, Dr. Jeffrey Shears, and my colleague Eric Junious for their mentorship and support. I would like to thank Dr. Cardra Burns from Mecklenburg County Public Health and the Black Treatment Advocates Network (BTAN) Charlotte Chapter's executive committee (Solita Jefferies, Hannah Stutts, Jaysen Foreman-McMaster, and Jeffrey Edwards-Knight) for their continued support and motivation.

I began working in HIV in 2006 under the leadership of Dr. Yohance Omar Whiteside. Thank you for always encouraging me to move forward. Thank you, Grazell Howard and Phill Wilson of the Black AIDS Institute, for encouraging me during this process. I would like to acknowledge Quality Home Care Services, Inc., and the participants of the Black MSM Oral Health Behavior Study. Last, but certainly not least to my friend and huge support J. Donte Prayer…thank you for your support during this journey.

TABLE OF CONTENTS

TABLES AND FIGURES

Introduction

Chapter #1: A Descriptive Profile on Black MSM Oral Health and Oral Sex Behaviors

Chapter #2: Safer Sex Above the Waist: A Framework for Implementing Positive Oral Health and Oral Sex Behaviors Among Black MSM

LIST OF ABBREVIATIONS

3MV	MANY MEN MANY VOICES
ACA	AFFORDABLE CARE ACT
AIDS	ACQUIRED IMMUNODEFICIENCY SYNDROME
ARV	ANTIRETROVIRAL THERAPY
CBO	COMMUNITY-BASED ORGANIZATION
CBPR	COMMUNITY-BASED PARTICIPATORY RESEARCH
CDC	CENTERS FOR DISEASE CONTROL AND PREVENTION
CQI	CONTINUOUS QUALITY IMPROVEMENT
EBI	EVIDENCE BASED INTERVENTION
HIV	HUMAN IMMUNODEFICIENCY VIRUS
MSM	MEN WHO HAVE SEX WITH MEN
NHAS	NATIONAL HIV AIDS STRATEGY
NIH	NATIONAL INSTITUTE OF HEALTH
ONAP	OFFICE OF NATIONAL AIDS POLICY
PLWH	PEOPLE LIVING WITH HIV
POL	POPULAR OPINION LEADER
QHCS	QUALITY HOME CARE SERVICES
STI	SEXUALLY TRANSMITTED INFECTIONS
TQM	TOTAL QUALITY MANAGEMENT
WHO	WORLD HEALTH ORGANIZATION

INTRODUCTION

Statement of the Problem

Black men who have sex with men (MSM) may be impacted by oral health disparities and have oral health behaviors that put them at risk for human immunodeficiency virus (HIV) infection. Oral health behaviors have not been researched among Black MSM. Black MSM is the only population that continues to see increases in new HIV infections. This group has the most barriers to accessing prevention and care services. To reduce the number of HIV infections among Black MSM in North Carolina, a multifaceted approach that includes effective HIV prevention programs designed to reduce risk behaviors, increase knowledge of HIV status, promote successful use of anti-retroviral (ARV) medication for those who are already positive must be enhanced, and address psychosocial stressors that create access barriers to HIV prevention and care services. Comprehensive health programs should properly educate Black MSM about HIV risk and all modes of transmission, including oral HIV transmission. Currently, HIV prevention interventions only address preliminary information about oral HIV risk reduction. These techniques include not brushing, flossing or using mouthwash before or after oral sex, and spit or swallow if there is semen in the mouth after having receptive penile to mouth oral sex. However, these interventions fail to address oral health, and negative oral health is known to be associated with various chronic illnesses.

This dissertation addresses these approaches by introducing a framework that shows how Black MSM can be exposed to positive oral health and oral sex behaviors, and increase health literacy to have better health outcomes and reduce the risk of oral HIV transmission.

The primary goal of this mixed methods study was to determine the oral health behaviors of Black (MSM) and if there are implications for risk of human HIV infection.

The secondary goal of this mixed methods study was to determine if Black MSM report lack of access to and low utilization of oral health care services.

The research questions and specific aims included the following: 1) What are oral health behaviors of Black MSM; 2) What is the level of health literacy about oral health among Black MSM; and 3) What is the level of access to and utilization of oral care services for Black MSM. This dissertation consists of three research papers that focus on the specific aims:

***Specific Aim 1*:** To determine the prevalence of [regular] oral health behaviors (e.g. brushing teeth twice daily/before-after meals for at least 60 seconds per encounter, flossing, etc.) as well as oral health behaviors before and after sexual encounters (e.g. flossing/use of mouthwash before oral sex) of Black MSM in the South.

***Hypothesis*:** Black MSM will report low prevalence of healthy oral health behaviors.

***Specific Aim 2*:** To quantitatively and qualitatively determine the level of health literacy about oral health among Black MSM.

Hypothesis: Black MSM will exhibit a low level of health literacy concerning oral health.

Specific Aim 3: To determine the level of access to and utilization of oral health care services with black MSM.

Hypothesis: Black MSM will report a low level of access to dental care, including not having dental insurance.

***Specific Aim 4*:** To determine if Black MSM self-report dental caries (i.e. cavities,

gingivitis, etc.) and continue to engage in oral sex.

Hypothesis: Black MSM will report dental cavities and engage in unprotected oral sex.

BACKGROUND AND SIGNIFICANCE

Oral Health

The World Health Organization (WHO) defines oral health as a state of being free from chronic mouth and facial pain, oral and throat cancer, oral sores, birth defects such as cleft lip and palate, periodontal (gum) disease, tooth decay (cavity) and tooth loss, and other diseases and disorders that affect the oral cavity (World Health Organization [WHO], n.d.). The mouth and teeth are sources of communication, pleasure, social interaction, and cultural facial and dental aesthetics. (Fisher- Owens, Barker, Adams, Chung, Gansky, Hyde & Weintraub, 2008). The mouth also is an inflammation portal (Fisher-Owens et al., 2008), where oral infections and diseases may occur. Negative oral health in conjunction with unprotected oral sex can put Black MSM at increased risk for HIV transmission. Oral and systemic diseases share common risk factors including poor diet, substance use, poor oral hygiene, and stress. Oral and systemic health disparities are often associated with race/ethnicity, sex, income, education, geographic location, insurance coverage, chronic conditions, age, and health literacy (Fisher-Owens et al., 2008; Sheiham, Watt, 2000).

The American Dental Association (ADA) encourages everyone to brush twice daily, floss once daily, have a balanced diet and limit between meal snacks, and schedule regular dental visits as basic oral health measures and to prevent oral health diseases. Risk factors that may contribute to oral health diseases are not listed as part of the basic oral health recommendations, and therefore may not be learned by populations who do

not have adequate dental care. Oral health recommendations from the ADA could pose challenges for communities who are poor or disadvantaged, and may have low health literacy, as prevalence for dental cavities are high among all adults worldwide. Also, treating oral diseases could be challenging for poor and disadvantaged people. Severe gum disease is found in 15-20% of middle-aged (35- 44) adults, and dental cavities and gum disease are major causes of tooth loss (WHO, n.d.). The focus or this study and for data collection are the risk factors that influence poor oral health as they could affect the oral cavity and potentially increase the chances of HIV infection for Black MSM.

Worldwide nearly 100% of adults have dental cavities (WHO, n.d.). Globally, the greatest burden of oral diseases is on the disadvantaged and poor population groups (Petersen, Bourgeois, Ogwa, Estupian-Day & Ndiaye, 2005). These groups may have risk factors, such as poor diet or harmful tobacco and alcohol consumption, that may put them at increased risk for oral diseases (Petersen et al., 2005). These are also risk factors for the four leading chronic diseases (cardiovascular diseases, cancer, chronic respiratory diseases, and diabetes), and oral diseases are often linked to chronic disease (WHO, n.d.). Untreated dental disease can lead to serious health problems, such as infection (American Dental Association, n.d.). Oral infections may be a result of the four leading chronic diseases; and similarly, oral diseases can occur early during HIV infection.

Oral health disparities span across various vulnerable populations. Pregnant women have particularly high gingivitis risk (60-75%) but low use of dental care (Fisher-Owens et al., 2008). Roughly 75 percent of caries (cavities) experienced by children age six or older occurs in only 33 percent of children, concentrating in Black, Mexican American, American Indian/Alaskan Native, and low-income groups (Fisher-Owens et

al., 2008). Adults surveyed in 2003, especially those with chronic conditions, often cited oral health as their top unmet need (Fisher-Owens et al., 2008; Davidoff et al., 2007). Lower-income, less educated, and racial/ethnic minority populations have higher prevalence of caries, periodontal diseases, and oral cancer than other adults (Fisher-Owens et al., 2008). In 1994-2004, 60 percent of adults had prior-year dental visits, with fewer visits from racial/ethnic minorities (43-50 percent), populations below poverty level (44 percent), and those with less than a high school education (38 percent) (Fisher-Owens et al., 2008; Dye et al., n.d.).

It is plausible that positive changes in health-related behaviors and better access to preventive dental services could eliminate or significantly decrease socioeconomic disparities in oral health (Sabbah, Georgios, Sheiham & Watt, 2009; Wamala et al., 2006). Special attention to oral health is not often considered to be a strategy for HIV prevention. However, African Americans are significantly impacted by disparities in health care, including oral health (Edelstein, 2002). Oral and systemic health disparities are often associated with race/ethnicity, sex, income, education, geographic location, insurance coverage, chronic conditions, age, and health literacy. Therefore, underserved populations like Black MSM are also impacted by these disparities. Most HIV prevention research with Black MSM focuses on prevention of the most common mode of HIV transmission, which is unprotected anal intercourse. Oral sex and oral health are significantly understudied in relation to the Black MSM population. It is important to consider the oral health behaviors of Black MSM and the implications they may have on HIV transmission.

Oral Sex and Oral Health

The potential HIV transmission risk associated with unprotected oral receptive intercourse continues to be an area of confusion and concern for HIV negative sexually active gay men (Halkitis & Parsons, 2000). Some evidence (Halkitis, 1997; Halkitis, Kosciw & Brathold, 1996) indicates that gay men believe that such concerns are present because HIV education and prevention programs have failed to clearly articulate the "safety;" of oral sex (Halkitis & Parsons, 2000). Oral sex in comparison to anal sex is deemed a lower risk behavior (Halkitis & Parsons, 2000). Sexually active heterosexual and same-gender loving couples of various ages commonly practice oral sex (Saini, Saini, & Sharma, 2010). Oral health has a direct impact on the transmission of infection (Saini et al., 2010); however, oral health isn't often considered when teaching HIV risk reduction to specific populations. The lack of concern about oral health, lack of access to dental health, and unprotected oral sex is a combination that should be considered with prevention strategies among Black MSM.

Oral sex refers to sexual activities involving the stimulation of the genitalia using the mouth, tongue, teeth, or throat (Saini et al., 2010). Fellatio (oral to penile contact) and analingus (oral to anal contact) are some practices common among Black MSM. Oral sex with ejaculation is perceived as more risky than oral sex without ejaculation (Saini et al., 2010) because semen is an HIV vector. The mouth may be a primary source of infection in any individual (Chapple & Hamburger, 2000), and therefore one can assume that the occurrence of dental caries will increase the risks of other infections, including HIV.

A study by Halkitis and Parsons (2000) found that most HIV negative gay men engage in receptive oral sex, and most do so without using condoms. Men developed a

determination about the relative HIV risk and were able to articulate contextual factors (e.g. not allowing ejaculation in the mouth, not swallowing, not taking the penis deep into the throat) that they believe reduced the potential risk of unprotected receptive intercourse (Halkitis & Parsons, 2000). This shows that some gay men are aware of the behaviors that put them at risk and use risk reduction techniques to decrease HIV transmission. However, there are currently no studies that have engaged gay men, especially Black MSM, and their oral health practices in conjunction with their HIV risk reduction techniques. Despite overall trends toward safer sex practices in gay and bisexual men, some MSM remain at high risk for sexually transmitted diseases (STD) acquisition (Lafferty, Hughes & Handsfield, 1996). A cross-sectional study with MSM found that fellatio (oral sex), a commonly thought to be a "safe" sexual practice is an independent risk factor for urethral gonorrhea and non-chlamydial non-gonococcal urethritis (NGU) ((Lafferty, Hughes & Handsfield, 1996). Another study found that receptive oro-genital sex carries a small risk of human papillomavirus (HPV) infection and possibly hepatitis C, while insertive oro-genital contact is an important risk factor for acquisition of herpes simplex virus-1 (HSV-1) (Edwards, & Carne, 1998). In a 2004 CDC report, 13.7% of primary and secondary syphilis cases in Chicago were attributed to oral sex, including 20.3% of cases among MSM (CDC, 2004). Because the risk of HIV transmission through oral sex is much lower than the risk through anal or vaginal sex, persons might mistakenly consider unprotected oral sex (i.e. without a condom) to be a safe or no-risk sexual practice and adopt oral sex as a replacement for higher-risk behaviors (CDC, 2004).

Health Literacy

The Patient Protection and Affordable Care Act of 2010 (ACA) defines health literacy as the degree to which an individual has the capacity to obtain, communicate, process, and understand basic health information and services to make appropriate health decisions (CDC, n.d.). Research has demonstrated that improving oral health knowledge is a necessary prerequisite for implementation of proper oral self-care behaviors (Yuen, Wolf, Bandypadhyay, Magruder & Salinas, London, 2009; Locker, 1989). Knowledge of correct behaviors does not necessarily translate to practice and misconceptions (or incorrect knowledge) about oral health and may lead to harmful behaviors (Yuen et al., 2009; Brown, 1994; Kay & Locker, 1996; Yuen, Wiegland, Slate, Magruder, Salinas & London, 2008). Consumer health information should be easy to understand, as sometimes it does not come directly from a medical provider. Nearly half (43%) of adults in the United States are at risk for low health literacy (Lee, Divaris, Baker, Rozier & Vann Jr., 2012). Individuals with low health literacy skills often have poorer health knowledge and health status, unhealthy behaviors, less utilization of prevention services, higher rates of hospitalizations, increased healthcare costs, and ultimately poorer health outcomes than do those with higher literacy levels (Lee et al., 2012). In this research study, health literacy and oral health literacy are essential components to encourage Black MSM to understand the connection between oral health and oral sex.

Human Immunodeficiency Virus

HIV is a virus that enters the body and attaches itself to disease fighting white blood cells (T-cells) in the immune system (Weiss, 1993). HIV infection can advance to Acquired Immunodeficiency Syndrome (AIDS) if not diagnosed or left untreated. AIDS

is a diagnosis that occurs when the number of T-cells decrease, giving the opportunity to other infections that normally wouldn't occur if the body was not already compromised by HIV infection (Weiss, 1993). To detect HIV, a person would see a medical provider and have an HIV test, usually confirmed by a blood test. However, with new technological advances, HIV can be confirmed with oral mouth swab tests. If infected, a person should immediately begin HIV treatment to prevent advanced stages of HIV.

Since the early 1980s, the HIV epidemic has impacted certain subpopulations of the United States population (Millet et al., 2007). HIV was first found in gay White men diagnosed in 1982 at the UCLA medical center and named gay-related immune deficiency (GRID) before further research found that it not only impacted gay men, but other communities through unprotected sexual intercourse, injection drug use, and blood transfusions (Wilson, 2012). HIV transmission is caused from human to human contact with bodily fluids (blood, semen, vaginal secretions, and breast milk) of an infected person (Rowan, 2014). Most HIV transmissions in the Unites States are from unprotected anal and vaginal intercourse (Rowan, 2014).

Human Immunodeficiency Virus and Acquired Immunodeficiency Syndrome is a global pandemic (Rowan, 2014). The Centers for Disease Control and Prevention (CDC) estimated approximately 1.1 million persons in the United States living with HIV infection in 2010 (CDC, 2011). Currently, it is estimated that 1.3 million people are living with HIV and 20% of them are unaware of their infection (Rowan, 2014; CDC 2012). In 2010, the estimated number of HIV infections was 47,500: of those, 63% were attributed to male-to-male sexual contact, 25% to heterosexual contact, and 8% to injection drug use (CDC, 2011). African Americans accounted for an estimated 44% of

all new HIV infections among adults and adolescents (ages 13 years or older) in 2010, despite representing only 12% of the U.S. population (CDC, 2012). In 2010, men accounted for 70% of the estimated 20,900 new HIV infections among all adult and adolescent African Americans, and Black women accounted for 29% of new infections (CDC, 2012).

Prevalence, the amount of disease already in a particular population, and incidence, the amount of new infections, show the inequities of HIV burden between Black MSM and other subpopulations. This HIV burden has most disproportionately impacted Black men, who represent an increasingly large percentage of AIDS cases among MSM (Blair et al., 2002; CDC, 2001; CDC; 2004; Millet et al., 2007). Figure 1 from the CDC Surveillance Report shows the estimates of new HIV infection among subpopulations in 2010.

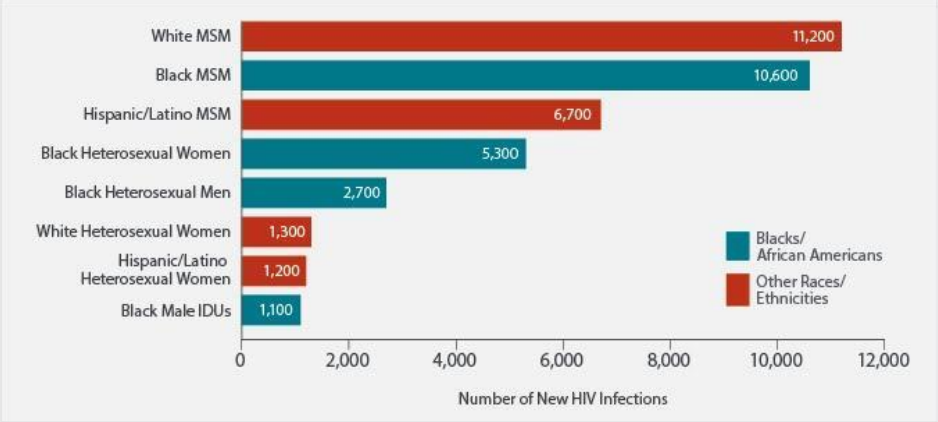

Figure 1. Estimates of New HIV Infections in the United States for the Most-Affected Subpopulations, 2010, CDC 2012, HIV Supplemental Surveillance Report

White MSM are a larger subpopulation compared to Black MSM, and the 2010 HIV infection rates for White MSM were higher than Black MSM. However, HIV

prevalence among Black MSM is roughly double the prevalence among White MSM (Andrasik et al., 2014). As shown in figure 2, the HIV incidence rate for Black MSM is nearly seven times that of White MSM, which causes Black MSM to have the most barriers to accessing HIV prevention and care, and other health services.

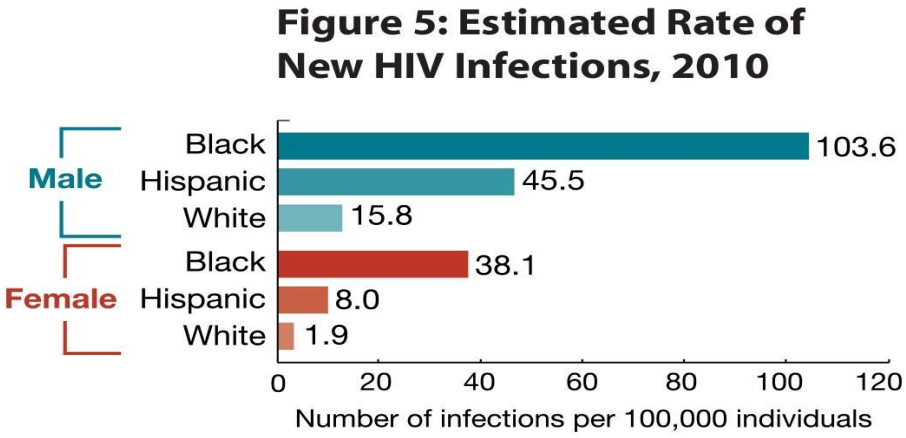

Figure 2. Estimated Rate of New HIV Infections, 2010, CDC 2012, HIV Supplemental Surveillance Report

Description of the Population: Black Men who have Sex with Men

Black MSM represent 1 in 500 citizens and 9% of all MSM in the United States, yet they accounted for 38% of new HIV infections among MSM and over 70% of new HIV infections among Black males in 2010 (Andrasik et al., 2014). The HIV incidence rate for Black MSM is nearly seven times the rate of White MSM (CDC, 2011). Black MSM is the only population that continues to see increases in new HIV infections in the United States, and this population requires enhanced prevention and treatment programs to reduce HIV incidence (Wilson, 2012). The Black AIDS Institute asserts that HIV rates among Black MSM are not attributed to more risky behavior compared to other populations, but are due to lack of access to health care for this population, lack of community infrastructure, and the need for organized health strategies across HIV

prevention and treatment (Wilson, 2012). Access to care is a barrier to receiving HIV prevention, care, and other health services for Black MSM (Wilson, 2012). Currently, Black MSM account for the highest rates of HIV infection compared to any other subpopulation. The public health community continues the work to find out why this population has the highest rates of HIV infection, but research shows lack of access to care, low health literacy, and the lack of effective prevention programs can be attributed to high rates of HIV among Black MSM; thus, these characteristics may also be associated with negative oral health among this population.

Black MSM, a subset of the larger population of Black men, are at elevated risk for HIV since the beginning of the epidemic, although their disproportionate risk was obscured by the prevailing view of AIDS as a "white gay disease" in the 1980s and through much of the 1990s (Wilson, 2012). Black gay men or MSM are neglected in society outside the context of HIV infection and prevention, and therefore, Black gay men's issues were essentially outed due to the onset of the HIV epidemic in the Black community. In addition to health disparities as it relates to the HIV epidemic, Black MSM issues are more complex concerning connectedness to racial and gender identities (Anderson & McCormack, 2010). Gay, bisexual, and other MSM who are also racial or ethnic minorities potentially experience the "double whammy" because they are both minority and gay (Crenshaw, 1991; Frye et al., 2015), and are associated with racial discrimination and negative life events (Karlsen & Nazroo, 2002; Nazroo, 2003; Egan et al., 1993; Frye et al., 2015). These individuals are said to possess "dual minority status" and may be at particularly high risk of adverse health outcomes, such as HIV infection (Diggs, 1993; Frye et al., 2015).

Black MSM could engage in other behaviors that put them at increased risk for HIV acquisition, including drug and alcohol use (Celentano et al., 2006; Phillips II et al., 2011). These behaviors are sometimes seen as coping mechanisms influenced by social stigma and negative perceptions about gay and bisexual persons. Furthermore, Black MSM are labeled a "hard to reach" population and difficult to engage in prevention and care by many healthcare providers and practitioners (Rowan, Long & Johnson, 2013; Phillips II et al., 2011). Black MSM are potentially hard to reach because they were not engaged in health care discourse until being perceived as a public health threat due to the HIV epidemic. Also, stigma toward homosexuality, lack of satisfaction with medical personnel, lack of access to private health care settings, and low health literacy are barriers to health care access (Peterson & Jones, 2009). Therefore, a framework for community-based organizations to effectively engage this population is essential to better health outcomes.

RESEARCH DESIGN AND METHODS

Mecklenburg County has the highest number of HIV/AIDS cases in North Carolina. On average, there are approximately seven new cases of HIV reported per week in the county (NCDHHS, 2015). African Americans comprise 68% of all new reported HIV cases in 2007, despite representing only 28% of the county's total population. North Carolina ranked eight of fifteen states with the highest AIDS cases among African Americans (NCDHHS, 2015).

Sampling

The three dissertation papers utilize qualitative data from one focus group and quantitative data collected via the Black MSM Oral Health Behavior Survey. Seventy-

Five Black MSM in North Carolina were recruited from December 2016 until March 2017 for the quantitative portion of this pilot study to participate in the survey. Eligible participants for this study self-identified as the following: 1) assigned male gender at birth; 2) identify as Black or African American; 3) live in North Carolina; 4) primarily have sex with men; and 5) over the age of 18. The primary partner with the study is PowerHouse Project, a CDC-funded HIV prevention program of Quality Home Care Services in Charlotte, NC for Black MSM ages 18-45. This program engages the community through HIV testing initiatives and focused community engagement events in Mecklenburg County, but also has partnerships throughout the state.

The study design is an exploratory mixed methods pilot study. Research on oral health behaviors and implications of HIV risk had not previously been conducted with this specific population. The Black MSM Oral Behavior Survey was developed specifically for this research. A letter of agreement was signed with the PowerHouse project to support recruitment to conduct the Black MSM Oral Health Behavior Survey. This study was conducted according to the protocol approved by the UNC Charlotte Institutional Review Board.

Members of the focus community were recruited via social media, flyers and print publication, community engagement events, and snowball recruitment. The survey was administered electronically via Qualtrics survey software. Participants were able to access the survey via a link on their personal phones, computers, and tablets. The pre-screening and informed consent were included in the link. Once the participant completed the screening and gave informed consent, they proceeded to the subsequent portions of the survey. The survey took approximately 10 to 15 minutes to complete.

THEORETICAL CONCEPTUALIZATION AND MODEL

This dissertation is guided by theoretical perspective of the social cognitive theory (Bandura, 1988). The connection between oral health and oral sex is not currently understood by Black men who have sex with men. Black MSM must be exposed to environmental changes (i.e. increased prevention strategies, access to care, health information) to gain knowledge about oral health behaviors that put them at risk for transmission of HIV. As individuals learn more, behaviors and environment may change, causing more knowledge to be gained, which, in turn reinforces behavior and health environments (Hollister & Anema, 2004). This means that Black MSM can learn positive oral health behaviors and how it is important to be aware of oral sex practices depending on the adequacy of oral health care; and make better decisions about oral sex practices. The social cognitive theory inspired a framework for community-based organizations to engage Black MSM in positive oral health and oral sex behaviors for HIV risk reduction. Also, it is a framework that enhances opportunities for community-based organizations to engage Black MSM in the development and implementation of their own personal goal setting and new strategies for community HIV prevention.

TAILORED APPROACH TO HIV PREVENTION AND CARE, POLICY, AND FUTURE RESEARCH

Over the past two and a half decades, community based participatory research (CBPR) has increasingly been viewed as an important strategy for eliminating racial and ethnic health disparities through engaging community members as partners in research design, collaborative knowledge development, and health policy-making (Belone, Lucero, Duran, Tafoya, Baker, Chan, Chang, Greene-Moton, Kelley, Wallerstein, 2014; Bell & Standish, 2005, Cargo & Mercer, 2008, Collins, 2006; Israel, Eng, Schulz, &

Parker, 2005, 2013; Israel, Schulz, Parker, & Becker 2013; Viswanathan et al., 2004). Engaging communities impacted by health disparities for HIV prevention are critical to community-based organizations and their effectiveness. Black MSM are often engaged in community-based settings, and often times receiving support for HIV education, healthcare, and/or social support. Programs created to provide support for Black MSMS have been instrumental in reducing risk of HIV transmission and providing community support; however, sometimes lack effectiveness in providing holistic and culturally appropriate services.

Community-based organizations have been instrumental in attempting to engage Black MSM for HIV prevention and care services. Programs like Mpowerment, D-Up! Popular Opinion Leader, Many Men Many Voices, and Counseling, Testing, and Referral Services are evidenced-based programs that have been used to educate and care for gay and bisexual men. Despite the amount of HIV prevention programs, social media campaigns, and linkage to care services, HIV infections continue to rise in Black MSM. Past studies have shown that the increasing rates cannot be attributed to more high-risk sexual behaviors compared to other populations. Special attention is given to Black MSM through funding of the aforementioned behavioral HIV prevention programs, but the North Carolina Department of Health and Human Services has implemented few policies to enhance effective HIV prevention and treatment programs that are specific to Black MSM, and HIV infections continue to increase among this population across the state and the U.S. Federal policies such as the Patient Protection and Affordable Care Act and the National HIV/AIDS Strategy serve as a monumental progression in the U.S. healthcare system. However, vulnerable populations like Black MSM are continuously marginalized

within the health policy and population health discourse. Therefore, culturally tailored approaches to HIV prevention and care, integrated services delivery models, and policies that affect Black MSM are needed to address the increasing rates of HIV infection among this population.

Past Prevention Strategies Specific to Black MSM

Prevention interventions specific to Black MSM are few, and only address the basic oral risk reduction techniques- not brushing or flossing before or after oral sex, spit or swallow ejaculatory fluid. Most of these interventions address reducing unprotected anal intercourse, but not unprotected oral sex. However, these programs are deemed effective as targeted prevention interventions for Black MSM. Prevention interventions can be culturally modified to include knowledge about oral health and more in depth prevention education around the potential for oral HIV transmission.

To advance the prevention goals of the National HIV/AIDS Strategy and maximize effectiveness of current HIV prevention methods, CDC outlined the high impact prevention (HIP) approach in 2011 (CDC, 2015). HIP uses combinations of scientifically proven cost-effective, targeted and scalable interventions for maximum impact on the HIV epidemic (CDC, 2015). The HIP project, formerly known as Diffusion of Effective Behavioral Interventions (DEBI), began in 1999 to aid service providers in addressing the HIV epidemic (CDC, 2015). However, there were only two effective evidence-based interventions that were specific to Black MSM.

Two community-based organizations, in collaboration with an STD/HIV prevention training center, created Many Men Many Voices (3MV) in 1997 (Herbst et al., 2014). 3MV was delivered by various CBOs serving black MSM since its development

(Herbst et al., 2014). Because of an urgent need for risk-reduction interventions for Black MSM, CDC has nationally disseminated 3MV since 2004 (Herbst et al., 2014). 3MV is a seven-session, small-group intervention for black MSM that aims to reduce the behavioral risks for acquiring HIV and other STDs and increase health protective actions (Herbst et al., 2014). The intervention focuses on helping Black MSM better understand the social, cultural, and behavioral determinants that affect their HIV/STD risk (Herbst et al., 2014).

The next evidence-based intervention for Black MSM was an adaptation of Popular Opinion Leader, a community level intervention that seeks to increase safer sex norms among members of a well-defined target population (Kelly et al., 1991; Jones et al., 2008). POL was originally designed and tested among White, rural MSM (Kelly et al., 1991; Jones et al., 2008). This intervention was piloted in 3 cities in North Carolina: Charlotte, Raleigh, and Greensboro. The program was effective at significantly reducing unprotected anal intercourse among Black MSM, and later became a CDC evidence-based intervention called D-Up! Defend Yourself. None of the above interventions explicitly include oral health behaviors and oral sex as a risk reduction component. Over the years, special attention and more research was conducted with Black MSM, but HIV incidence continues to increase among this population.

Health Services Research, HIV, and Black MSM

The Academy for Health Services Research and Health Policy (2000) defines health services research as the multidisciplinary field of scientific investigation that studies how social factors, financing systems, organizational structures and processes, health technologies, and personal behaviors affect access to health care, the quality and

cost of health care, and ultimately our health and well-being. Its research domains are individuals, families, organizations, institutions, communities, and populations. HIV should be an area of concern for health services researchers, as particular populations like Black MSM, have access barriers to HIV care and prevention. These access barriers can be attributed to cost and organizational structures in places where Black MSM access healthcare. The public health community has conducted numerous HIV studies on Black MSM, but this population remains understudied in terms of how they access the larger healthcare system. This exploratory pilot research study is primarily HIV related, however, includes an understudied cross with oral health among Black MSM.

CONCLUSION

The objective of this study was to collect data that could inform new strategies for addressing the increasing rates of HIV among Black men who have sex with men. The data will be used to inform future research about oral health behaviors and Black MSM. This dissertation will include articles addressing the following: 1) Descriptive data about the population included in the research study; 2) The theoretical conceptualization model for oral health behaviors and HIV risks; and 3) Integrated Services Delivery format as an example of how community-based organizations can engage Black MSM in services to reduce the risk of HIV infection and engage persons living with HIV into care.

Chapter #1: A Descriptive Profile on Black MSM Oral Health and Oral Sex Behaviors

INTRODUCTION

Barriers to access to health care services for Black men who have sex with men (MSM) could lead to negative health outcomes. Human immunodeficiency virus (HIV) acquisition is the highest among Black MSM, and this is the only group that continues to have increasing rates new HIV infections. Black MSM also have the most barriers to accessing HIV prevention and care services (Wilson, 2012). Access barriers include: Stigma about sexuality and receiving or having an HIV diagnoses, homophobia, racism, medical mistrust, difficulty navigating the healthcare system, low health literacy, and lack of social support (Wilson, 2012). Black MSM sometimes feel isolated or rejected by family, school and the religious community, and these problems are often associated with homophobia and racism, influence negative health behaviors and discourage Black MSM from accessing prevention and care services (Wilson, 2012).

To reduce the number of HIV infections among Black MSM in North Carolina, health care workers must understand the barriers associated with accessing health care services. A multifaceted approach including effective HIV prevention programs designed to reduce risk behaviors, increase knowledge of HIV status, and promote successful use of anti-retroviral treatment (ARV) for those who are already HIV-positive must be considered. Also, exploring various modes of HIV transmission should be considered. Oral health is one area that has been significantly understudied among this population. Negative oral health is often not discussed within the context of HIV prevention as a risk of HIV transmission. However, with a population that already has barriers to accessing prevention and care, it is essential to also determine level of access to and utilization of

oral health care, oral health behaviors, and oral sex behaviors.

Nationally, MSM represent about 4% of the male population yet they account for 52% of all people living with HIV (Andrasik, Chandler, Powell, Humes, Wakefield, Kripke & Eckstein, 2014; Centers for Disease Control and Prevention (CDC), 2013). For Black MSM, the HIV disease burden is experienced throughout the lifetime (Andrasik et al., 2014). By the time Black MSM reach 25 years, 1 in 4 are already infected with HIV and by age 40, 60% are living with HIV (Andrasik et al., 2014). In North Carolina, the rate of Black males living with an HIV diagnosis was 7 times the rate of white males in 2013 (NCDHHS, 2015). Male-to-male sexual contact accounted for approximately 69% of HIV infections (NCDHHS, 2015). Subsequently, in 2013 male-to-male sexual contact accounted for 81% of new HIV diagnoses (NCDHHS, 2015).

New strategies are needed to determine the causes of increasing rates of HIV infection among Black MSM. Recent studies have found that Black MSM do not report higher sexual risk factors compared to White MSM, and increased rates cannot be attributed to other risky behaviors like the use of illicit drugs (Andrasik et al., 2014). However, like other racial and ethnic groups, Black MSM are more likely to date and engage in sex with other Black MSM; therefore, the high prevalence of HIV contributes to the increased odds of becoming infected (Andrasik et al., 2014). Furthermore, most studies about sexual risk among Black MSM assess the level or risk attributed to unprotected anal intercourse and factors that lead to this behavior. Currently, there are no published studies that have assessed risks associated with oral sex, negative oral health, and possible HIV transmission among Black MSM. However, Black MSM have reported negative oral health behaviors and engaging in unprotected receptive oral sex. Although

oral sex is deemed a less risky sexual behavior compared to unprotected anal sex, the risk of HIV transmission may be exacerbated if Black MSM also engage in oral sex and do not protect their teeth and gums. Behaviors such as unprotected receptive oral sex, and brushing and flossing in short periods before or after an oral sex encountered are considered unhealthy oral behaviors and could perpetuate the risk of oral transmission of HIV. For this paper, the descriptive profile of Black MSM and the association of their oral sex and oral health behaviors are examined as potential risk for oral HIV transmission.

METHODS

The Black MSM and Oral Health Behavior Study is an exploratory pilot study using both qualitative and quantitative methods. The study included one focus group with semi-structured questions and a brief questionnaire. The study population is Black men in North Carolina who primarily have sex with other men, ages 18 and older. The goal of the focus group was to test the Black MSM Oral Health Behavior survey instrument and obtain an understanding of perceptions about oral health and oral sex among Black MSM. Quantitative data from the Black MSM Oral Health Behavior survey was administered online from December 2016 through March 2017. Black MSM were recruited from the PowerHouse Project, a local community-based organization (CBO) in Charlotte, North Carolina that engages Black MSM for HIV prevention and linkage to HIV care services. Data were also collected online via Facebook social media website in Black MSM specific chat groups to include participants from various areas in North Carolina, and from MSM in other North Carolina cities through snowball sampling from other HIV service providers who were contacted and asked to distribute the survey to clients in their

organizations' network.

The principal investigator, who is also a staff member at the partnering organization recruited participants to take the survey. The principal investigator has over 10 years of experience engaging the population in HIV prevention, and is a trusted individual within the Black MSM community. An HIV prevention coordinator at Quality Home Care Services assisted with recruitment of the focus group.

Qualitative Data Collection

Participants were recruited by word of mouth for the focus group. The prevention coordinator and the principal investigator both work in HIV prevention with the community of focus and have built rapport and established trustworthiness with the community. The attendance goal for the focus group was 12 participants. Ten Black MSM confirmed their attendance, 7 signed in to participate to the focus group, and after the statement of informed consent was read, 2 did not agree to participate and left the facility; therefore, there were 5 participants in the focus group.

During part 1 of the focus group, participants practiced the Black MSM Oral Health Behavior Survey in paper format. The task was to get familiar with the flow of the survey and make notes as they completed the survey. Part 2 of the focus group was a semi-structured discussion about how they felt answering the survey questions, and their perceptions about oral health behaviors and their oral sex behaviors. The principal investigator led the semi-structured questions in a round-table discussion style format. The prevention coordinator took notes about comments made in the focus group. The focus group was audio-recorded and lasted about an hour and half. The principal investigator advised attendees to use code names when referring to each other in the

discussion to keep the confidentiality of the participants during the audio-recorded portion of the focus group. There were no incentives given to participate in the focus group.

Qualitative data were analyzed using the open coding process as the initial and final approach, given the small number of participants for the focus group. Codes were developed after the focus group data were transcribed by the principal investigator. There was no follow up to the focus group, as the primary goal was to test the survey instrument.

Three themes emerged from the focus group. First, participants felt that oral health is only discussed when Black MSM have negative experiences. Participants described only discussing oral health and oral sex in conversations about personal hygiene (i.e. bad breath), and when a person visibly lacks oral aesthetics. Participants advised that it is perceived that a person has good oral health behaviors if they have a nice smile. Participants also noted that oral health would be discussed more if health experts increase attention around negative oral health behaviors as potential risk of HIV transmission during oral sex.

Second, participants felt the community, and specifically Black men who have sex with men, do not equate oral health and oral sex. Because oral sex is deemed a less risky sexual behavior compared to unprotected anal sex, participants advised that there is a lack of urgency acknowledging any risk with oral sex. In fact, participants noted that some Black MSM do not see oral sex practices as a type of insertive or receptive sex practice, and place focus more on insertive and receptive anal sex.

Third, although not brushing, flossing, or using alcohol-based mouthwash is

currently discussed in some prevention interventions, participants discussed that in their experience these practices are generally still unknown in the Black MSM community. Participants stated that people do not consider these practices and would typically brush, floss, and rinse with mouthwash to maintain good oral hygiene before and after practicing oral sex. Also, the presence of cavities, inflammation of gums, and toothaches are considered minor and will not prevent a person from having unprotected receptive oral sex. Participants stated that Black MSM would knowingly have problems with teeth or gums, continue to brush, floss, and rinse with alcohol-based mouthwash shortly before having receptive oral sex.

Quantitative Data Collection

The focus group was a vital part in developing the Black MSM Oral Health Behavior Survey, although the principal investigator developed survey questions that were aligned with the study aims prior to the focus group. After the focus group, the questions were revised and converted to a web-based format using Qualtrics Survey Software. The survey was then beta tested by individuals who are members of the focus community and HIV service providers at the local public health department. Minor revisions were made before the survey officially launched.

Measures

The Black MSM Oral Health Behavior survey consisted of four components:

1) Demographics: age; race, live in North Carolina, education level, income level, sexual orientation;
2) Sexual Risk Assessment: behaviors during receptive and insertive anal intercourse; behaviors during receptive and oral intercourse; condom use, HIV

status;

3) Oral Health Behaviors: reasons for last dental visit, frequency of brushing and flossing, and;
4) Black MSM Oral Health Literacy Assessment (BMSMOHLA): 20 item word recognition; fill in the blank word comprehension.

Self-reported demographic, sexual risk assessment, and substance abuse questions were adapted from the Centers for Disease Control and Prevention National Behavioral Surveillance Survey, MSM cycle (CDC, 2011). Oral health behavior questions were adapted from the World Health Organization (WHO) oral health assessment for adults 5th edition (WHO, 2013). The Black MSM Oral Health Literacy Assessment (BMSMOHLA-20) was developed to a 15-item word recognition scale, and a 5-item rapid word comprehension scale using a culturally modified version of the Rapid Assessment of Adult literacy in Dentistry-30 (REALD-30) word recognition and comprehension (Lee, et al., 2012; Lee, Rozier, Ruiz & Ruiz, 2007).

Data Analysis

Descriptive statistics were generated for participant characteristics, HIV risk behavior, oral health behaviors, and oral health literacy. Chi-square tests of independence were generated for dichotomous variables. Associations were examined between prevalence of oral health behaviors, and oral health behaviors before and after sexual encounters; access to and utilization of health care services; and if MSM self-reported dental caries and continue to engage in unprotected oral sex. Participants were scored as 1 for each correct item and as 0 for each incorrect item on the BMSMOHLA-20 assessment. Items with no answer were scored as 0. The average score on a 20-point

scale (l-9=low oral health literacy; 10-15= moderate oral health literacy; above 15=high level of oral health literacy) was used to determine the level of health literacy of the population. The mean score was 15.96, which constitutes a relatively high level of health literacy for Black MSM in this study.

RESULTS

Demographic Characteristics

Table 1 presents demographic data in Black MSM Oral Health Behavior Survey. Seventy-five participants responded to the Oral Health Behavior Survey, and 69 MSM met the inclusion criteria. Ninety-seven percent of respondents reported having oral sex and anal sex with another male in the past 12 months. Ninety-nine percent of respondents reported primarily having sex with other men in the last 12 months. Approximately 40% of respondents reported having unprotected anal intercourse, and 69.70% of respondents reported having unprotected receptive mouth to anal oral sex, and 87.30% having receptive mouth to penile oral sex. The educational level varied among the population with 10% with a high school diploma, 45% having completed college, and 17% with graduate degrees. The age range also varied among the population with 42% ages 18-29, 51% ages 30-45, and 7% ages 46-60. Approximately 68% percent of the population reported having dental insurance.

TABLE 1- Sample Demographic Characteristics for the Black MSM Oral Health Behavior Survey (N=69)

Characteristic	n (%)
Age	
18-29	29 (42.03)
30-45	35 (50.72)
46-60	5 (7.25)
Income Range	
$0-$10,000	9 (13.04)
$11,000-$20,000	1 (1.45)
$21,000-$30,000	9 (13.05)
$31,000-$40,000	18 (26.09)
$41,000-$50,000	12 (17.39)
$51,000-$60,000	9 (13.04)
$61,000-$70,000	6 (8.70)
$71,000+	5 (7.25)
Education	
Grade School	1 (1.45)
High School Diploma	7 (10.14)
Some College	13 (18.84)
College Graduate	31 (44.93)
Graduate Degree	17 (24.64)
Employment Status	
Working Part-time	5 (7.25)
Working Full-time	54 (78.26)
Student and Working	4 (5.80)
Student and not Working	2 (2.90)
Unemployed	2 (2.90)
Disabled	2 (2.90)
Dental Insurance	
Yes	47 (68.21)
No	22 (31.88)

Oral Health Behaviors

As seen in Table 2, a majority of participants reported regularly brushing and flossing their teeth, and brushing for the recommended 60 seconds per encounter. Forty-nine percent of participants reported brushing twice a day, while only approximately 13 % reported flossing twice a day. Approximately 92% reported brushing their teeth for more than one minute or more.

TABLE 2- Prevalence of [regular] oral health behaviors (N=63)

Oral Health Behavior	n (%)
How often do you brush your teeth?	
Never	0 (0)
Sometimes	0 (0)
Daily	18 (28.57)
Twice a day	31 (49.21)
More than twice a day	14 (22.22)
How often do you floss your teeth?	
Never	4 (6.35)
Sometimes	30 (47.62)
Daily	17 (26.98)
Twice a day	8 (12.70)
More than twice a day	4 (6.35)
How much time does it take to brush your teeth?	
10 seconds	0 (0)
30 seconds	5 (8.20)
1 minute	17 (27.87)
More than 1 minutes	39 (63.93)
None at all	0 (0)

TABLE 3- [Regular] Oral health behaviors and Oral Sex Behaviors

Characteristic	Brush/mouthwash n (%)	Did not brush/mouthwash n (%)	x^2 (df=1)
Protected Mouth to anal	1 (100)	0 (0)	2.98
Unprotected Mouth to anal	10 (23.81)	32 (76.19)	-
Protected Mouth to penis	2 (50)	2 (50)	1.30
Unprotected Mouth to penis	12 (24)	38 (76)	-
Semen in mouth	6 (28.57)	15 (71.43)	0.05
Mouth to penis w/HIV positive Partner	6 (54.55)	5 (45.45)	7.77*

*p< .05

Table 3 shows the relationship between oral health behaviors and oral sex behaviors. Approximately 24% of participants reported unprotected mouth to anal oral sex after brushing/flossing/or using mouthwash, while approximately 76% of participants reported unprotected mouth to anal sex but did not brush/floss/or use mouthwash. However, mouth to penile oral sex with an HIV positive partner shows statistical significance with approximately 54% of the participants who reported mouth to penile oral sex with an HIV-positive partner indicated also brushing/flossing/or using mouthwash before or after the encounter. Table 3 also shows approximately 29% of participants reporting semen in their mouth during oral sex and after brushing or using mouthwash before or after the encounter. Table 4 shows that participants with dental insurance are more likely to have a dental visit in the past 12 months, however, there are were no statistical significant associations with access to and utilization of oral health

care services. However, participants with insurance and may have been more exposed to more positive oral health behaviors and questions about oral sex from the dentist.

Thirty-five percent of participants reported unprotected mouth to anal receptive oral sex, and approximately 37% of participants reported unprotected mouth to penile receptive oral sex while having a cavity as indicated in table 5. Table 6 shows the 15-item word recognition portion of the BMSMOHLA-20. This table indicates the number of participants who correctly matched the key word to the stem word.

TABLE 4- Access to and Utilization of Oral Health Care Services

Characteristic	Dental Insurance n (%)	No Dental Insurance n (%)	x^2 (df=1)
Visited a dentist office	35 (76.09)	11 (23.91)	4.83*
Had a tooth pulled	4 (66.67)	2 (33.33)	0.74
Had a cavity	12 (60)	8 (40)	0.81
Dentist suggested brushing/ Flossing more	13 (65)	7 (35)	0.10
Dentist ask about oral sex	5 (83.33)	1(16.67)	0.70
Dentist ask about HIV	6 (75)	2 (25)	0.19

*p< .05

TABLE 5- Self-report dental caries and unprotected oral sex

Characteristic	Dental Caries n (%)	x (df=1)
Mouth to anal	14 (35.15)	0.51
Mouth to penis	18 (36.73)	0.22

*p< .05

TABLE 6- BMSMOHLA-20 Word Recognition with Correct Answer

	Stem Word	Key Word	Distracter Word	n=69(%)
1.	Floss	Clean	Rinse	54(78.36)
2.	Dental Caries	Cavities	Ulcer	51(73.91)
3.	Fluoride	Protect	Destroy	53(76.81)
4.	Abscess	Pus	Mucus	55(79.71)
5.	Extraction	Remove	Replace	61(88.41)
6.	Enamel	Surface	Inside	54(78.26)
7.	Dental Dam	Barrier	Access	57(82.61)
8.	Smoking	Lung	Stomach	62(89.86)
9.	Numb	Feeling	Hot	62(89.86)
10.	Brush	Toothpaste	Soap	62(89.86)
11.	Periodontal	Gums	Palate	46(66.67)
12.	Inflammation	Swelling	Warm	59(85.51)
13.	Restoration	Treatment	Instrument	58(84.06)
14.	Denture	Synthetic	Natural	58(84.06)
15.	Braces	Straighten	Twist	59(85.51)

DISCUSSION

The remarks of participants from the focus group shows a desire and need to increase education around oral sex practices within HIV prevention programs and community education. Oral sex is considerably a lower sexual risk behavior compared to unprotected anal sex, but oral health behaviors as the ones indicated in the focus group might exacerbate the potential risk of HIV and other STI oral transmission. The associations between prevalence of oral health behaviors; access to and utilization of dental care; and self-report of dental caries but still engaging in unprotected oral sex showed no statistical significance. However, Black MSM who did report these behaviors should be educated on the potential risk and these behaviors should be closely monitored to determine oral health HIV risk reduction methods for Black MSM.

STUDY LIMITATIONS

Participants of this study were mostly college-educated, working full-time, and reported having dental insurance. These characteristics are viewed as limitations as Black

MSM who do not have these characteristics may report different oral health or oral sex behaviors, and have a lower level of health literacy. The study did not ask respondents to report whether they were currently engaged in or have previously participated in an HIV prevention intervention. This information could inform the level of oral health literacy and the reduction in risk behavior as it relates to oral HIV transmission. The frequency of dental visits for participants who have dental insurance and participants who are not insured was not asked in the survey. Frequency of dental visits could help with assessing the validity of the BMSMOHLA-20. The BMSMOHLA-20 was not tested across education level, income, or age, which could also help assess the validity of the instrument. Increasing the study sample size may show differences in the associations and may increase the statistical significance. The BMSMOHLA-20 is shorter modified version to the Rapid Estimate of Adult Literacy in Dentistry-30 (Lee et al, 2007), and may not be comparable to previous studies that have used these assessments for oral health literacy. The REALD-30 was also previously tested and validated; therefore, reliability tests were not conducted for the health literacy scale used in this study, given the small sample size during the instrument development phase.

REFERENCES

American Dental Association (n.d.). Adults under 40. Retrieved from *http://www.mouthhealthy.org/en/adults-under-40/*

Andrasik, M.P., Chandler, C., Powell, B., Humes, D., Wakefield, S., Kripke, K., & Eckstein, D., (2014). Bridging the divide: HIV prevention research and Black men who have sex with men. *American Journal of Public Health, 104*(4), 708-714.

Bandura, A., (1988). Organisational applications of social cognitive theory. *Australian Journal of Management, 13*(2), 275-302.

Brown, L.F. (1994). Research in dental health education and health promotion: A review of the literature. *Health Education, 21,* 83-102.

Celentano, D.D., Valleroy, L.A., MacKellar, D.A., Hylton, J. Theide, H., McFarland, W., Shehan, D.A., Stoyanoff, S.R., Lalota, M., Koblin, B.A., Katz, M. & Torian, L.V., (2006). Associations between substance use and sexual risk among very young men who have sex with men. *Sexually Transmitted Diseases, 33*(4), 265-271.

Centers for Disease Control and Prevention, (n.d.). Health literacy. Retrieved from *http://www.cdc.gov/healthliteracy/learn/index.html*

Centers for Disease Control and Prevention [CDC], (2004). Transmission of primary and secondary syphilis by oral sex---Chicago, Illinois, 1998-2002. *Morbidity and Mortality Weekly Report*. Retrieved from *http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5341a2.htm*

Centers for Disease Control and Prevention [CDC], (2011). HIV risk, prevention, and testing behaviors- national HIV behavioral system: Men who have sex with men, 20 U.S. cities, 2011. *HIV Surveillance Special Report 8*.

Chapple, I.L.C, & Hamburger, J., (2000). The significance of oral health in HIV disease. *Sexual Transmitted Infections, 76,* 236-243.

Davidoff, A., Kenney, G.M., (2005). Uninsured Americans with chronic health conditions: Key findings from the national health interview survey. Retrieved from *http://www.urban.org/uploadedpdf/411161_uninsured_americans.pdf*

Dye, B.A., Tan, S., Smith, V., Lewis, B.G., Barker, L.K., Thornton-Evans, G., Eke, P.L., Beltran-Aquilar, E.D., Horowitz, A.M., & Li, C.H., (2007). Trends in oral health status: United States, 1998-1994 and 1999-2004. *Vital Health and Statistics, 11* (248), 1-104.

Edelstein, B.L., (2002). Disparities in oral health and access to care: Findings of national surveys. *Ambulatory Pediatrics, 2*(2), 141-147.

Edwards, S., Carne, C., (1998). Oral sex and the transmission of viral STIs. *Sexually Transmitted Infections, 74,* 6-10.

Fisher-Owens, S.A., Barker, J.C., Adams, S., Chung, L.H., Gansky, S.A., Hyde, S., & Weintraub, J.A., (2008). Giving policy some teeth: Routes to reducing disparities in oral health. *Health Affairs, 27*(2), 404-412.

Lee, J.Y., Rozier, R.G., Lee, S.Y., Bender, D., & Ruiz, R., (2007). Development of a word recognition instrument to test health literacy in dentistry: the REALD-30. *Journal of Public Health Dentistry, 67*(2), 94-98.

Lee, J., Stucky, B., Rozier, G., Lee, S., & Zeldin, L.P., (2012). Oral health literacy assessment: Development of an oral health literacy instrument for Spanish speakers. *Journal of Public Health Dentistry, 73*, 1-8.

Halkitis, P.N., & Parsons, J.T., (2000). Oral sex and HIV risk reduction. *Journal of Psychology & Human Sexuality, 11*(4), 1-24.

Hollister, M.C., Anema, M.G., (2004). Health behavior models and oral health: A review. *Journal of Dental Hygiene, 78*(3), 1-8.

Jones, K.T., Gray, P., Whiteside, Y.O., Wang, T., Bost, D., Dunbar, E., Foust, E., & Johnson, W., (2008). Evaluation of an HIV prevention intervention adapted for Black men who have sex with men. *American Journal of Public Health, 98*(6), 1043-1050.

Kay, E.J., Locker, D., (1996). Is dental health education effective? A systematic review of current evidence. *Community Dental Oral Epidemiology*, 24, 231-235.

Lafferty, W.E., Hughes, J.P. & Handsfield, H.H., (1997). Sexually transmitted diseases in men who have sex with men: Acquisition of gonorrhea and nongonococcal urethritis by fellatio and implication for STD/HIV prevention. *Sexually Transmitted Diseases, 24*(5), 272-278.

Lee, J.Y., Divaris, K., Baker., A.D., Rozier, R.G. & Vann Jr., W.F., (2012). The relationship of oral health literacy and self-efficacy with oral health status and dental neglect. *American Journal of Public Health, 102*(5), 923-929.

North Carolina HIV/STD Surveillance Unit, (2015). 2013 North Carolina HIV/STD epidemiological profile. *North Carolina Department of Health and Human Services. http://epi.publichealth.nc.gov/cd/stds/figures.html.*

Patton, L.L, Strauss, R.P., McKaig, R.G., Porter, D.R. & Eron, J.J., (2003). Perceived oral health status, unmet needs, and barriers to dental care among HIV/AIDS patients in North Carolina cohort: Impacts of race. *Journal of Public Health Dentistry, 63*(2), 86-91.

Petersen, P.E., Bourgeois, D., Ogwa, H., Estupian-Day, S. & Ndiaye, C., (2005). The global burden of oral diseases and risks to oral health. *Bulletin of the World Health Organization, 83*(9), 661-669.

Sabbah, W., Tsakos, G., Sheiham, A., & Watt., R.G., (2009). The role of health-related behaviors in the socioeconomic disparities in oral health. *Social Science & Medicine, 68,* 298-303.

Saini, R., Saini, S. & Sharma, S., (2010). Oral Sex, Oral Health, and Orogenital Infections. *Journal of Global Infectious Diseases, 2*(1): 57.

Sheiham, A. & Watt, R.G., (2000). The common risk factor approach: A rational basis for promoting oral health. *Community Dentistry and Oral Epidemiology, 28*(6), 399-406.

Petersen, P.E. & Baez, R.J., W (2013). Oral health surveys: Basic methods. *World Health Organization, 5*,1-137.

Wilson, P., (2012). Back of the line: The state of AIDS among Black gay men in America. *Black AIDS Institute, 1-75*.

Yuen, H.K., Wolf, B.J., Bandyopadhyay, D., Magruder, K.M., Salinas, C.F. & London, S.D., (2008). Dental health knowledge in a group of Black adolescents living in rural South Carolina. *Journal of Allied Health, 37*, 15-21.

Yuen, H.K., Wiegand, R.E., Slate, E.H., Magruder, C.F., Salinas, S.D. & London S.D., (2009). Oral health knowledge and behavior among adults with diabetes. *Diabetes Research and Clinical Practice, 86,* 239-246.

Chapter #2: Safer Sex Above the Waist: A Framework for Implementing Oral Health and Oral Sex Positive Behavior Change Among Black MSM

ABSTRACT

The relationship between oral health and oral sex behaviors are not considered to be a strategy for human immunodeficiency virus (HIV) prevention. Understanding the relationship could be a prevention method for Black men who have sex with men (MSM) who are not HIV positive, but could also be a preventative and care method for people living with HIV (PLWH) as they may take antiretroviral medication that affect their oral health. The Johnson Black MSM Oral Health Behavior model was influenced by Bandura's social cognitive theory, and can help Black MSM understand the connection between oral health and oral sex to reduce the risk of HIV transmission.

INTRODUCTION

Self-regulatory systems lie at the very heart of causal processes, mediating the effects of most external influences, but provide the very basis for purposeful action (Bandura, 1991). Since the early 1990s, HIV has significantly impacted Black men who have sex with men. Various assumptions have been made about causes of increasing HIV rates among this population, which attribution to more risky behavior compared to White MSM was eliminated. HIV prevention programs were created specifically for Black MSM, but many do not adequately address negative oral health as a risk factor for HIV transmission during oral sex.

Special attention to oral health is not often considered to be a strategy for HIV prevention. However, African Americans are significantly impacted by disparities in health care, including oral health (Edelstein, 2002). Oral and systemic health disparities are often associated with race/ethnicity, sex, income, education, geographic location,

insurance coverage, chronic conditions, age, and health literacy. Therefore, underserved populations like Black MSM are also impacted by these disparities. Most HIV prevention research with Black MSM focuses on prevention of the most common mode of HIV transmission, which is unprotected anal intercourse. Oral sex and oral health are significantly understudied in relation to the Black MSM population. It is important to consider the oral health behaviors of Black MSM and the implications they may have on HIV transmission. The mouth and teeth are sources of communication, pleasure, social interaction, and cultural facial and dental aesthetics (Fisher-Owens, Barker, Adams, Chung, Gansky, Hyde, & Weintraub, 2008). The mouth also is an infection or inflammation portal (Fisher-Owens et al., 2008). Negative oral health in conjunction with unprotected oral sex can put Black MSM at increased risk for HIV transmission. For this paper, the perceptions about oral health and oral sex were explored among Black MSM in a focus group, and their access to and utilization of oral healthcare were examined. This paper also introduces a framework that could be used by community-based organizations to engage Black MSM in exposure to education and positive oral health and oral sex behaviors.

METHODS

Black MSM may not have been exposed to positive oral health practices. Part of the Black MSM Oral Health Behavior Study included a single focus group with Black MSM providing insight to the perception that this community has about oral sex and oral sex. The focus group was held at the PowerHouse Project, an HIV prevention drop-in safe space that engages Black MSM for HIV prevention. The prevention drop-in safe space is a component of Quality Home Care services, a community-based HIV services

organization. Seven Black MSM attended the focus group, and 2 did not give informed consent. Five Black MSM participated in the focus group. The focus group was audio recorded and participants were instructed to use code names for confidentiality. The principal investigator led the focus group in a discussion round table format. A prevention coordinator at the PowerHouse Project took focus group notes on the discussion. At the end of the focus group, the Principal Investigator transcribed the notes and developed common themes from the participants' responses.

The second part of the study is the Black MSM Oral Health Behavior Survey. The survey was administered online at the drop-in safe space, a community events, and through snowball sampling across the state with other HIV prevention and care services providers. The survey responses were anonymous. Informed consent was included as the initial part of the survey, followed by 4 sections including: demographics, a self-reported sexual risk assessment, oral health behaviors, and the Black MSM Oral Health Literacy Assessment-20 (BMSMOHLA-20). Seventy-Five participants participated in the Oral Health Behavior Survey, however, 69 met the inclusion criteria. There was no incentive for participating in the survey.

RESULTS

There were three overarching themes that emerged from the focus group. The first theme that emerged from the focus group was negative experiences. Participants in the focus group believed that oral health is only discussed when Black MSM have negative experiences, such as encountering someone with bad oral hygiene or when there are visible problems with someone's teeth. Table 1 from the Black MSM Oral Health Behavior Survey shows problems that Black MSM have experienced in the past 12

months that may trigger some of the negative experiences discussed in the focus group. Some of the problems were aligned with oral health problems, and some were related to aesthetics as indicated in the focus group.

Participant: Oral health is only discussed sometimes...on an as needed basis. It is out of the blue or when a date has a messed-up grill or got bad breath.

Participant: When you were in school...it was important when the fluoride man came. It was important when you were young...when you had a brush your teeth song in preschool but it diminishes, as you get older. You would think adults would be more responsible with their oral health. But it's hard when you don't have insurance

TABLE 1- Problems Experienced with Teeth or Mouth in the Past 12 months (N=23)

Characteristic	N (%)
Which of the following have you experienced in the past 12 months?	
Difficulty biting food	6 (26.09)
Difficulty chewing food	6 (26.09)
Difficulty with speech or saying words	2 (8.70)
Dry mouth	8 (34.78)
Felt embarrassed	5 (21.74)
Avoided smiling	5 (21.74)
Lack of sleep	4 (17.39)
Difficulty doing daily activities	2 (8.70)
Have taken days off work	4 (17.79)

The second theme that emerged in the focus group is: Are they connected? Participants felt the community, and specifically Black MSM, did not find a significant association with oral health and oral sex.

Participant: People think about oral health after having oral sex...not before. They feel like they have to brush their teeth and use mouthwash after oral sex.

You don't want breath that smells like private parts.

Participant: People don't see the importance of talking about oral health or oral sex. People are more concerned with regular intercourse causing more of a risk as opposed to catching something from oral sex.

Participant: It's like do you really plan to brush your teeth or not before oral sex? People don't think about cavities and other things in the mouth.

Here, participants advised that unprotected anal sex with most associated with risk of HIV transmission and the lack of urgency to acknowledge risk associated with oral sex. The possibility of HIV infection through unprotected receptive oral sex is possible, and appears to be heightened by the presence of both ejaculatory and pre-ejaculatory fluid in one's mouth, and is mediated by the presence of cuts, lesions, or ulcerations in one's mouth (Halkitis, Parsons 2000; Gay Men's Health Crisis, GMHC, 1996; San Francisco Department of Public Health, 1996).

The third theme is coded as the unexplored. Unexplored means that Black MSM have not had the opportunity to have any conversations about oral sex and HIV risk reduction. This could be attributed to AIDS service organizations not having a clear message about oral health and oral sex behaviors (Halkitis & Parsons, 2000). Suggested harm reduction techniques like not brushing, flossing, or using alcohol-based mouthwash shortly before and after receptive oral sex have not reach some parts of the Black MSM community, thus engaging in these practices are considered maintaining good oral hygiene before and after practicing oral sex. Also, participants have reported not having conversations with dentist about oral sex, and advised that they would feel uncomfortable talking to dentist about oral sex when discussing oral health.

Participant: My dentist never asked me about oral sex but they will ask about my diet and what I eat.

Participant: I would not feel comfortable discussing oral sex with my dentist, but with these questions I see why that conversation is necessary.

Participant: Most people don't consider a dentist a real doctor so the information may not have the same weight as another doctor. Some people would say a dentist should just stay in his lane and handle teeth.

Other comments from the participants were related to health care access with mention of race and sexual orientation as possible barriers to engagement in dental care.

Participant: If people had insurance they would use it. A lot of people do not have personal dental insurance.

Participant: Black men in general, gay or straight, do not go like to the doctor...unless they are in pain. Black people do not go to the doctor because of fees and copays...don't want to hear the real...what's going with them and they rather run away from it. Then you may not trust the doctor and a dentist ain't no different. You don't know what they are putting in your mouth.

There were a few general comments that wrapped up the focus group.

Participant: These are interesting questions. It isn't talked about unless you see a crest commercial. People don't know that oral health may affect other health aspects.

Participant: People should talk about oral health holistically and make it fun to participate in health... like...make it popular like Michelle Obama and what she did with healthy eating.

This conversation with a group of Black MSM indicates a willingness to take self-responsibility for their oral health and consider risk before oral sex. However, there is also concern about whether Black MSM have access to dental care. More importantly, there is concern about the community not being exposed to basic oral health HIV risk reduction techniques. There is substantial evidence of socioeconomic disparities in oral health (Sabbah, Tsakos, Sheiham & Watt, 2009; Locker, 2000; Watt & Sheiham, 1999). Improvements of health-enhancing behavior could lessen inequality in health (Sabbah, Tsakos, Sheiham & Watt, 2009), thus exposure to positive oral health behaviors and increase in access for Black MSM could improve oral health outcomes.

Although the primary conversation was about prevention of HIV infection, prevention for persons living with HIV programs should also address oral health behaviors and oral sex. Higher rates of unmet dental need have been reported for Black people more than Whites (Patton, Strauss, McKaig, Porter & Eron, 2003). With High national rates of unmet oral health needs among people living with HIV and among Blacks regardless of HIV status, a significant burden of HIV/AIDS among Blacks in the Southern region of the United States, and reports of higher levels of perceived unmet needs in this southern region of the country, a more thorough understanding of factors affecting oral health care utilization in this population is essential for planning effective regional public health interventions (Patton, et al., 2003). Black MSM living with HIV participated in the Black MSM Oral Health Behavior Survey. Of the total 69 survey participants, 11 (6.27%) participants indicated they are living with HIV, 100% reported taking their antiretroviral medications daily, 27.27% indicated having dry mouth and 9.09% indicated having red sores, which both could have been caused by their

antiretroviral (ARV) medication. Red sores or lesions could indicate disease progression or be a sign of a transmitted infection (Chapple & Hamburger, 2000). Approximately 89% reported having unprotected receptive oral sex and 55% did not have dental insurance. Oral health should be a concern for Black MSM living with HIV to prevent transmission of sexually transmitted infections orally, which could potentially cause complications with their HIV status. Therefore, oral health and oral sex should also be discussed in HIV prevention for positive programs, as well as in HIV care management plans for Black MSM living with HIV.

There are specific behaviors that are separate from unprotected receptive oral sex that may put Black MSM at risk for HIV infection or affect the CD4 of a person living with HIV. Smoking is known as an immune-altering substance and has been linked to the likelihood of acquiring HIV (Wolf & Freedman, 2000). Cigarette smoking is associated with many other effects on the immune system that suggest its possible involvement in the progressing on HIV (Wolf & Freedman, 2000).

Alcohol use is also associated with increased HIV risk among MSM (Tobin, Davey-Rothwell, Yang, Siconolfi & Latkin, 2014; Woolf & Masito, 2009; Reisner et al., 2010). Most studies report alcohol use associated with unprotected oral sex, however, it is understood that alcohol use can impair a person's judgment when making decisions about risk reduction. This means that willingness to have safer sex weather oral or anal is less likely under the influence of alcohol and illicit drugs, like marijuana and cocaine. Table 2 shows some of the substances reported by MSM in the Black MSM Oral Health Behavior Survey.

TABLE 2- Smoking, Alcohol, and Illicit Drug Use by Black MSM

Characteristic	n (%)
Which of the following do you use:	N=15
Cigarettes	10 (66.67)
Cigars	8 (58.33)
Other	2 (13.33)
How often do you drink alcohol?	N=61
Daily	5 (8.20)
2-3 times a week	17 (27.87)
Once a week	24 (39.34)
Never	4 (6.56)
Other	11 (18.03)
In the past 12 months, which of the following have you used?	N=26
Cocaine	5 (19.23)
Marijuana	25 (96.15)

Knowledge about oral health can create a precondition for change in oral health behaviors and oral sex practices. The theory that guided this study is the Bandura Social cognitive theory. This theory can be applied to the willingness to Black MSM to change negative oral health and oral sex behaviors. Bandura's social cognitive theory (1988) is a model that can be used to understand how environmental factors and knowledge of oral health behaviors can determine oral health outcomes. This theory has been previously applied to other health promotion models as it describes behavior change associated with environmental factors and how these factors can be indicators to willingness to change negative health behavior.

HEALTH PROMOTION USING BANDURA'S SOCIAL COGNITIVE THEORY

The social cognitive theory includes developing competencies through modeling, perceived self-efficacy, and self- regulation and motivation. Modeling through guided

practice is a highly effective method for developing skills and competencies (Bandura, 1988). In the social cognitive theory model, behavior, cognitive, and other personal factors and environmental events all operate as interactive determinants that influence each other bi-directionally (Bandura, 1988), as indicated in Figure 1. Human competency requires not only skills, but also self-belief in one's capability to use those skills well (Bandura, 1988). Modeling, as part of this theory is used to develop human competencies and build self- assurance as well as to convey skills (Bandura, 1988). Individuals who value perceived effects of changed life-styles will attempt to change if they believe that their current lifestyles pose threats to any personally valued outcomes, such as health or appearance; that particular behavioral changes will reduce the threats; and that they are personally capable of adopting the new behaviors (Rosenstock, Stretcher & Becker, 1988). Here, the term lifestyle refers to oral health behaviors and oral sex practices, and should not be attributed to sexual orientation as it is offensive to people who have same-sex attraction.

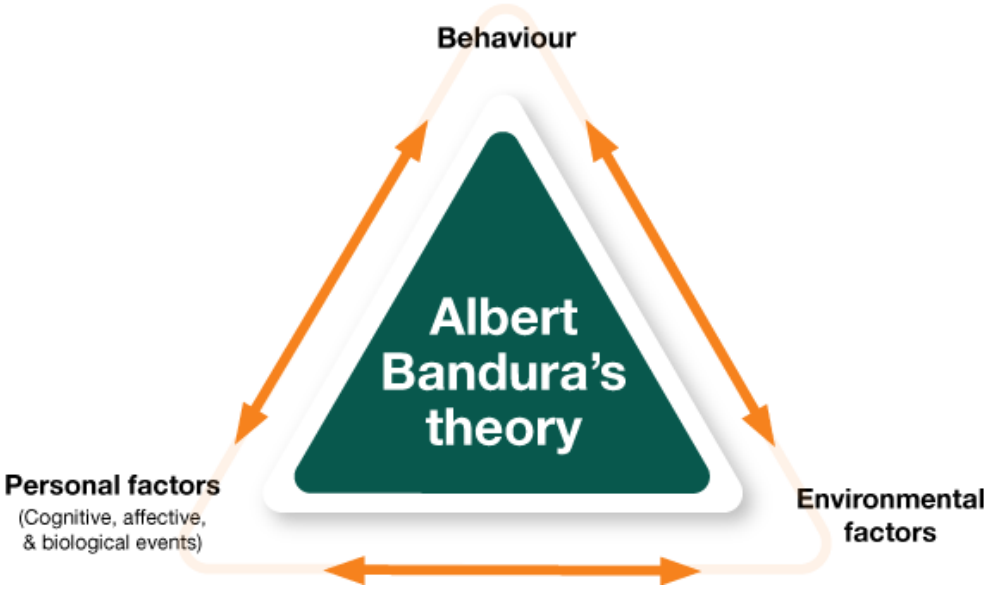

Figure 1. Bandura Social Cognitive Theory

The social cognitive theory holds that behavior is determined by expectancies and incentives (Rosenstock, Stretcher & Becker, 1988). For Black MSM, expectancies are how this community sees the connection between oral health and oral sex, and how their behaviors can influence health outcomes. The incentive is value placed on physical appearance, having a nice smile and healthy teeth, or health status to include HIV status. Therefore, the social cognitive theory can be applied to Black MSM as this population has not considered the effect oral health may have on HIV status. The author developed a conceptual framework that describes reported negative behaviors of Black MSM, and how exposure to positive behaviors can influence behavior change to reduce the risk of HIV transmission.

JOHNSON BLACK MSM ORAL HEALTH BEHAVIORS CONCEPTUAL MODEL

The Johnson Black MSM Oral Health Behavior model is a conceptual framework that shows the relationship of negative health behaviors and negative sexual behaviors that work together as influencing risk factors for Black MSM. Negative factors include tobacco use, increased alcohol use, lack of dental insurance, not brushing or flossing, condomless receptive oral sex, etc. Similar to the social cognitive theory, once Black MSM are exposed to positive factors like brushing daily and flossing, access to dental insurance, and oral health education, they can begin to change health behaviors to reduce their risks of HIV transmission. Consistent exposure to positive factors become social norms and increases the efficacy of Black MSM to understand the relationship of oral health and oral sex. Having positive oral health behaviors when having oral sex could potentially lower risk of oral transmission of HIV. HIV prevention programs should work to eliminate the barriers to accessing HIV prevention and care, and increase the

effectiveness of current prevention programs to discuss oral health with Black MSM. Current barriers to HIV prevention and care include social and cultural barriers such as stigma about HIV, sexual orientation, and the health care system; and structural barriers to navigating the healthcare system once receiving an HIV diagnosis. These barriers can be mediated with education to improve health literacy and exposure to positive health behaviors. The process of Black MSM moving from negative oral and oral sex behaviors; being exposed to education about positive oral health and oral sex behaviors, and having access to dental insurance, leading to positive health outcomes is summarized in Figure 2.

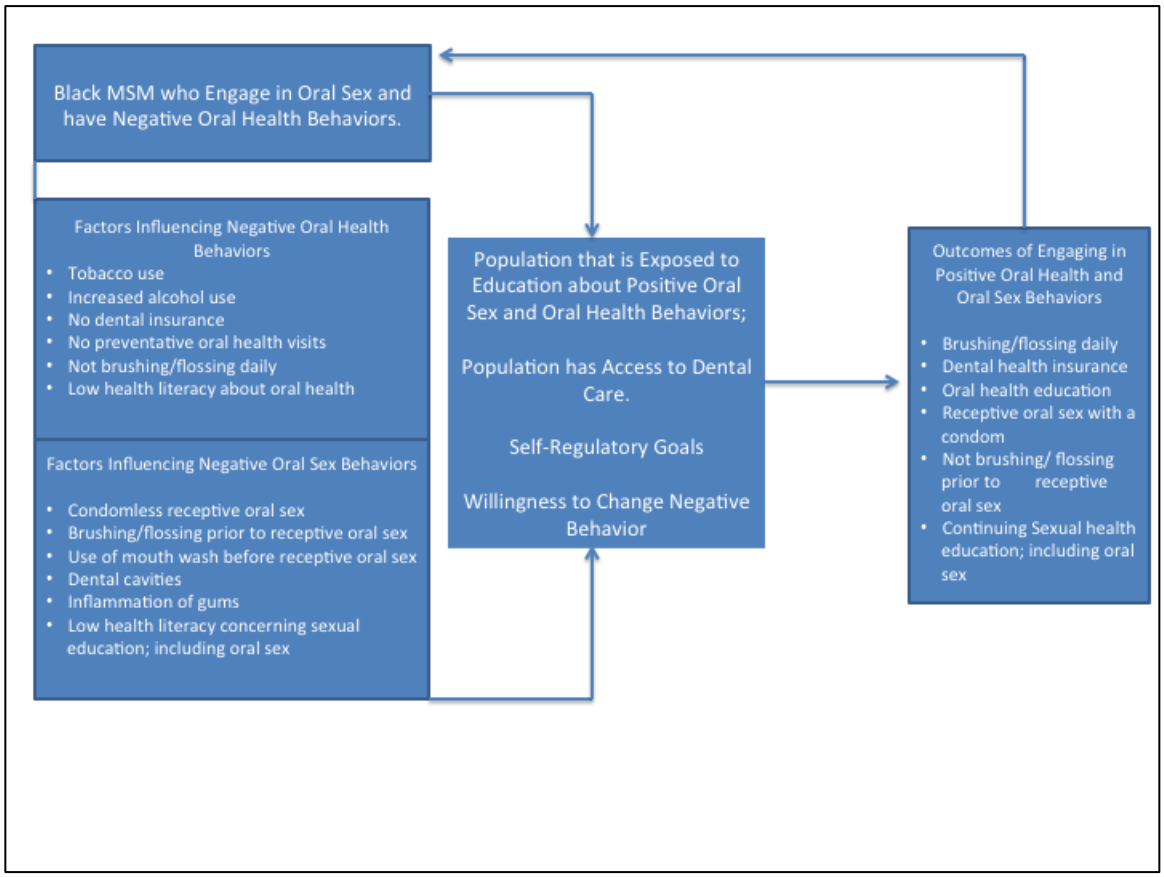

Figure 2. Johnson Black MSM Oral Health Behavior Conceptual Model

Social and Cultural Barriers

The current racial climate in Charlotte and the United States is an example of a barrier to healthcare. Stressors associated with race and sexual orientation from discriminatory laws like North Carolina House Bill 2 (HB2) are direct barriers to HIV prevention and treatment, and indirectly perpetuate medical mistrust. These barriers also contribute to stigma associated with HIV. Stigma is a driving force in the HIV/AIDS epidemic. HIV heavily impacts the southeastern states of the United States, and when compared to the rest of the U.S. it increases the stigma about health status among these states, including North Carolina. Link and Phelan (2006) defined stigma as the result of a process in which a series of five interrelated components combine: identification and labeling of human difference; stereotyping; separation of 'them" and "us"; discrimination and loss of status; and loss of power. It is important to understand the implications of the stigma process and its public health implications. Stigma can occur when discussing HIV with family and friends, when contemplating taking an HIV test, or when seeking HIV care services. The stigma associated with HIV is associated with being promiscuous or having an infection that harms people and causes death (Alonzo & Reynolds, 1995). Stigma prevents people from talking about HIV in normal-daily conversations, and prevents people from getting tested for HIV and knowing their status. Stigma also perpetuates homophobia and racism, which are barriers to engagement for communities of color, particularly Black MSM (Wilson, 2012).

Vulnerable populations like Black MSM have been "targeted" by the public health community for HIV prevention (Rowan, 2014). The heightened attention raises

stigma within a population that is already marginalized within overall society. For Black MSM, there is stigma associated with being Black, a man, a man who has sex with other men, and then the possibility of being infected with HIV (Dyer, Regan, Wilton, Harawa, Ou, Wang, & Shoptaw, 2013; Alvy, McKirnan, Mansergh, et al, 2011; Pasrsons, Grov, & Golub, 2012). This combination is a huge barrier to care if health care providers and practitioners do not adequately unpack these associations before attempting prevention and care strategies in this community and other vulnerable communities.

Social support is very important for individuals living with HIV to address barriers that may impede on their successful treatment. These barriers can often lead to the client prioritizing their other needs and disregarding the importance of HIV prevention methods, and adhering to HIV care if already living with HIV. Barriers must be addressed through community support, collaborations in community-based health organizations, and personal goal setting.

Structural Barriers

Navigating the healthcare system is difficult for many individuals, and can be especially difficult for Black MSM. It can prevent Black MSM from getting tested for HIV and prevent initiation of HIV treatment for Black MSM living with HIV. Fear and avoidance of difficult conversations could be reasons why members of this community may not access healthcare (Rowan, DeSousa, Randall, White, & Holley 2014). For the best healthcare outcomes, Black MSM will need to discuss private sexual behaviors with healthcare providers who may not fully understand the life experiences of Black MSM and may be stigmatized because of the information that they disclose.

For Black MSM living with HIV, linkage to care is the first step to early initiation

of antiretroviral therapy, which is essential to improving morbidity and mortality. Evidence suggests that linkage to care should occur immediately after diagnosis. However, it is reported that in the United States 25% of newly diagnosed persons do not present for follow-up care within the first 12 months (Gardner, McLees, Steiner, del Rio & Burman, 2011). With increasing recognition that linkage to care is critical to improving subsequent outcomes in the continuum, the current National HIV Strategy has set a goal of 85% newly diagnosed people living with HIV being linked to care within 30 days of diagnosis (ONAP, 2015). There are multiple barriers to linkage to care including substance use, lack of permanent housing, clinic locations, and provider availability. Many evidence-based interventions have demonstrated improvement in linkage to care; such as The CDC funded Antiretroviral Access study (ARTAS) and the CDC Connect Study. ARTAS was a randomized controlled trial examining whether case management versus simple referral would more likely link recently diagnosed people living with HIV to medical care (Gardner, Metsch, Anderson-Mahoney, Loughlin, Rio, Strathdee, Sansom, Harvey, Greenberg & Holmberg, 2005). ARTAS demonstrated that a face to face intervention shortly after diagnosis or re-engagement had a significant impact on the patient presenting for their first appointment and being retained in care during the first 12-months post diagnosis or re-engagement. Programs like ARTAS are essential linkage and retention of persons newly diagnosed with HIV in North Carolina.

Adherence is vital to viral suppression among Black MSM. Although a person living with HIV may be linked and retained in care, they may not be taking the medication as prescribed. As mentioned, lack of adherence for Black MSM can occur for many reasons. Low health literacy, poverty, stigma, and willingness to adhere are among

issues that Black MSM encounter. For treatment to result in the intended viral suppression, adherence must be maintained.

Comprehensive health coverage allows individuals to access more than HIV care; they can have preventative care as they age. With the advent of successful HIV treatment, many individuals are living long lives and experiencing the same health disparities as others. Appropriate screenings, annual medical care, and attention to other chronic illnesses which may be diagnosed can reduce overall healthcare costs and result in better health outcomes.

Understanding these structural barriers are important to understand the positive and negative factors that contribute to health outcomes of Black MSM. Oral health, although typically a secondary concern, should be included in comprehensive health planning in prevention and treatment.

DISCUSSION

Self-regulation is essential to the prevention of HIV and the prevention of further health complications for Black MSM living with HIV. Habit change is not achieved through an act of will, it requires the development of self-regulatory skills (Bandura, 1991). Black MSM must be exposed to positive health behaviors that include oral health knowledge and practices, and safer oral sex practices. Black MSM must also be willing to monitor their behavior after learning the correlation of having negative oral health and continue to have receptive oral sex. Barriers to access such as lack of dental insurance, stigma, and access to dental care must be addressed with this population to affect behavior change.

Implications for Health Services Research

The quality of health for Black MSM is a social and public health matter. Health with Black MSM is often associated with HIV prevention and care, and comprehensive approaches to HIV prevention and care have only recently emerged. Black MSM is a population that continues to have increasing rates of HIV. The Centers for Disease control and Prevention (CDC) asserts that if rates of HIV continue among this population, Black MSM have a 1 in 2 chance of becoming infected with HIV in their lifetime (CDC, 2016). Thus, further attention to research on prevention strategies for Black MSM is important in all areas of health care, including oral and dental health. Routine HIV and other screenings for sexually transmitted infections should not be limited to primary care providers, but should be considered for oral and dental health organizations, emergency services, and other health entry points for Black MSM. Community-based organizations that work with this population should strengthen their prevention programs to include positive oral health promotion, and more HIV prevention strategies for oral sex.

STUDY LIMITATIONS

The small sample size of the focus group limited context of the study. Participants for the Oral Health Behavior Survey were recruited from a community-based organization in Charlotte, North Carolina, at an HIV prevention outreach event, or from snowball sampling from other HIV service providers across the state, which may indicate their willingness to access healthcare services. Questions about race and sexual orientation discrimination, and stigma were not asked in the survey. However, these topics emerged from the focus group. Comments about stigma and discrimination that were mentioned in the focus group aligned with previous research and experiences of

Black MSM and their lack of willingness to access HIV prevention and care services. However, the focus group participants from this study were intrigued by the discussion and exhibited willingness to access health services.

REFERENCES

Bandura, A., (1988). Organisational applications of social cognitive theory. *Australian Journal of Management, 13*(2), 275-302.

Bandura, A., (1991). Social cognitive theory of self-regulation. *Organizational Behavior and Human Decision Processes, 50*, 248-287.

Bandura, A., (1998). Health promotion from the perspective of social cognitive theory. *Psychology & Health, 13*(4), 623-649.

Centers for Disease Control and Prevention, (2016). HIV among gay and bisexual men. *Retrieved from https://www.cdc.gov/hiv/group/msm/.*

Chapple, I.L.C. & Hamburger, J., (2000). The significance of oral health in HIV disease. *Sexually Transmitted Infections, 76*, 236-243. doi: 10.1136/sti.76.4.236.

Edelstein, B.L. (2002). Disparities in oral health and access to care: Findings of national surveys. *Ambulatory Pediatrics, 2*(2), 141-147.

Fisher-Owens, S.A., Barker, J.C., Adams., Chung, L.H., Gansky, S.A., Hyde, S. & Weintraub, J.A., (2008). Giving policy some teeth: Routes to reducing disparities in oral health. *Health Affairs, 27*(2), 404-412.

Gardner, L.I., Metsch, L.R., Anderson-Mahoney, P., Loughlin, A.M., Rio, C.D., Strathdee, S., Sansom, S.L., Harvey, A., Greenberg, A.E. & Holmberg, S.D., (2005). Efficacy of a brief case management intervention to link recently diagnosed HIV-infected persons to care. *Journal of International AIDS Society, 19*(4), 423-431.

Gardner, E.M., McLees, M.P., Steiner, J.F., del Rio, C. & Burman, W.J., (2011). The spectrum of engagement in HIV care and its relevance to test-and-treat strategies for prevention of HIV infection. *Clinical Infections Disease, 52*(6), 793-800.

Halkitis, P.N. & Parsons, J.T., (2008). Oral sex and HIV risk reduction. *Journal of Psychology & Human Sexuality, 11(4),* 1-24.

Link, B.G. & Phelan, J.C. (2006). Stigma and its public health implications. *The Lancet, 367*, 528-529.

Office of National AIDS Policy (n.d.). *Retrieved from https://www.whitehouse.gov/onap*

Patton, L.L., Strauss, R.P., McKaig, R.G., Porter, D.R. & Eron, J.J., (2003). Perceived oral health status, unmet needs, and barriers to dental care among HIV/AIDS patients in a North Carolina cohort: Impacts of race. *Journal of Public Health Dentistry, 63*(2), 86-91.

Prussia, G.E. & Kinicki, A.J., (1996). A motivational investigation of group effectiveness using social-cognitive theory. *Journal of Applied Psychology, 81*(2), 187-198.

Reisner, S.L., Mimiaga, M.J., Bland, S., Skeer, M., Cranston, K., Isenbrerg, D., Driscoll, M. & Mayer, K.H., (2010). Problematic alcohol use and HIV risk among Black men who have sex with men in Massachusetts. *AIDS Care, 22*(5), 577-587.

Rosenstock, I.M., Strecher, V.J. & Becker, M.H., (1988). Social learning theory and the health belief model. *Health Education Quarterly, 15*(2), 175-183.

Rowan, D., DeSousa, M., Randall, E.M., White, C. & Holley, L. (2014). We're just targeted as the flock that has HIV: Health care experiences of members of the house/ball culture. *Social Work in Health Care, 53*(5), 460-477.

Sabbah, W., Tsakos, G., Sheiham, A. & Watt, R.G., (2009). The role of health-related behaviors in the socioeconomic disparities. *Social Science & Medicine, 68,* 298-303.

Tobin, K., Davey-Rothwell, M., Yang, C., Siconolfi, D. & Latkin, C., (2014). An examination of associations between social norms and risky alcohol use among African American men who have sex with men. *Drug and Alcohol Dependency, 134*, 218-221.

Wolf, R. & Freedman, D., (2000). Cigarette smoking, sexually transmitted diseases and HIV/AIDS. *International Journal of Dermatology, 39*, 1-9.

Woolf, S.E. & Maisto, S.A., (2009). Alcohol use and risk of HIV infection among men who have sex with men. *AIDS Behavior, 13*, 757-782.

Chapter #3: An Integrated Service Delivery Model for Community-Based Organizations that Engage Black MSM for HIV Prevention and Care

ABSTRACT

Black men who have sex with men (MSM), an already marginalized population, are often subjected to lackluster services due to ineffective HIV prevention strategies at community-based organizations (CBOs). In the wake of advances in biomedical research and biomedical HIV prevention strategies, HIV behavioral interventions for Black MSM are becoming unpopular due to the lack of evidence concerning their effectiveness. However, the effectiveness of community-based organizations that implement behavioral HIV prevention interventions is important, especially when providing services to marginalized communities. CBOs must have a strong infrastructure, a clear mission and vision, and policies that will support the organization's programs and services specific to Black MSM. Staff within organizations must effectively engage their communities of focus to ensure they maintain fidelity to their programs. To reduce the number of HIV infections among Black MSM, a multifaceted approach should be employed. This approach must consist of an integrated model of service provision that includes effective HIV prevention programs designed to reduce risk behaviors, increase knowledge of HIV status, and promote successful use of antiretroviral medications (ARV) for those who are already positive.

A U.S. Centers for Disease Control and Prevention (CDC) funded safe space specific to Black MSM in the southern region of North Carolina was created by using an integrated HIV service delivery model. Quality Home Care Services in Charlotte, NC used this model to enhance HIV prevention and care provision for Black MSM. Members of the focus community were vital in the conceptualization, development, and

implementation of the integrated program. Data were collected on venue selection for recruitment, use of new technology, community spaces, and social networks to identify effective approaches and potential barriers to prevention and care access.

Keywords: Men who have sex with men (MSM), Human Immunodeficiency Virus (HIV), Acquired Immunodeficiency Syndrome (AIDS), Anti-retroviral (ARV), Community-based organization (CBO), integrated service delivery

INTRODUCTION

Community-based organizations have been instrumental in attempting to engage Black men who have sex with men (MSM) for HIV prevention and care services. Commonly utilized evidence-based behavioral HIV prevention programs like D-Up! Defend Yourself, Popular Opinion Leader (POL), Many Men Many Voices (3MV), and Counseling, Testing, and Referral Services (CTRS) have been used to provide HIV-related education and care for gay and bisexual men. Despite the numerous HIV prevention programs, social media campaigns, and linkage to care services, HIV incidence rates continue to rise in Black MSM. Past studies have shown that the increasing rates among Black MSM cannot be attributed to more high-risk sexual behaviors compared to other populations. An exploratory study by Dodge, Jeffries & Sandfort (2008) found that Black MSM use condoms, are educated about HIV, and get tested at the same rates as other races and ethnicities. Researchers and practitioners have tried to determine key reasons why Black MSM continue to have increasing rates of HIV. One assumption is that because HIV has already impacted the Black MSM community at disproportionate rates and Black MSM tend to have sex only with other Black MSM, it increases the chances of HIV infection due to a higher concentration of HIV in the pool

of potential partners. Other assumptions attribute the increases of HIV infection to the consistent differences in socioeconomic status, and adding homophobia and stigma, which serve as barriers to health care (Malebranche et al., 2004). The frustration in finding a solution has caused researchers and HIV service practitioners to reject current evidence-based interventions, deeming them ineffective and a waste of resources. However, there is little to no research on the effectiveness of community-based organizations implementing behavioral health interventions specifically with Black MSM. Here, the authors will present the scope of HIV among Black MSM, describe possible issues with community-based organizations that may contribute to the ineffectiveness of implementing HIV interventions, introduce a new framework that can help increase the effectiveness of services for Black MSM, and introduce the integrated service delivery model created for Quality Home Care Services, a community-based organization (CBO) in Charlotte, North Carolina (United States).

HIV/AIDS IN THE UNITED STATES

Since the 1980s, the Human Immunodeficiency Virus (HIV), the virus that causes AIDS (Acquired Immunodeficiency Syndrome) has impacted all segments of the United States population. It was first found in the U.S. 1981 in White gay men who were diagnosed at the UCLA Medical Center with a condition named gay-related immune deficiency (GRID). Further research found that it not only impacted gay men, but other communities through unprotected sexual intercourse, injection drug use, and blood transfusions. HIV transmission is caused from human to human contact with bodily fluids (blood, semen, vaginal secretions, and breast milk) of an infected person. Most HIV transmissions in the Unites States are from unprotected anal and intercourse.

There are approximately 1.1 million persons in the United States living with HIV (CDC, 2011). In 2010, the estimated number of people living with HIV was 47, 500: of those, 63% were attributed to male-to-male sexual contact, 25% to heterosexual contact, 8% to injection drug use (CDC, 2011). Since it spread at epidemic rates, HIV has impacted gay and bisexual men, and particularly Black gay and bisexual men, at alarming rates more than any other subpopulation in the United States.

Black men who have sex with men (MSM) represent 1 in 500 US citizens and 9% of all MSM in the United States, yet they accounted for 38% of new HIV infections among MSM and 70% of new HIV infections among Black males in 2010 (Andrasik, M.P., Chandler, C. Powel, B., Humes, D., Wakefield, S., Kripke, K. & Eckstein, D., 2014). HIV incidence continues to increase among Black gay and bisexual men, despite increased funding and specialized attention as a key population from the Centers for Disease Control and Prevention.

Hospitals, health departments, and community-based organizations are sometimes state and federally funded to implement behavioral health interventions with Black MSM. Organizations need to ensure that this population can access affordable, high quality, culturally appropriate health and social services through full implementation of the Affordable Care Act, as well as prioritized cultural sensitivity training for health care workers to increase their ability to provide appropriate care and treatment to Black MSM (Wilson, 2012).

Black MSM are labeled a “hard to reach” population by many healthcare providers and practitioners (Rowan, Long & Johnson, 2013). This population may be hard to reach because they have not been part of health care conversations until the HIV

epidemic, thus limiting health care providers' and researchers' knowledge on engaging the population for HIV prevention and treatment. Reasons for the population being "hard to reach" can include the lack of: a) providers who can relate to the community of focus; b) not engaging the community in prevention and care planning; c) lack of structured programs within community-based organizations; d) staff who are adequately trained to work with the community of focus; and e) lack of funding to work with the population. Further, the focus of many funders is achieving certain service targets, such as number of HIV tests given to members of the target population, and these may or may not center on the specific needs of the community.

BARRIERS TO PREVENTION AND CARE FOR BLACK MSM

Access to health care is a complex topic within the greater health care system, and achieving adequate access is particularly difficult for minority subgroups and marginalized populations. Changes in the system of health care delivery, especially through the Affordable Care Act (ACA), has helped with access, but there remain people who are uninsured or underinsured, and do not have access to HIV prevention and care services. This means that there is need for special attention to specific populations, such as people who are at risk for HIV infection and people living with HIV and AIDS (PLWA). The National HIV/AIDS Strategy (NHAS), which was released by the Obama Administration in July 2010, is a plan to reduce HIV incidence and coordinate a response to preventing new infections in the United States by improving access to care and health outcomes for people living with HIV (CDC, 2011). The NHAS also proposed to reduce HIV-related disparities and health inequities, and improve the coordination of HIV programs across federal, state, territorial, tribal, and local governments (ONAP, n.d.).

Health disparities often exist in healthcare due to stigma, homophobia, racism, and lower socioeconomic status. Black non-Hispanic minorities are still disproportionately uninsured or underinsured, tend to access health services later, and are impacted by disease more than White non-Hispanic people (IOM, 2002). The lack of access to health services serves as a barrier to accessing HIV prevention and care. Underlying barriers to accessing HIV prevention and care services for Black MSM are sometimes not addressed in the health care system and the aforementioned barriers. Two of these underlying barriers that are not immediately visible are HIV stigma and homophobia.

Stigma has historically been a significant and complex problem within the HIV/AIDS epidemic. HIV stigma impacts decisions about getting tested, accessing treatment, or having conversations about HIV. Especially in areas like the Southeastern states of the United States (U.S.), where HIV rates are greater than those in other regions of the U.S., stigma is a larger barrier to providing HIV prevention and care services.

Link and Phelan (2006) define stigma as the result of a process in which a series of five interrelated components combine: a) identification and labeling of human difference; b) stereotyping; c) separation of 'them" and "us"; d) discrimination and loss of status; e) and loss of power. Understanding the implications of the stigma process for Black MSM and its public health implications is essential before combatting the stigma in programs and services for the community. Stigma can occur when discussing HIV with family and friends, when contemplating taking an HIV test, or when seeking HIV care services. Stigma associated with HIV is associated with concern over being perceived as promiscuous or having an infectious disease that harms people and causes death. Stigma

prevents people from talking about HIV in normal, daily conversations, and prevents people from getting tested and knowing their status. Even after an HIV positive diagnosis, some people fear attending infectious disease facilities because of what people may think of them.

Black MSM seem to have been "targeted" as opposed to engaged by the public health community for HIV prevention. The heightened attention of HIV as a potential public health threat increases stigma within a population that is already marginalized within overall society. For Black MSM, there are overlapping stigmas. They may experience feelings of discrimination or separation by being Black, a man, a man who has sex with other men, and then the possibility of being infected with HIV. This combination is a significant barrier to care if health care providers and practitioners do not adequately unpack these associations before attempting prevention and care strategies in the Black MSM community. An essential step is for staff to acknowledge what it can be like to live in a heteronormative, racist society that values a certain type of Black male identity presentation over others.

Homophobia, internalized and externalized, is another barrier to accessing HIV prevention and care. Externalized homophobia happens when society heightens negative stereotypes that cause disgrace of LGBT (lesbian, gay, bisexual, transgender) people. When LGBT people then have negative feelings about other LGBT people, then it creates internalized homophobia. For example, the "Black church" is an important part of many Black families and communities. When Black MSM attend church, and hear their pastor say, "gay people are damned to hell", and to hear the congregation including families and friends agree, it creates a negative perception about what it means to identify as gay or

bisexual, or to just be a Black man who enjoys having sex with other men. In the context of public health, why would a person who is constantly being told that they are going to hell by their pastor and family disclose their identity, or value themselves enough to protect themselves from HIV and other sexually transmitted infections? Homophobic attitudes create a barrier for Black gay, bisexual, and other MSM to accessing care. Further, it is difficult for practitioners to implement prevention strategies to men who do not "identify" as gay or bisexual because of their religious beliefs, specifically the homophobic underpinnings.

Racial and ethnic inequities contribute to health disparities for many minority populations. Black and African American people are significantly disproportionately affected in many dimensions of quality of life due to racial inequities. Further, racial and ethnic inequities impact income level, geographic location, and education, and therefore reduce access to health care. Within the U.S. racial and ethnic hierarchy, White people have always been at the top, Blacks at the bottom, and other groups in between (Williams, 1999). The hierarchy speaks to the racial inequities in the health care system. Racism has restricted socioeconomic attainment for members of minority groups and racial segregation has been a key mechanism by which racial inequality has been created and reinforced (Williams, 1999). When people are restricted in what they have access to, including health care and education, they are then unable to receive quality prevention and health care.

COMMUNITY-BASED HEALTH ORGANIZATIONS

Effective behavioral interventions (EBIs) for Black MSM are often implemented at community-based organizations (CBOs). Jones et al. (2008) conducted a systematic review of published HIV articles and found only one EBI that was specifically for Black MSM: Many Men Many Voices (3MV).

There was a need to develop national interventions specific to Black MSM, and which could be implemented in various geographic locations. To this end, a cross-sectional study and initiation of an intervention using an evidence-based intervention was conducted in North Carolina. Popular Opinion Leader (POL) is a CDC evidence-based intervention created for White gay males in a rural geographical area in the United States that proved to reduce unprotected anal intercourse (UAI) among that population. POL was adapted for Black MSM and implemented in 3 cities in North Carolina. The study results showed significant decreases in UAI among Black gay men (Jones, Gray, Whiteside, Wang, Bost, Dunbar, Foust, & Johnson, 2008). POL was used to create D-Up!: Defend Yourself, a new intervention adapted for Black MSM. Soon, community-based organizations all over the U.S. would implement this intervention. However, to date, there is not adequate data on the effectiveness of the D-Up!: Defend Yourself intervention outside of the 3-city pilot study in North Carolina, or any other intervention evaluation data. However, practitioners and researchers have described having structural and capacity problems recruiting participants and sustaining the D-Up!: Defend Yourself intervention in their organizations. CBOs must be properly equipped to implement programs for Black MSM, especially with the few options available for the community.

Elford and Hart (2003) posed a question: If HIV prevention works, why are rates

of high-risk sexual behavior increasing among MSM? Elford and Hart (2003) suggested that evidence generated from systematic reviews may not answer the question because: a) it is uncertain whether experimental interventions shown to be effective in one setting, place, or moment in time can be repeated successfully in another; b) there is limited understanding of the processes that underlie the interventions; and c) interventions shown to work in an experimental study may not necessarily be effective in everyday life. D-Up!: Defend Yourself was the first study to demonstrate the efficacy of an integrated HIV/STI prevention intervention developed with and for Black MSM. Currently, not all organizations that hold these programs hire or effectively engage Black MSM, and therefore do not hold fidelity to the original model of an intervention designed for this population.

CBOs are often nonprofit agencies that operate from state and federal funding, private and foundation funding, and fundraising. These organizations have programs aligned with their mission and vision and can include education and prevention, research, direct services, and community outreach. CBOs (e.g. Carolinas CARE Partnership and Quality Home Care in Charlotte, North Carolina) that are funded by state health departments or federal agencies (e.g. CDC or NIH) can be more creative with community engagement and outreach. Therefore, for this sole reason, CBOs are ideal for implementing EBIs. State and federal agencies have more bureaucratic guidelines that prohibit community engagement activities, and therefore fund CBOs to implement EBIs. However, CBOs that implement programs with state and federal funding must adhere to policies and guidelines within funding criteria, such as adherence to budgetary rules. Although CBOs are ideal venues for investment of state and federal funding for

implementation of community engagement programs, infrastructure in these organizations sometimes lacks effective leadership, qualified staff, adherence to policies and regulations, and a clear vision and mission for the organization. Some rely solely on state and federal funding, which is not ideal for organizational sustainability. Organizations with few funding sources apply for grant funding that may not be aligned with the original mission of the organization. This "chasing of dollars" affects the implementation and quality of their programs and the sustainability of the organization. Many CBOs and nonprofit organizations have to close due to lack of organizational infrastructure. These organizations should use a model, such as the community-based management model to implement their programs, direct services, and increase capacity and effectiveness.

METHODS

Quality Home Care Services, Incorporated (QHCS) is a community-based organization in Charlotte, North Carolina, in the southeastern U.S. This organization is CDC funded for a drop-in center for Black MSM. The drop-in center is called the PowerHouse Project. The PowerHouse Project is an HIV prevention and linkage to care program that provides a safe space for young Black men who have sex with men (MSM) in Charlotte, North Carolina. The PowerHouse Project's primary focus is the CDC Mpowerment community-level intervention. The goal of the Mpowerment EBI is to mobilize Black gay and bisexual men, build positive social connections, promote safe sex practices, provide peer support through formal and informal outreach, and monthly Mpowerment groups. The program offers the following services: HIV testing and linkage to care, couple's HIV testing and counseling, Antiretroviral Treatment and

Access to Services (ARTAS), Mpowerment HIV Prevention Program, and the Sister to Sister initiative specific for African American cis-gender women and transgender women.

Historically, the programs of the organization were implemented separately. There were no prevention to care linkage models, or procedures for people at risk for HIV to be linked to prevention or care services. Therefore, an integrated service delivery model was created that was specific to community members identified through the services at the PowerHouse Project. The model includes linkage to overall care services at QHCS. However, with initial implementation of the integrated service delivery model, there was a need to create additional policies and procedures, and to further develop the infrastructure at QHCS to sustain the CDC-funded prevention program. The integrated service delivery model, shown in Figure 1 describes the process of a client's entry into prevention and care with opportunities for continuous engagement in prevention programming.

Staff at the PowerHouse Project are guided by a community advisory board composed of members of the focus community. Staff members, along with advisory board members, host "safe space", informal and formal outreach events to engage HIV-negative and HIV-positive Black MSM in prevention and care services. The PowerHouse Project plans and host events such as community health fairs, fashion shows, house/ball affiliated events, discussion and support groups, and planning meetings. Care is taken to align programming with activities that are of interest to the focus community, and the advisory board helps with this process.

Initial client intake consists of contact and demographic information and/or data

associated with HIV counseling and testing and other health screenings. Staff members are then able to recruit for prevention programming or link to HIV care. Continuous community engagement and social support events are vital to health promotion associated with reducing HIV risk factors. Also, if a person has gaps in HIV care, PowerHouse staff members are able to re-engage them at community social events. Between July 1, 2015 and June 30, 2016, n=122 Black MSM who reside in the Charlotte region were linked to HIV prevention, care, and other supportive services. A total of n=5 were newly diagnosed with HIV.

COMMUNITY-BASED MANAGEMENT SYSTEM

Community-based organizations, many of which are also nonprofit, sometimes lack effective systems of managing programs and care for the populations they serve. This issue can be attributed to lack of infrastructure, management, experienced practitioners, researchers, finances, or a clear mission and vision for the organization. Some community-based organizations provide direct health services, such as HIV testing, care management, and clinical HIV treatment. Others focus on social service provision.

The internal processes of a CBO that implements health services directly affect the quality of its services and programs, and ultimately the health outcomes of the population it serves. This is important for all populations, but specifically for those who are vulnerable and lack health care services, culturally tailored prevention messages, and linkage to care in other health care settings. It is vital to have a model that guides the processes of the organization and the services that it provides. Shortell et al. (1995) created a model for assessing, evaluating, and reinventing hospital care. Here, the Community Health Care Management system model will be discussed with respect to

how it can be used to enhance community-based organizations that implement programs for Black gay and bisexual and Black MSM.

Shortell et al. (1995) introduced the Community Health Care Management System model that includes: community/population-based needs assessment; resource requirements and service offerings; and caregiver, managerial, and governance integration and alignment. In the Community Health Care Management system model, the aforementioned elements lead to a continuous cycle of outcomes and increases the effectiveness of research, guideline and protocol development, continuous quality improvement (CQI) and total quality management (TQM), clinical reengineering and case management, and corrective preventive improvement activity. Continuous quality improvement is when an organization's management team and staff strive to create constant quality improvement. Total quality management is the process in which quality is continuously assessed. These elements are contingent on the collection of data within and outside the organization, the processes used to enhance quality, and the way data is used and distributed throughout the organization (Shortell, Gillies & Anderson, 1994).

Sometimes organizations apply for funding without assessing the need within the community or the organization. Rather than "chasing dollars", community-based needs assessments can help determine what services are useful within a specific community, which requires asking the community what their needs are. Programs and other services can be ineffective if they aren't needed in the community or the organization is not adequately prepared to provide the services. Health care organizations can obtain this information by implementing surveys, conducting focus groups, or one-on-one interviews. Unfortunately, often CBOs make decisions on what services to provide based

on available funding opportunities rather than conducting research on what the community members say they need.

After assessing the community or population of interest, an organization can then determine what resources are needed to create and implement their programs, and what services should be available to the community. Resources can include monetary (grant funding, donations, private funding), staff and volunteers, equipment, and location of the organization. Having adequate resources is important to support the services within the organization. Resource allocations can directly affect both the effectiveness and efficiency of services.

An effective leader is essential to manage the leadership team of a CBO, and both are a necessary foundation for a strong organization. Leaders guide the use of resources and the implementation of the services within an organization. Leaders also make the policies, protocols, and guidelines for staff and volunteers to implement the services. Leaders must understand the needs of and work with staff at every level of the organization to be effective in implementing programs and services.

Culture continuously changes within organizations and among members of a specific population. Health care organizations need to implement continuous methods to evaluate their program and services. Routine assessments of the needs in the community are necessary because needs can change over time. Further, changes within the organization should be continuously assessed to ensure efficacy of programs. The leadership of the organizations is responsible for ensuring that all cycles of the community health care management system model are implemented.

The community health care management system model has been used to increase

the quality of services in many hospitals in the U.S. This process represents an example of neither organizational decline nor turnaround, but rather, organizational integrity and humility (Shortell et al, 1995). This permits new organizational forms to grow in order to serve identified community needs in response to changing market and societal forces (Shortell et al, 1995).

An emerging structure of healthcare provision is that of patient-focused care: a patient centered and clinically driven approach to care from preadmission through posthospitalization (Berkman, 1996). The patient-centered approach is also important for other health care organizations, including community-based health organizations. Sometimes it is best to cultivate and assess partnerships with other health care organizations, such as between CBOs and hospitals, two CBOs, or CBOs and county or state health departments to provide integrated systems of care. In conducting such assessments, systems will need to foster closer linkages with public health and social services agencies in the community (Shortell et al, 1994).

CBOs often miss the mark when engaging Black MSM because they do not follow the guidelines outlined within the community health care management system model. Table 1 shows a case example of two hypothetical organizations, one that is effectively providing services to Black MSM, and one that is ineffective with the same population.

There are clear differences in the characteristics of these two organizations. Organization “A” showed history working with Black MSM and organization “B” did not. Organization “A” had current community partnerships, which is important for developing networks of care, and organization “B” did not. It is unfortunate that some

CBOs operate driven by the needs of the organizations and do not assess the critical needs of the community and implement needed programs.

IMPLICATIONS FOR INEFFECTIVE SERVICES WITH BLACK MSM

Effective Behavioral Interventions (EBIs) are programs deemed sufficient by the CDC to prevent HIV transmission with specific populations. D-Up! Defend Yourself, Many Men Many Voices (3MV), Mpowerment, and Popular Opinion Leader (POL) are among the most well-known EBIs implemented with Black MSM. These interventions are specifically designed to address issues deeply rooted in the Black MSM community. These issues include: education about HIV and other STIs, internalized and externalized homophobia, racism, racial and ethnic identity, and seamless linkage to services. We can suggest that EBIs combined with other strategies, like treatment as prevention (TASP) can be essential to the reduction of HIV infections. Although EBIs are deemed effective by agencies or funders, there are few publications and empirical research results disseminated to the community after a program is implemented with Black MSM. The goals from each program and organization are reported directly to the program officers at the CDC, who assess whether the organization held fidelity to the guidelines in the intervention. Because the results of the program are often not shared with community members, this communication gap makes it difficult to assess whether the program was as effective with Black MSM as it could have been. Further, an opportunity is lost for hearing feedback from clients on changes that would make the program more culturally appropriate for the community of focus.

Black MSM are a population that requires special attention yet they are rarely discussed on any national level. In some ways, HIV has created a platform for Black

MSM to be recognized, particularly in the context of health care. HIV represents a lifetime challenge for all persons, but particularly Black MSM (Wilson, 2012). Among young men ages 13-24, Black MSM are 14 times more likely to test HIV-positive than White MSM. One in four Black MSM are already infected by the time they reach age 25. By the age of 40, 60% of Black MSM are living with HIV (Wilson, 2012). With these statistics, it is clear that CBOs serving Black MSM must begin providing culturally specific and effective services when working with this population. Although the programs may be designed specifically for Black MSM, ineffective service provision contributes to the inequalities in health care for this population. The lack of quality services for minority populations creates health disparities, and disparities continue to increase if organizations that work with Black MSM are not providing needed and effective services. Some CBOs are more focused on their own sustainability than they are in helping to ameliorate health inequities facing Black MSM, and this is deeply troubling since there are few other options for this community.

FUTURE RESEARCH

More research needs to be done with Black MSM and by Black MSM. Inclusion of representatives from the focus community in the research process is important to get a true perspective of challenges faced and gaps encountered by the community, to promote health research agendas of Black MSM, and to increase capacity of the Black MSM community. Furthermore, research regarding the quality of life and the effectiveness and equity of health care should be at the forefront. Funding institutions should look more closely at CBOs that implement EBIs with Black MSM to ensure the efficacy of programs and their effect on health outcomes. Successful efforts to reduce inequities

should be highlighted. CBOs should be charged to publish project findings and evaluation or program challenges and successes when implementing EBIs with Black MSM at the end of their funding term, with recommendations for change as needed. Versions of the report designed for clients should be promoted and shared.

CONCLUSION

An integrated services delivery model specific for the focus community is essential to providing HIV services to Black MSM. These men are sometimes socially rejected which creates barriers for health care engagement. Addressing stigma, homophobia, and racism in a multifaceted approach is important for eliminating barriers for Black MSM. Comprehensive health programs should not only educate young MSM about HIV risk, but also address sexuality in the context of men's lives. Venue spacing for recruitment, marketing, and use of current technologies to include leveraging social media are also critical to reaching the target population. Community resources are important for organizations using this model, as cost can be a barrier for HIV service organizations.

Moving forward, Quality Home Care Services will use clients and staff experience to strengthen the integrated model. Continuous quality improvement will be incorporated into the service model, in addition to bi-annual assessments with members of the focus community. It is important to address the structural barriers of this population, improve access to prevention and care services, decrease new HIV infections, and continue to provide safe spaces for Black MSM.

Those committed to reducing unfair HIV burdens must continue to look at structural barriers in organizations that provide programs for Black MSM. Also, funding

institutions, agencies, and foundations might consider including requirements that seek to increase community capacity (Andrasik et al., 2014) for Black MSM. Andrasik and colleagues lists some community program and organizational enhancement requirements for consideration as follows: a) hiring and training community research assistants; b) developing community dissemination plans in collaboration with community partners; c) identifying community partners as co-investigators and consultants; d) generating a community involvement plan detailing the involvement of community members and leaders as equal partners throughout all phases of the research process; and e) developing aims and objectives to increase capacity building for CBOs.

These strategies for improving effectiveness are particularly important because they address some of the structural issues within CBOs that work directly with Black MSM. Organizations can implement the community health care management system model to enhance the services of CBOs and the implementation of EBIs for Black MSM. This model streamlines the effort to increase capacity among organizations, community, and the funding institutions by working together in partnership to enhance the effectiveness of HIV prevention and treatment programs for Black MSM. Partnerships are extremely important when working with marginalized populations, particularly among vulnerable Black MSM, to address the layers of barriers experienced by the community, and to help this vulnerable population gain access to much needed preventive care and health services.

ACKNOWLEDGEMENTS

A special thank you to Quality Home Care Services, Inc., Lisa Wigfall (Chief Executive Officer), Faye Marshall (Chief Operating Officer), and the International AIDS Conference 2016 for acceptance of an original presentation version of this article.

REFERENCES

Andrasik, M.P., Chandler, C., Powell, B., Humes, D., Wakefield, S., Kripke, K., & Eckstein, D., (2014). Bridging the divide: HIV prevention research and Black men who have sex with men. *American Journal of Public Health, 104*(4), 708-714.

Berman, B., (1996). The emerging health care world: Implications for social work practice and education. *Social Work, 41*(5), 541-551.

Centers for Disease Control and Prevention, (2011). HIV risk, prevention, and testing behaviors- national HIV behavioral system: Men who have sex with men, 20 U.S. Cities, 2011. *HIV Surveillance Special Report 8.*

Dodge, B., Jefferies IV, W.L. & Sandfort, T.G.M., (2008). Beyond the down low: sexual risk, protection, and disclosure among at-risk Black men who have sex with both men and Women (MSMW). *Archives of Sexual Behavior, 37,* 683-696.

Institute of Medicine, (2002). Unequal treatment: Understanding racial and ethnic disparities in health care. *http://www.nap.edu/catalog/10260.html.*

Jones, K.T., Gray, P., Whiteside, Y.O., Wang, T., Bost, D., Dunbar, E., Foust, E. & Johnson, W., (2008). Evaluation of an HIV prevention intervention adapted for Black men who have sex with men. *American Journal of Public Health, 98(6),* 1043-1050.

Link, B.G. & Phelan, J.C., (2006). Stigma and its public health implications. *The Lancet, 367,* 528-529.

Kingston, R.S. & Smith, J.P., (1997). Socioeconomic status and racial and ethnic differences in functional status associated with chronic diseases. *American Journal of Public Health, 87*(5), 805-810.

Pearson, M.L., Wu, S., Schaefer, J., Benomi, A.E., Shortell, S.M., Mendel, P.J., Marsteller, J.A., Louis, T.A., Rosen, M. & Keeler, E.B., (2005). Assessing the of the chronic care model in quality improvement collaboratives. *HSR: Health Service Research, 40*(4), 978-996.

Rizkallah, M.C. & Bone, L.R., (1998). Planning for the sustainability of community based health programs: Conceptual frameworks and future directions for research, practice and policy. *Health Education Research Theory and Practice, 13*(1), 87-108.

Rowan, D., Long, D.D. & Johnson, D. (2013). Identity and self- presentation in house/ball culture: A primer for social workers. *Journal of Gay & Lesbian Social Services, 25*(2), 178-196.

Shortell, S.M., Gillies, R.R. & Anderson, D.A., (1994). The new world of managed care: Creating organized delivery systems. *Health Affairs, 13*(5), 46-64.

Shortell, S.M., Gillies, R. & Devers, K.J., (1995). Reinventing the American hospital. *The Milbank Quarterly,73*(2), 131-160.

Williams, D.R., (1999). Race, socioeconomic status, and health: The added effects of racism and discrimination. *Annals New York Academy of Sciences*, 173-188

Wilson, P. (2012). Back of the line: The state of AIDS among Black gay men in America. *Black AIDS Institute*, 1-75.

Winkleby, M.A., Jatulis, D.E. & Fortmann, S.P., (1992). Socioeconomic status and health: How education, income, and occupation contribute to risk factors for cardiovascular disease. *American Journal of Public Health, 82*(6), 816-820.

APPENDICES

TABLE 1. Community and organization readiness of hypothetical organizations "A" and "B"

Effective Service Provision **Ineffective Service Provision**

Organization "A"	**Organization "B"**
Successfully held focus groups to assess the need for prevention services with Black MSM. Consistently funded to implement behavioral health interventions with Black MSM for the past 10 years. Has great community buy-in. Has created several community partnerships for supportive services. Has communicated with funders the challenges and successes of the programs and the scope of HIV in the community. Has staff from the community of focus (Black MSM).	Knew about the work of organization A, but decided not to become a community partner. Has no history of working with Black MSM. Was able to attain funding by providing research and literature review from organization A. Did not assess the community's need for a different intervention. Has no supportive services for the community. Needed the funding to keep the organization financially stable.

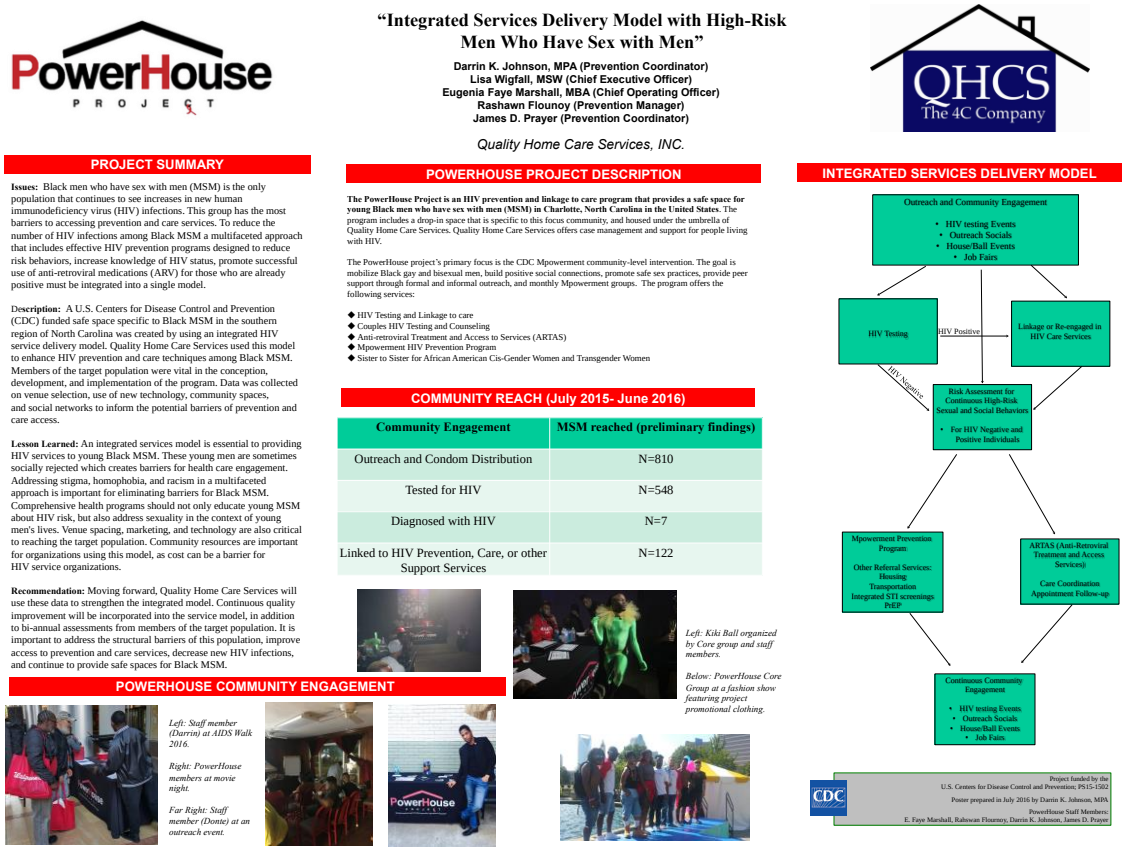

FIGURE 1. Poster Presentation at AIDS 2016- Durban, South Africa

CONCLUSION

The findings from this study contribute to research that highlights negative oral health behaviors in which Black MSM engage and their potential risk for HIV infection. Findings from this study indicate that Black MSM have a relatively high level of health literacy, have access to dental care; however, still engage in unprotected receptive oral sex, and have other behaviors that may put them at risk for HIV. The importance of this research is to highlight the need for finding other ways separate from the heavily studied research on unprotected anal sex, in which Black MSM can become infected with HIV. Although, few results in this research proved to be statistically significant, the study highlights the need for more education around HIV transmission and risk reduction methods, better access to care for Black MSM, and holistic approaches to HIV risk reduction that includes substance use education. Policies can be implemented on the regional and state level to enhance access to health care for Black MSM, with specific strategies for this population. New regional and state policies can reduce inequities in health, but also reduce new HIV infections among this population.

CURRENT POLITICAL LANDSCAPE

Special attention is given to Black MSM through funding of behavioral HIV prevention programs, but the North Carolina Department of Health and Human Services has implemented few policies to enhance effective HIV prevention and treatment programs that are specific to Black MSM, and HIV infections continue to increase among this population across the state, and nation. Federal policies such as the Patient Protection and Affordable Care Act and the National HIV/AIDS Strategy serve as a monumental progression in the U.S. healthcare system, and help regional and statewide networks of

care work toward new strategies to reduce HIV. However, vulnerable populations like Black MSM are continuously marginalized within the health policy and population health discourse.

In July 2015, President Obama signed an executive order releasing the National HIV/AIDS Strategy: Updated 2020, detailing principles and priorities to guide the collective national work to address HIV in the United States from 2015 until 2020 (Office of National AIDS Policy, 2015). The updated strategy includes the original vision, a fourth goal to achieve a more coordinated national response, the recognition of specific groups to prioritize including Black MSM, and new outcomes to achieve by 2020 (Office of National AIDS Policy, 2015). The ten new outcomes include: 1) Increase the percentage of people living with HIV who know their serostatus to at least 90 percent, 2) Reduce the number of new diagnoses by at least 25 percent, 3) Reduce the percentage of young gay and bisexual men who have engaged in HIV-risk behaviors by at least 10 percent, 4) Increase the percentage of newly diagnosed persons linked to HIV medical care within one month of diagnosis to at least 85 percent, 5) Increase the percentage of persons with diagnosed HIV infection who are retained in HIV medical care to at least 90 percent, 6) Increase the percentage of persons with diagnosed HIV infection who are virally suppressed to at least 80 percent, 7) Reduce the percentage of persons in HIV medical care who are homeless to no more than 5 percent, 8) Reduce the death rate among persons with diagnosed HIV infection by at least 33 percent, 9) Reduce disparities in the rate of new diagnoses by at least 15 percent in the following groups: gay and bisexual men, young Black gay and bisexual men, Black women, and persons living in the Southern United States, and 10) Increase the percentage of youth and persons who

inject drugs with diagnosed HIV infection who are virally suppressed to at least 80 percent (Office of National AIDS Policy, 2015).

This updated strategy brings special attention to Black gay and bisexual men, Black women and person living in the South, who are all disproportionately impacted by HIV. There must be specific plans in place to achieve these new outcomes within a 5-year period which may pose a financial burden on the CDC, National Institutes of Health (NIH), Office of Minority Health, Health Resource and Services Administration (HRSA), Food and Drug Administration (FDA), and other federal agencies that are tasked to provide prevention programming, research infrastructure, and approval of biomedical tools to prevent and treat HIV infection.

CREATING REGIONAL AND STATEWIDE HIV STRATEGIES

This section will examine three strategies to consider for reducing the HIV incidence among Black MSM. These options are: 1) A regional and statewide initiative to increase HIV testing that will identify people with HIV and get them on treatment so they will not spread the virus; 2) A regional and statewide public health campaign that will help educate Black MSM and reduce their chances of becoming infected with HIV, and 3) Strengthen community infrastructure to make a seamless continuum of HIV prevention and treatment that includes: community based collaborations, affordable health care, access to HIV testing, and HIV treatment.

Strategy 1: Initiative to Increase Access to HIV Testing among Black MSM

HIV testing is offered at community health centers, primary care facilities, hospitals, and with conducting at-home HIV testing. An increase in access to HIV testing is an opportunity for more people to know their HIV status, and therefore the opportunity

to link HIV-positive people into medical care for HIV treatment. A seamless process between identifying new HIV cases and linking people to care can reduce the HIV incidence rate and increase the amount of people virally suppressed, and thus reducing the HIV transmission rate. Also, expanding HIV testing is an opportunity to reach communities who are most impacted but may not have access to medical care, such as Black MSM.

Strategy 2: Holistic HIV Public Health Prevention Campaign

An intensive regional and statewide HIV public health campaign for Black MSM is essential to the reduction of HIV among this population. An awareness campaign can provide education to Black MSM and providers about sexual history, signs and symptoms of STDS, and partner-notification activities (Wilson, 2012). Awareness campaigns with social media components can reach communities faster. Specific populations, like Black MSM are found and engaged online (Hightow-Weidman, 2011). The social media approach can reduce cost compared to a traditional marketing campaign. Traditional marketing campaigns usually include printed material, radio and television, and sometimes use spokespersons to market the message.

Strategy 3: Build and Strengthen Community Infrastructure

Building and strengthening community infrastructure will include extensive support for the establishment of regional and statewide networks of health centers specifically designed for and by Black MSM; community skills building, general operating support, and organizational development for Black MSM community organizations; and the establishment of durable linkages with MSM-friendly health care settings (Wilson, 2012). HIV infections among Black MSM can be reduced in the United

States, with a coordinated regional and statewide approach. This will include effective HIV prevention programs designed to reduce risk behaviors, increase knowledge of HIV status, and the promotion of successful use of antiretroviral (ARV) medication for those who are already HIV-positive. Comprehensive health programs must be scaled up to educate Black MSM about HIV. Also, health policies, federal funding, and organized systems of care across the United States are essential to reducing incidence among Black MSM (Wilson, 2012). These systems increase access to care, increase prevention and care programs, and help create a continuum of care for Black MSM. Health care providers should implement community health model frameworks to ensure that HIV care services are streamlined between prevention and care, that services do not overlap, subpopulations are being reached, and to maximize resources. A community health model framework is a roadmap to enhance the effectiveness of health services within organizations and how these entities and the work they do in the community.

FUTURE RESEARCH

Oral health behaviors for HIV risk reduction is currently a small component of risk among Black MSM. However, more research should be done across other regions in the south heavily impacted by HIV to find differences in access to and utilization of oral dental care among Black MSM. The time is now for communities to build robust, sustainable community capacity for Black MSM to develop and implement HIV prevention and care programs, with extensive support for the establishment of regional and statewide networks of health centers specifically designed by Black MSM; community skills building, general operating support, and organizational development for Black MSM community organizations; and the establishment of durable linkages with

MSM-friendly health care settings (Wilson, 2012). Data collection, effective reporting tools, and program and organizational evaluation should be enforced by all organizations federally funded for HIV prevention and care at the local, state, and national levels to ensure the effectiveness and efficiency to these strategies. This recommendation is essential to dramatically decrease HIV incidence among Black MSM and thereby reduce the rate of new infections.

REFERENCES

Alonzo, A.A. & Reynolds, N.R. (1995). Stigma, HIV, and AIDS: An exploration and elaboration of a stigma trajectory. Social Science Medicine, 41(3), 303-315.

American Dental Association (n.d.). Adults under 40. Retrieved from *http://www.mouthhealthy.org/en/adults-under-40/*

Andrasik, M.P., Chandler, C., Powell, B., Humes, D., Wakefield, S., Kripke, K. & Eckstein, D., (2014). Bridging the divide: HIV prevention research and Black men who have sex with men. *American Journal of Public Health*, *104*(4), 708-714.

Bandura, A., (1988). Organisational applications of social cognitive theory. *Australian Journal of Management, 13*(2), 275-302.

Bell, J., & Standish, M. (2005). Communities and health policy: A pathway for change. *Health Affairs, 24*, 339-342.

Belone, L., Lucero, J.E., Duran, B., Tafoya, G., Baker, E.A., Chan, D., Chang, C., Greene-Moton, E., Kelley, M.A. & Wallerstein, N., (2014). Community-based participatory research conceptual model: Community partner consultation and face validity. *Qualitative Health Research*, 1-19.

Brown, L.F. (1994). Research in dental health education and health promotion: A review of the literature. *Health Education, 21*, 83-102.

Cargo, M., & Mercer, S.L. (2008). The value and challenges of participatory research: Strengthening its practice. *Annual Review of Public Health, 29*, 325-350.

Celentano, D.D., Valleroy, L.A., MacKellar, D.A., Hylton, J. Theide, H., McFarland, W., Shehan, D.A., Stoyanoff, S.R., Lalota, M., Koblin, B.A., Katz, M. & Torian, L.V., (2006). Associations between substance use and sexual risk among very young men who have sex with men. *Sexually Transmitted Diseases, 33*(4), 265-271.

Centers for Disease Control and Prevention, (n.d.). Health literacy. Retrieved from *http://www.cdc.gov/healthliteracy/learn/index.html*

Centers for Disease Control and Prevention, (2015). High impact HIV/AIDS prevention project (HIP) is CDC's approach to reducing HIV infections in the United States. *https://effectiveinterventions.cdc.gov/HighImpactPrevention/Interventions.aspx*

Centers for Disease Control and Prevention, (2012). Estimated HIV incidence among adults and adolescents in the United States, 2007-2010. *HIV Surveillance Supplemental Report, 17*(4).

Centers for Disease Control and Prevention, (2011). HIV risk, prevention, and testing behaviors- national HIV behavioral system: Men who have sex with men, 20 U.S. Cities, 2011. *HIV Surveillance Special Report 8.*

Centers for Disease Control and Prevention [CDC], (2004). Transmission of primary and secondary syphilis by oral sex---Chicago, Illinois, 1998-2002. *Morbidity and Mortality Weekly Report*. Retrieved from *http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5341a2.htm*

Centers for Disease Control and Prevention [CDC], (2011). HIV risk, prevention, and testing behaviors- national HIV behavioral system: Men who have sex with men, 20 U.S. cities, 2011. *HIV Surveillance Special Report 8*.

Chapple, I.L.C, & Hamburger, J., (2000). The significance of oral health in HIV disease. *Sexually Transmitted Infections, 76,* 236-243.

Collins, J. (2006). Addressing racial and ethnic disparities: Lessons from the REACH2010 communities. *Journal of Health Care for the Poor and Underserved, 17*(2), 1-5.

Davidoff, A., Kenney, G.M., (2005). Uninsured Americans with chronic health conditions: Key findings from the national health interview survey. Retrieved from *http://www.urban.org/uploadedpdf/411161_uninsured_americans.pdf*

Dye, B.A., Tan, S., Smith, V., Lewis, B.G., Barker, L.K., Thornton-Evans, G., Eke, P.L., Beltran-Aquilar, E.D., Horowitz, A.M., & Li, C.H., (2007). Trends in oral health status: United States, 1998-1994 and 1999-2004. *Vital Health and Statistics, 11* (248), 1-104.

Edelstein, B.L., (2002). Disparities in oral health and access to care: Findings of national surveys. *Ambulatory Pediatrics, 2*(2), 141-147.

Edwards, S. & Carne, C., (1998). Oral sex and the transmission of viral STIs. *Sexually Transmitted Infections, 74,* 6-10.

Fisher-Owens, S.A., Barker, J.C., Adams, S., Chung, L.H., Gansky, S.A., Hyde, S., & Weintraub, J.A., (2008). Giving policy some teeth: Routes to reducing disparities in oral health. *Health Affairs, 27*(2), 404-412.

Halkitis, P.N. & Parsons, J.T., (2000). Oral sex and HIV risk reduction. *Journal of Psychology & Human Sexuality, 11*(4), 1-24.

Herbst et al., (2014). Evidence-based HIV/STD prevention intervention for Black men who have sex with men. *Strategies for Reducing Health Disparities—Selected CDC-Sponsored Interventions, United States, 63*(1), 21.

Hightow-Weidman., L. et al., (2011). Healthempowerment.org: Development of a theory based HIV/STI website for young Black MSM. *AIDS Education Prevention, 23*(1), 1-12.

Hollister, M.C., Anema, M.G., (2004). Health behavior models and oral health: A review. *Journal of Dental Hygiene, 78*(3), 1-8.

Israel, B.A., Eng, E., Schulz, A.J., Parker, E.A., & Becker, A.E. (Eds). (2013). Methods for community-based participatory research for health (2nd ed.) San Francisco: Jossey-Bass.

Israel, B.A., Schulz, A.J., Parker, E.A., & Becker, A.B. (1998). Review of community based research: Assessing partnership approaches to improve public health. *Annual Review of Public Health, 19*, 173-202.

Jones, K.T., Gray, P., Whiteside, Y.O., Wang, T., Bost, D., Dunbar, E., Foust, E., & Johnson, W., (2008). Evaluation of an HIV prevention intervention adapted for Black men who have sex with men. *American Journal of Public Health, 98*(6), 1043-1050.

Kay, E.J., Locker, D., (1996). Is dental health education effective? A systematic review of current evidence. *Community Dental Oral Epidemiology*, 24, 231-235.

Karlsen, S. & Nazroo, J.Y. (2002). Relation between racial discrimination, social class, and health among ethnic minority groups. *American Journal of Public Health, 92*(4), 624-631.

Kelly, J.A et al., (1991). HIV risk behavior reduction following intervention with key opinion leaders of population: An experimental analysis. *American Journal of Public Health, 81,* 168-171.

Lafferty, W.E., Hughes, J.P., Handsfield, H.H., (1997). Sexually transmitted diseases in men who have sex with men: Acquisition of gonorrhea and nongonococcal urethritis by fellatio and implication for STD/HIV prevention. *Sexually Transmitted Diseases, 24*(5), 272-278.

Lee, J.Y., Divaris, K., Baker., A.D., Rozier, R.G. & Vann Jr., W.F., (2012). The relationship of oral health literacy and self-efficacy with oral health status and dental neglect. *American Journal of Public Health, 102*(5), 923-929.

Malebranche, D.J et al., (2004). Race and sexual identity: Perceptions about medical culture and healthcare among Black men who have sex with men. *Journal of the National Medical Association, 96*(1), 97- 107.

Mickler, M., & Wallerstein, N. (Eds). (2008). *Community-based participatory research for health: From process to outcomes* (2nd ed.) San Francisco: Jossey-Bass.

Nazroo, J.Y., (2003). The structuring of ethnic inequalities in health: Economic position, racial discrimination and racism. *American Journal of Public Health, 93*(2), 277-284.

Patton, L.L, Strauss, R.P., McKaig, R.G., Porter, D.R., & Eron, J.J., (2003). Perceived oral health status, unmet needs, and barriers to dental care among HIV/AIDS patients in North Carolina cohort: Impacts of race. *Journal of Public Health Dentistry, 63*(2), 86-91.

Petersen, P.E., Bourgeois, D., Ogwa, H., Estupian-Day, S. & Ndiaye, C., (2005). The global burden of oral diseases and risks to oral health. *Bulletin of the World Health Organization, 83*(9), 661-669.

Peterson, J.L & Jones, K.T., (2009). HIV prevention for Black men who have sex with men in the United States. *American Journal of Public Health, 99*(6), 976-980.

Price, C.C. & Eibner, C., (2013). For states that opt out of Medicaid expansion: 3.6 million fewer insured and $8.4 billion less in federal payments. *Health Affairs, 32*(6), 1030-1036.

Rowan, D., (2014) HIV in an era of biomedical advances: Prevention. *Encyclopedia of Social Work, Oxford Media*, 1-17.

Rowan, D., Long, D.D. & Johnson, D., (2013). Identity and self-presentation in the house/ball culture: A primer for social workers. *Journal of Gay and Lesbian Social Services, 25*(2), 178-196.

Sabbah, W., Tsakos, G., Sheiham, A., & Watt., R.G., (2009). The role of health-related behaviors in the socioeconomic disparities in oral health. *Social Science & Medicine, 68*, 298-303.

Saini, R., Saini, S., & Sharma, S., (2010). Oral sex, oral health, and orogenital infections. *Journal of Global Infectious Diseases, 2*(1): 57.

Sheiham, A., Watt, R.G., (2000). The common risk factor approach: A rational basis for promoting oral health. *Community Dentistry and Oral Epidemiology, 28*(6), 399-406.

Subramanian, S.V., Belli, P., Kawachi, I., (2002). The macroeconomic determinants of health. *Annual Review of Public Health, 23*, 287-302.

Trickett, E.J. & Beehler, S. (2013). The ecology of multilevel interventions to reduce social inequities in health. *American Behavioral Scientist, 5*, 1227-1246.

Viswanathan, M., Ammerman, A., Eng, E., Gartlehner, G., Lohr, K.N., Griffith, D., Whitener, L. (2004). *Community-based participatory research: Assessing the evidence* (Evidence report/Technology Assessment No.99, prepared by RTI-University of North Carolina Evidence-Based Practice Center under Contract No. 290-02-0016, AHRQ Publication 04-E022-2). Rockville, MD: Agency for Healthcare Research and Quality.

Weis, R.A., (1993). How does HIV cause AIDS? *Science, New Series, 260*, 1773-1279.

White House Office of National AIDS Policy. National HIV/AIDS strategy for the United States updated to 2020. Washington, DC: *White House Office of National AIDS Policy*.

Wilson, P., (2012). Back of the line: The state of AIDS among Black gay men in America. *Black AIDS Institute, 1-75*.

Yehia, B., Frank, I. (2011) Battling AIDS in America: An evaluation of the national HIV/AIDS strategy. *American Journal of Public Health, 101*(9), e4-e6.

Yuen, H.K., Wolf, B.J., Bandyopadhyay, D., Magruder, K.M., Salinas, C.F. & London, S.D., (2008). Dental health knowledge in a group of Black adolescents living in rural South Carolina. *Journal of Allied Health, 37*, 15-21.

Yuen, H.K., Wiegand, R.E., Slate, E.H., Magruder, C.F., Salinas, S.D. & London S.D., (2009). Oral health knowledge and behavior among adults with diabetes. *Diabetes Research and Clinical Practice, 86*, 239-246.

APPENDICES

Appendix 1. Researcher Identity Memo

This section acknowledges my work as the principal investigator for this research study. It is important to understand the experiences that I as a research bring to this organization and acknowledge any potential bias and conflicts in the efficacy of this study.

I started working in HIV prevention in Fall 2006 at Metrolina AIDS Project in Charlotte, NC. I was hired as the Project Coordinator due to my experience and volunteerism coordinating youth programs and community connections formed while an undergraduate student at North Carolina A&T State University. My undergraduate degree in Journalism and Mass Communications provided me the essential skills I needed for the project in creating social marketing campaigns for HIV prevention. This project started my journey to learn about HIV, of which I had no previous exposure. I quickly gained experience in group facilitation, HIV counseling and testing, and community outreach and engagement. At the time, I had no idea that this job would be long term or would be my career, but at the beginning 2007 I gave my first HIV positive result.

My first time giving a positive result was to a friend who one day just decided to get an HIV test. He had no idea the result I would give him would change his life forever. I had no idea that it would change mine too. Our similar experiences and our mutual friendship networks helped me understand that being affected is as important as being infected. The roles between him and I could have easily been reversed. As cliché as it sounds, my friend as a client and me as an outreach worker was confirmation that I was in the right place. That one HIV test result was just the beginning, because week after

week I was giving the same results to other young black men who were just like me and similar in age. My passion turned into advocacy; advocacy turned into creating continuums of care; and the hard work turned into outrage as resources continued to decrease and agencies were being ineffective in their approaches to the HIV epidemic. I clearly saw the gaps in our health services, as it was difficult for those infected to get case management, and furthermore, access to quality medical services. I saw the importance of effectiveness in proper management of non-profit organizations. I also witnessed the closing of the first community organization that I worked for; the largest AIDS service organization in my region.

I currently serve as the Prevention Programs Manager for Quality Home Care Services, an HIV service organization in Charlotte, N.C. I have the same passion for prevention HIV and engaging Black MSM into care as I did when I started in HIV nearly eleven years ago. For that reason, I find privilege in the ability to conduct this study and collect primary data from a community in which I have built rapport while utilizing the tools that I have gained as a student in the health services research doctoral program at UNC Charlotte.

Appendix 2. Certificate of IRB Approval

UNC CHARLOTTE

Research and Economic Development
Office of Research Compliance
9201 University City Blvd, Charlotte, NC 28223-0001
t/ 704.687.1876 f/ 704.687.0980 http://research.uncc.edu/compliance-ethics

Institutional Review Board (IRB) for Research with Human Subjects

Certificate of Approval

Protocol #	**16-06-22**
Protocol Type:	**Expedited** 7
Title:	**Black MSM Oral Health Behaviors and Implications for HIV Risk**
Initial Approval:	**7/14/2016**

Responsible Faculty	**Dr. Diana**	**Rowan**	**School of Social Work**
Investigator	**Mr. Darrin**	**Johnson**	**Health Services Research**

After careful review, the protocol listed above was approved by the Institutional Review Board (IRB) for Research with Human Subjects under 45 CFR 46.111. This approval will expire one year from the date of this letter. In order to continue conducting research under this protocol after one year, the "Annual Protocol Renewal Form" must be submitted to the IRB. This form can be obtained from the Office of Research Compliance web page http://research.uncc.edu/compliance-ethics/human-subjects.

Please note that it is the investigator's responsibility to promptly inform the committee of any changes in the proposed research prior to implementing the changes, and of any adverse events or unanticipated risks to subjects or others.

Amendment and Event Reporting forms are available on our web page at: http://research.uncc.edu/compliance-ethics/human-subjects/amending-your-protocol.

M. Lyn Exum 7/21/16

Dr. M. Lyn Exum, IRB Chair Date

Appendix 3. Focus Group Guiding Questions

Black MSM Oral Health Behavior Guiding Questions for Focus Group

1. How long did it take to complete the survey?

2. What words or phrases are hard to understand in the survey?

3. What is a good format for the survey? How well did you follow this template?

4. What words or questions seemed offensive to you and why?

5. What questions would you ask differently?

6. What are questions that should be asked that are not currently in the survey?

7. What is your perception of oral health?

8. How often is oral health discussed among your peers?

9. How often is oral health thought about before engaging in oral sex?

10. What would prevent someone from completing the survey?

Appendix 4. Black MSM Oral Health Behavior Survey

Black MSM Oral Health Behaviors and Implications for HIV Risk

Q90 Darrin K. Johnson, a Health Services Research doctoral student (and Principal Investigator) at the University of North Carolina at Charlotte, is conducting the Black Men who have Sex with Men (MSM) Oral Health Behavior and Implications for HIV Risk study. The entire process should take between 10-15 minutes and will be administered online. While there is no immediate benefit to you individually, the results of this survey will be useful to the research community for the purpose of better understanding oral health behaviors among Black men who have sex with other men, and if there is potential for HIV risk. Should you choose to complete the entire survey you will have the opportunity to be selected as a raffle winner to receive a $100 Walmart electronic gift card emailed to you. Should you choose to receive the gift card, you will be asked to provide your email address at the end of the survey. The data will be aggregated. Therefore, the email will not be associated with your response. There are no known risks associated with your participation in this study. The results of this study may be published in scientific journals, or presented at professional meetings; however, only aggregated results, as opposed to individual outcomes will be reported. To further insure confidentiality, all questionnaires will be viewed only by Darrin Johnson and possibly by trained research assistants, and will be stored in a secure, password-protected database on a computer locked inside Darrin Johnson's office. You may withdraw from this study at anytime without jeopardizing your relationship with Darrin Johnson or UNC Charlotte; your participation is completely voluntary. You should be 18 years of age or older to complete this survey. If you are younger than 18, you are not eligible to participate in this study. If you would like any further information about this survey, please contact the Darrin Johnson, (704) 231-6904. Do you agree to participate in this study?

- ❍ Yes (1)
- ❍ No (2)

If No Is Selected, Then Skip to End of Survey

Display This Question:

If Darrin K. Johnson, a Health Services Research doctoral student at The University of North Carolina... Yes, Is Selected

Q1 What is your current age?

- ❍ age 17 or younger (1)
- ❍ 18-29 (2)
- ❍ 30-45 (3)
- ❍ 45-60 (4)
- ❍ 60+ (5)

If age 17 or younger Is Selected, Then Skip to End of Survey

Q2 What is your birth sex?
- ❍ Male (1)
- ❍ Female (2)

If Female Is Selected, Then Skip to End of Survey

Q3 What is your current gender?
- ❍ Male (1)
- ❍ Female (2)
- ❍ Transgender Male (3)
- ❍ Transgender Female (4)

If Male Is Selected, Then Skip to Do you live in North Carolina?

Q4 Do you live in North Carolina?
- ❍ Yes (1)
- ❍ No (2)

If No Is Selected, Then Skip to End of Survey

Q63 Do you primarily have sex with other men?
- ❍ Yes (1)
- ❍ No (2)

If No Is Selected, Then Skip to End of Survey

Q6 What is the highest level of education you have completed?
- ❍ Grade School (1)
- ❍ Some High School (2)
- ❍ High School Diploma or GED (3)
- ❍ Some College (4)
- ❍ College Degree (5)
- ❍ Graduate Degree (6)

Q7 Which best describes you?
- ❍ African American/Black (1)
- ❍ Black Hispanic/ Latino (2)
- ❍ Afro-Caribbean/Latino (3)
- ❍ Mixed Race (4)
- ❍ Other (5) _____

Q8 What is your yearly gross income?
- ❍ $0 - $10,000 (1)
- ❍ $11,000 - $20,000 (2)
- ❍ $21,000 - $30,000 (3)
- ❍ $31,000 - $40,000 (4)
- ❍ $41,000 - $50,000 (5)
- ❍ $51,000 - $60,000 (6)
- ❍ $60,000 - $70,000 (7)
- ❍ $71,000+ (8)

Q9 What is your current employment status?
- ❍ Working part-time (1)
- ❍ Working full-time (2)
- ❍ Student and working (3)
- ❍ Student and NOT working (4)
- ❍ Unemployed (5)
- ❍ Disabled (6)

Q10 Which of the following best describes you?
- ❍ Straight (1)
- ❍ Gay (2)
- ❍ Bisexual (3)
- ❍ Questioning (4)
- ❍ Same gender loving (5)

Q11 Do you currently have medical insurance (not dental insurance)?
- ❍ Yes (1)
- ❍ No (2)

Q12 Do you currently have dental insurance?
- ❍ Yes (1)
- ❍ No (2)

Q13 Have you had an HIV test in the past 12 months?
- ❍ Yes (1)
- ❍ Don't know (2)
- ❍ No (3)

Display This Question:
If Have you had an HIV test in the past 12 months? No Is Selected

Q83 If you have not had an HIV test, are you a person living with HIV?
- ❍ Yes (4)
- ❍ No (5)

If Yes Is Selected, Then Skip to If you are HIV positive, are you rece...

Display This Question:
If Have you had an HIV test in the past 12 months? Yes Is Selected

Q14 If you've had an HIV test in the past 12 months, what was the result of your most recent HIV test?
- ❍ Positive (1)
- ❍ Negative (2)
- ❍ Don't know (3)

Display This Question:
If you've had an HIV test in the past 12 months, what was the result of your most recent HIV test? Positive Is Selected

Q15 If you are HIV positive, are you receiving medical care or treatment?
- ❍ Yes (1)
- ❍ No (2)

Display This Question:
If you are HIV positive, are you receiving medical care or treatment? Yes Is Selected

Q84 If you are HIV positive and on treatment, how often do you take your medication?
- ❍ Daily (1)
- ❍ 2-3 times a week (3)
- ❍ Once a week (4)
- ❍ Never (5)

Display This Question:
If you are HIV positive, are you receiving medical care or treatment? Yes Is Selected

Q85 Has having HIV ever caused any of the following in your mouth? (select all that apply):
- ❑ Dry mouth (1)
- ❑ Red sores (2)
- ❑ White patches (3)
- ❑ None (4)
- ❑ Other (5) _____

Q16 In the last 12 months, did a health care worker tell you that you have a sexually transmitted infection?
- ❍ Yes (1)
- ❍ No (2)

Display This Question:
If In the last 12 months, did a health care worker tell you that you have a sexually transmitted inf... Yes Is Selected

Q55 In the past 12 months, did a health care worker tell you that you had syphilis?
- ❍ Yes (1)
- ❍ No (2)

Display This Question:
If In the last 12 months, did a health care worker tell you that you have a sexually transmitted inf... Yes Is Selected

Q56 In the past 12 months, did a health care worker tell you that you had gonorrhea?
- ❍ Yes (1)
- ❍ No (2)

Display This Question:
If In the last 12 months, did a health care worker tell you that you have a sexually transmitted inf... Yes Is Selected

Q57 In the past 12 months, did a health care worker tell you that you had chlamydia?
- ❍ Yes (1)
- ❍ No (2)

Q17 In the past 12 months, did you have sex with a male (born male, identify as male)?
- ❍ Yes (1)
- ❍ No (2)

If No Is Selected, Then Skip to In the past 12 months, did you put YO...

Q18 In the past 12 months, how many male sex partners (born male, identify as male) did you have?
- ❍ Click to write your answer (1) _____

Q20 In the past 12 months, did your male partner put HIS penis in YOUR butt?
- ❍ Yes (1)
- ❍ No (2)

Display This Question:
If In the past 12 months, did your male partner put HIS penis in YOUR butt? Yes Is Selected

Q68 In the past 12 months, did your male partner use a condom when he put HIS penis in

YOUR butt?
- ❍ Yes (1)
- ❍ No (2)

Q21 In the past 12 months, did you put YOUR penis in your male PARTNER'S butt?
- ❍ Yes (1)
- ❍ No (2)

Display This Question:
If In the past 12 months, did you put YOUR penis in your male PARTNER'S butt? Yes Is Selected

Q64 In the past 12 months, did you use a condom when you put YOUR penis in your male PARTNER'S butt?
- ❍ Yes (1)
- ❍ No (2)

Q22 In the past 12 months, did you put YOUR mouth on your male PARTNER'S butt?
- ❍ Yes (1)
- ❍ No (2)

Display This Question:
If In the past 12 months, did you put YOUR mouth on your male PARTNER'S butt? Yes Is Selected

Q25 In the past 12 months, did you use a dental dam when you put your MOUTH on your male PARTNER'S butt?
- ❍ Yes (1)
- ❍ No (2)

Display This Question:
If In the past 12 months, did you put YOUR mouth on your male PARTNER'S butt? Yes Is Selected

Q61 In the past 12 months, how often did you put YOUR mouth on your male PARTNER'S butt?
- ❍ Daily (1)
- ❍ 4-6 times a week (2)
- ❍ 2-3 times a week (3)
- ❍ Once a week (4)
- ❍ Never (5)
- ❍ Other (6) _____

Q23 In the past 12 months, did your male PARTNER put his mouth on YOUR butt?
- ❍ Yes (1)
- ❍ No (2)

Q66 In the past 12 months, did you put YOUR mouth on your male PARTNER'S penis?
- ❍ Yes (1)
- ❍ No (2)

Display This Question:
If In the past 12 months, did you put YOUR mouth on your male PARTNER'S penis? Yes Is Selected

Q67 In the past 12 months, did you use a condom when you put YOUR mouth on your male PARTNER'S penis?
- ❍ Yes (1)
- ❍ No (2)

Display This Question:
If In the past 12 months, did you put YOUR mouth on your male PARTNER'S penis? Yes Is Selected

Q26 In the past 12 months, did your male PARTNER have HIV when you put YOUR mouth on HIS penis?
- ❍ Yes (1)
- ❍ No (2)
- ❍ Don't know (3)

Display This Question:
If In the past 12 months, did you put YOUR mouth on your male PARTNER'S penis? Yes Is Selected

Q52 In the past 12 months, did you have semen (cum) in your mouth after you put YOUR mouth on your male PARTNER'S penis?
- ❍ Yes (1)
- ❍ No (2)
- ❍ Don't know (3)

Display This Question:
If In the past 12 months, did you put YOUR mouth on your male PARTNER'S penis? Yes Is Selected

Q60 In the past 12 months, how often did you put YOUR mouth on your male PARTNER'S penis?
- ❍ Daily (1)
- ❍ 4-6 times a week (2)
- ❍ 2-3 times a week (3)
- ❍ Once a week (4)
- ❍ Never (5)
- ❍ Other (6) _____

Q27 Have you ever had a tooth or more than one tooth replaced?
- ❍ Yes (1)
- ❍ No (2)

Q28 During the past 12 months, did your teeth or mouth cause you pain or discomfort?
- ❍ Always (1)
- ❍ Sometimes (2)
- ❍ About half the time (3)
- ❍ Never (4)

Q29 How healthy are your teeth?
- ❍ Excellent (1)
- ❍ Very good (2)
- ❍ Average (3)
- ❍ Poor (4)
- ❍ Terrible (5)

Q32 How healthy are your gums?
- ❍ Excellent (1)
- ❍ Very good (2)
- ❍ Average (3)
- ❍ Poor (4)
- ❍ Terrible (5)

Q30 How often do you brush your teeth?
- ❍ Never (1)
- ❍ Sometimes (2)
- ❍ Daily (3)
- ❍ Twice a day (4)
- ❍ More than twice a day (5)

Q50 Do your gums bleed when you brush your teeth?
- ❍ Always (1)
- ❍ Sometimes (2)
- ❍ About half the time (3)
- ❍ Never (4)

Q31 How much time does it take to brush your teeth?
- ❍ 10 seconds (1)
- ❍ 30 seconds (2)
- ❍ 1 minute (3)
- ❍ More than 1 minute (4)
- ❍ None at all (5)

Q33 How often do you floss your teeth?
- ❍ Never (1)
- ❍ Sometimes (2)
- ❍ Daily (3)
- ❍ Twice a day (4)
- ❍ More than twice a day (5)

Q51 Do your gums bleed when you use floss?
- ❍ Always (1)
- ❍ Sometimes (2)
- ❍ About half the time (3)
- ❍ Never (4)

Q34 In the past 12 months, have you visited a dentist office?
- ❍ Yes (1)
- ❍ No (2)

Display This Question:
If In the past 12 months, have you visited a dentist office? Yes Is Selected

Q59 In the past 12 months, why did you visit the dentist office?
- ❍ Click to write your answer (1) _____

Q35 Which of the following did you experience in the past 12 months due to problems with your teeth or mouth? (select all that apply)

- ❑ Difficulty biting food (1)
- ❑ Difficulty chewing food (2)
- ❑ Difficulty with speech or saying words (3)
- ❑ Dry mouth (4)
- ❑ Felt embarrassed because of problems with teeth or mouth (5)
- ❑ Have avoided smiling (6)
- ❑ Lack of sleep (7)
- ❑ Have taken days off work (8)
- ❑ Difficulty doing daily activities (9)
- ❑ None of the above (10)

Q36 Which of the following do you use? (select all that apply)

- ❑ Cigarettes (1)
- ❑ Cigars (2)
- ❑ A pipe (3)
- ❑ Chewing tobacco (4)
- ❑ Snuff or powdered tobacco (5)
- ❑ Other (6) _____
- ❑ None of the above (7)

Q37 How often do you drink alcohol?

- ❍ daily (1)
- ❍ 2-3 times a week (2)
- ❍ Once a week (3)
- ❍ Never (4)
- ❍ Other (5) _____

Q38 In the past 12 months, which of the following have you used? (select all that apply)

- ❑ Heroin (1)
- ❑ Cocaine (2)
- ❑ Meth (3)
- ❑ PCP (4)
- ❑ Marijuana (5)
- ❑ None of the above (6)

Q39 In the past 12 months, has a dentist told you that you needed to have a tooth pulled?

- ❍ Yes (1)
- ❍ No (2)

Display This Question:
If In the past 12 months, has a dentist told you that you needed to have a tooth pulled? Yes Is Selected

Q58 In the past 12 months, has a dentist pulled one or more of your teeth?
- ❍ Yes (1)
- ❍ No (2)

Q40 In the past 12 months, has a dentist suggested you brush your teeth or use floss more often?
- ❍ Yes (1)
- ❍ No (2)

Q41 In the past 12 months, has a dentist ever asked you if you participate in oral sex?
- ❍ Yes (1)
- ❍ No (2)

Q42 In the past 12 months, has a dentist ever asked you if you've had an HIV test?
- ❍ Yes (1)
- ❍ No (2)

Q44 In the past 12 months, did an HIV prevention specialist talk to you about oral sex?
- ❍ Yes (1)
- ❍ No (2)

Q45 In the past 12 months, has a dentist told you that you had a cavity or hole in a tooth?
- ❍ Yes (1)
- ❍ No (2)

Q46 In the past 12 months, have you brushed your teeth or used mouth wash shortly before putting YOUR mouth on your PARTNER'S penis?
- ❍ Yes (1)
- ❍ No (2)

Q47 In the past 12 months, have you brushed your teeth or used mouth wash shortly before putting YOUR mouth on your PARTNER'S butt?
- ❍ Yes (1)
- ❍ No (2)

Q69 Choose the option that is associated with the word "floss".
- ❍ Clean (1)
- ❍ Rinse (2)

Q70 Choose the option that is associated with the words " dental caries".
- ❍ Ulcer (1)
- ❍ Cavities (2)

Q71 Choose the option that is associated with the word "fluoride".
- ❍ Protect (1)
- ❍ Destroy (2)

Q72 Choose the option that is associated with the word "abscess".
- ❍ Pus (1)
- ❍ Mucus (2)

Q73 Choose the option that is associated with the word "extraction".
- ❍ Replace (1)
- ❍ Remove (2)

Q74 Choose the option that is associated with the word "enamel".
- ❍ Surface (1)
- ❍ Inside (2)

Q75 Choose the option that is associated with the word "dental dam".
- ❍ Barrier (1)
- ❍ Access (2)

Q76 Choose the option that is associated with the word "smoking".
- ❍ Lung (1)
- ❍ Stomach (2)

Q77 Choose the option that is associated with the word "numb".
- ❍ Hot (1)
- ❍ Feeling (2)

Q78 Choose the option that is associated with the word "brush".
- ❍ Toothpaste (1)
- ❍ Soap (2)

Q79 Choose the option that is associated with the word "periodontal".
- ❍ Gums (1)
- ❍ Palate (2)

Q80 Choose the option that is associated with the word "inflammation".
- ❍ Warm (1)
- ❍ Swelling (2)

Q81 Choose the option that is associated with the word "restoration".
- ❍ Treatment (1)
- ❍ Instrument (2)

Q82 Choose the option that is associated with the word "denture".
- ❍ Synthetic (1)
- ❍ Natural (2)

Q83 Choose the option that is associated with the word "braces".
- ❍ Twist (1)
- ❍ Straighten (2)

Q84 Fill in the blank: (Blank) can loosen or severely damage a tooth.
- ❍ Bad breath (1)
- ❍ Chewing gum (2)
- ❍ Gum disease (3)
- ❍ Hard chewing (4)

Q85 Fill in the blank: Before removing your tooth, your dentist will give you a (blank) to (blank) the area where the tooth will be removed.
- ❍ cold drink to desensitize (1)
- ❍ anesthetic to numb (2)
- ❍ toothbrush to clean (3)
- ❍ mirror to view (4)

Q87 Read the following instructions and answer the question below. The following may help speed recovery after having a tooth pulled: 1. Take painkillers as prescribed by your dentist or oral surgeon. 2. To help relieve pain and swelling, apply an ice or cold pack to the outside of your mouth for 10 to 20 minutes at a time. Put a thin cloth between the ice and your skin. 3. After 24 hours, rinse your mouth gently with warm salt water several times a day to reduce swelling and relieve pain. 4.Make your own salt water by mixing 1 tsp (5 g) of salt in a medium-sized glass [8 fl oz (240 ml)] of warm water. Do not rinse hard. This can loosen the blood clot and delay healing. Change gauze pads before they become soaked with blood.5. Relax after surgery. Physical activity may increase bleeding. Avoid smoking.6. Eat soft foods, such as gelatin, pudding, or a thin soup. Gradually add solid foods to your diet as healing progresses.7. Do not lie flat. This may prolong bleeding. Prop up your head with pillows. 8. Avoid rubbing the area with your tongue.9. Do not use sucking motions, such as when using a straw to drink.10. Continue to carefully brush your teeth and tongue. How long should you apply ice or a cold pack to your mouth after having a tooth

pulled?

- ❍ 10 to 20 minutes (1)
- ❍ 20 to 30 minutes (2)
- ❍ 5 to 7 minutes (3)
- ❍ It is harmful to apply ice (4)

Q88 Read the following instructions and respond to the statement below. The following may help speed recovery after having a tooth pulled: 1. Take painkillers as prescribed by your dentist or oral surgeon. 2. To help relieve pain and swelling, apply an ice or cold pack to the outside of your mouth for 10 to 20 minutes at a time. Put a thin cloth between the ice and your skin. 3. After 24 hours, rinse your mouth gently with warm salt water several times a day to reduce swelling and relieve pain. 4.Make your own salt water by mixing 1 tsp (5 g) of salt in a medium-sized glass [8 fl oz (240 ml)] of warm water. Do not rinse hard. This can loosen the blood clot and delay healing. Change gauze pads before they become soaked with blood.5. Relax after surgery. Physical activity may increase bleeding. Avoid smoking.6. Eat soft foods, such as gelatin, pudding, or a thin soup. Gradually add solid foods to your diet as healing progresses.7. Do not lie flat. This may prolong bleeding. Prop up your head with pillows. 8. Avoid rubbing the area with your tongue.9. Do not use sucking motions, such as when using a straw to drink.10. Continue to carefully brush your teeth and tongue. It is okay to eat a steak and burgers shortly after having a tooth pulled.

- ❍ Yes (1)
- ❍ No (2)

Q89 Read the following instructions and answer the question below. The following may help speed recovery after having a tooth pulled: 1. Take painkillers as prescribed by your dentist or oral surgeon. 2. To help relieve pain and swelling, apply an ice or cold pack to the outside of your mouth for 10 to 20 minutes at a time. Put a thin cloth between the ice and your skin. 3. After 24 hours, rinse your mouth gently with warm salt water several times a day to reduce swelling and relieve pain. 4.Make your own salt water by mixing 1 tsp (5 g) of salt in a medium-sized glass [8 fl oz (240 ml)] of warm water. Do not rinse hard. This can loosen the blood clot and delay healing. Change gauze pads before they become soaked with blood.5. Relax after surgery. Physical activity may increase bleeding. Avoid smoking.6. Eat soft foods, such as gelatin, pudding, or a thin soup. Gradually add solid foods to your diet as healing progresses.7. Do not lie flat. This may prolong bleeding. Prop up your head with pillows. 8. Avoid rubbing the area with your tongue.9. Do not use sucking motions, such as when using a straw to drink.10. Continue to carefully brush your teeth and tongue. How much salt should be mixed per 8 fluid ounces of water?

- ❍ 1 cup (1)
- ❍ 1 tablespoon (2)
- ❍ 1 teaspoon (3)
- ❍ 1/2 cup (4)
- ❍ None at all (5)

Q81 If you would like a chance to win a $100 Walmart e-gift card or other incentives, please provide your email here.

Q82 Thank you for completing this survey!!!