

## **The Disproportionality of HIV Transmission Among Black Men Who Have Sex with Men (BMSM): Recommendations for an Effective Prevention Model**

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***Abstract:** The Black community shoulders the heaviest HIV/AIDS burden of any racial or ethnic group in the United States, with Black men who have sex with men being the most impacted subpopulation (CDC, 2011). Health determinants (i.e., behavior, social environment, physical environment, and healthcare) of Black men who have sex with men are examined for consideration in the creation of innovative HIV prevention programs specific to the community. The only two intervention strategies targeting this population approved by the Centers for Disease Control and Prevention, the 3MV and d-up:Defend Yourself programs, are scrutinized, and the theoretical underpinnings of these evidence-based programs (i.e., social cognitive theory, diffusion of innovations) will be examined in order to recommend strategies for future interventions to reach greater numbers within the community.*

***Keywords:** BMSM, HIV, prevention, health determinants*

Thirty years have passed since the appearance of the first AIDS cases, and within the first 25 of those years, more than 65 million people worldwide have been infected with HIV and over 25 million have died from AIDS-related complications (Merson, 2006). Since 1981, in the United States alone the descriptive epidemiology of the AIDS pandemic has witnessed shifts regarding HIV/AIDS incidence among various subpopulations in light of known behavioral risk factors for the disease (Karon, Fleming, Steketee, & De Cock, 2001). Established populations with higher rates of HIV transmission, in hierarchical order of risk, include men who have sex with men (MSM), intravenous drug users (IDUs), MSM who are also intravenous drug users, hemophiliacs, heterosexual contacts with high-risk partners, and blood transfusion recipients. The trends in the United States over the last two decades, with the inclusion of all known risk factors, reflect a dividing line in HIV/AIDS demographics along racial lines (Karon et al., 2001).

The number of all newly diagnosed cases of AIDS increased from 1990, peaked in 1992 and began a steady decline from 1993 to 1999 (Karon et al., 2001). Up until 1993, AIDS incidence remained the highest among Whites compared to other races, even as the steep decline began in 1992. The trend continued until 1999, when incidence rates among Whites dropped below that of Blacks and hovered just above that of Latinos (Centers for Disease Control and Prevention [CDC], 2011; Karon et al., 2001). However, the majority of all newly diagnosed cases since 1995 in the United States had been among Blacks. By 1999, nearly twenty years into the AIDS pandemic, this trend continued until half of all newly diagnosed cases were comprised of Blacks (Karon et al., 2001).

A decade later in 2009, Blacks accounted for an estimated 44% of newly diagnosed cases of HIV in the United States (CDC, 2011). Black men accounted for

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70% of new cases among the Black population, with 73% of new cases among Black men being MSM, more known in the HIV prevention sphere as Black men who have sex with men (BMSM). While the number of new HIV diagnoses for White MSM was slightly higher, the overall rate of infection was 6.5 times higher for BMSM by comparison and 2.5 times higher than Latino MSM. The Black community now shoulders the heaviest HIV/AIDS burden of any racial or ethnic group in the United States, with BMSM being the most affected subpopulation (CDC, 2011).

While the Centers for Disease Control and Prevention (CDC) acknowledges various evidence-based HIV prevention interventions for most subpopulations, an obvious gap of interventions for the BMSM population has emerged (CDC, 2011). Multiple systematic reviews have acknowledged a lack of effective interventions for BMSM (Beatty, Wheeler, & Gaiter, 2004; Millet & Peterson, 2007; Wheeler, Lauby, Liu, Van Sluytman, & Murrill, 2008). Too few interventions focus on the impact that health determinants have on the risk of HIV transmission for BMSM (Millet & Peterson, 2007), and too little research has addressed the challenges of delivering prevention services to a community that may be seen by others, as well as by itself, as hidden or ostracized. Therefore, this paper seeks to prepare social work practitioners, educators, and policy makers to promote the creation of innovative HIV prevention programs to target the BMSM community.

The paper will examine the magnitude of the crisis, explore potential barriers deriving from health determinants of BMSM (i.e., behavior, social environment, physical environment, and healthcare), and analyze the tenets of the only HIV prevention programs approved by the CDC, *3MV* and *d-up:Defend Yourself* (CDC, 2012). Lastly, recommendations will be outlined that are geared towards social work practitioners and researchers for future HIV prevention programs specific to the BMSM community.

### **Magnitude**

The Morbidity and Mortality Weekly Report (MMWR) reported that an estimated prevalence of 2% of the entire United States' population is MSM (CDC, 2011). The true prevalence is difficult to obtain however, as convenience and snowball sampling dominates attempts to define the population and may not reach those that wish to conceal their sexual behavior (Cole, 2006). Statewide studies report prevalence to be 4-10%, taking into consideration that MSM estimates vary between urban, suburban, and rural areas (Gasiorowicz & Stodola, 2011; Lieb et al., 2009; Lieb et al., 2011; Magnus et al., 2011). Despite the Black population composing around 15% of the U.S. population, they represent nearly 50% of known cases (Mimiaga et al., 2009). Specifically, disproportionate numbers of BMSM are reported as HIV positive.

Gasiorowicz and Stodola (2011) found that within their study of HIV rates of MSM in Wisconsin, 14 to 28% of BMSM were HIV positive, as compared to 2-4% of White MSM and 5-9% of Latino MSM. Magnus and colleagues (2011) reported that although BMSM on average have fewer sexual partners and engage in fewer risk behaviors historically associated with infection, they have greater rates of infection than Whites (26% v. 8%). At 38%, BMSM are the largest racial minority group of persons infected with HIV who are unaware of their serostatus (CDC, 2011). Although a decrease in new infections among BMSM 30 years and older has been

reported, there has been a substantial increase among men aged 15-29 since 2008 (CDC, 2011).

The most frequently reported risk behaviors associated with HIV infection are unprotected anal intercourse, substance use (most commonly reported as alcohol, crystal methamphetamines, marijuana, and/or amyl nitrite), transactional sex (i.e., sex exchanged for money, drugs or other needs), or serodiscordant sex (CDC, 2012). Other factors associated with HIV infection include a history of incarceration, educational attainment of less than or equal to a high school diploma, depressive symptoms, social isolation, age of sexual debut, and lack of healthcare coverage (CDC, 2012). BMSM have been found to report less unprotected sex but are more likely to have sex with a partner of unknown serostatus, be younger at the time of study, and have lower income and less educational attainment (Dorell et al., 2011; Eaton, Kalichman, & Cherry, 2010; Outlaw et al., 2011).

### **Health Determinants**

More and more attention is being focused on health determinants influencing the health status of individuals or populations to efficiently and effectively provide treatment and prevention efforts (Matthews, Gallow, & Taylor, 2010). Many factors contribute to disparities in the distribution of HIV. Such factors include behaviors, social environment, physical environment, and healthcare. Historical oppression is intertwined with all of these factors (Cargill & Stone, 2005; Williams & Jackson, 2005). For example, racial and ethnic discrimination in employment may restrict access to higher paying jobs, making it difficult to pay for health care.

Along with historical oppression, a strong correlation exists between Black men and an underutilization of healthcare services, which has strong implications for their health determinants. Compared to White men, Black men attend fewer preventative health visits and face premature mortality from illnesses amenable to early interventions (Ravenell, Whitaker, & Johnson, 2008; Wong et al., 2006). Studies of Black men's preventative health services, which are primarily qualitative, have linked the lack of access to health care to socioeconomic barriers (Ravenell et al., 2008; Whitley, Samuels, Wright, & Everhart, 2005), limited health knowledge or awareness (Cheatham, Barksdale, & Rodgers, 2008), masculinity (Cheatham et al., 2008; Wade, 2008; Whitley et al., 2005), fatalism (Ravenell et al., 2008), and medical mistrust (Cheatham et al., 2008; Hammond, Matthews, & Corbie-Smith, 2010; Wade, 2008; Whitley et al., 2005; Wong et al., 2006).

### **Behaviors**

Due to the reported findings that BMSM participate in less sexual risk-taking behaviors compared to White and Latino MSM, the significance of choosing sexual partners of the same race coupled with preexisting prevalence rates among BMSM (Mimiaga et al., 2009; VanDevanter et al., 2011) seems to be more important than individual behaviors. However, behavioral characteristics that intersect with HIV positive status, such as minority stress and/or stigma, are important to remember. Several reports have emphasized racial and/or ethnic discrimination as having a strong correlation with poor mental health outcomes (Mimiaga et al., 2009; Reisner et al., 2009; Safren & Pantalone, 2006; VanDevanter et al., 2011). For example, the phenomenon of depression and presence of sexually transmitted infections (STIs)

may be bidirectional in nature; Reisner and colleagues (2009) assert that BMSM with moderate to severe depression have an elevated risk of contracting HIV, other STIs, and engaging in serodiscordant unprotected anal intercourse. A combination of social isolation and low self-esteem has been suggested as a contributor to depression in self-identified non-heterosexual racial minority men, while components of social oppression (i.e., homophobia, racism, financial hardship) have been shown to independently predict both depression and social isolation (Diaz, Bien & Ayala, 2006; Safren & Pantalone, 2006).

### **Social Environment**

Social networks, especially sexual networks, greatly impact a person's risk of acquiring HIV. The term sexual network refers to people who are linked directly or indirectly through sexual contact (Flom, Friedman, & Kottiri, 2001). A recent network analysis found that young BMSM who were HIV positive are generally linked by a small number of venues (Oster et al., 2013). Research suggests that there are differences between Blacks and Whites in the type and number of partners they include in their sexual networks (Adimora, Schoenbach, & Doherty, 2006; Thomas, 2006). These differences have been influenced by some of the same factors that contribute to health disparities (i.e., residential segregation by race, high incarceration rates among Black males, and poverty).

Social stigma also contributes to health disparities (Cargill & Stone, 2005). Like racial minorities, sexual minorities including gay and bisexual men also experience health disparities (Lombardi & Bettcher, 2006; Wolitski & Fenton, 2011). Negative societal attitudes and policies against homosexuality may contribute to social stigma experienced by BMSM that contribute to health disparities. Although homophobia cuts across racial lines, Black men may remain secretive about their sexual minority status because of a historical lack of acceptance by leaders and religious institutions within their communities (Wolitski & Fenton, 2011). Internalized homophobia can also be a barrier to care and treatment, as persons with HIV who do not identify as a sexual minority may shy away from health providers for fear of being identified as a gay or bisexual man (Eaton et al., 2010).

Internal homophobia may fuel keeping secrets, particularly concealing one's own sexual orientation, and can have a negative effect on the individual's health (Strachan, Bennett, Russo, & Roy-Byrne, 2007; Ullrich, Lutgendorf, & Stapleton, 2003). For example, research has shown that hiding sexual orientation is associated with more rapid progression of HIV-related illness (Strachan et al., 2007; Ullrich et al., 2003). In addition, some men also have sex with women but do not disclose their sexual relationships with men. The high prevalence of HIV in the Black community and the greater likelihood of bisexuality among Black men place Black heterosexual women at greater risk for HIV infection (Mimiaga et al., 2009).

Due to the discrepancy between "historically reported" risk behaviors and HIV infection in BMSM (as compared to WMSM), the nature of BMSM sexual networks, it has been suggested, is fundamentally different (Mimiaga et al., 2009). In the United States, Blacks are more likely to have a sexual partner that shares her/his race than Latinos or Whites (Mimiaga et al., 2009), and as previously suggested (Eaton et al., 2010; Outlaw et al., 2011), cultural/racial identity influences what kind of risk behaviors are engaged. Mimiaga and colleagues (2009) state that overlapping factors

associated with race, substance use, and sexual practices are more likely to explain discrepancy than simply racial identity. Identification with and reporting of male-to-male sexual activity is also likely to be racially bound. While 53% of participants in Mimiaga and colleagues' (2009) study identified as straight or bisexual, every person reported anal or oral sex with a man within the previous 12 months (Mimiaga, et al., 2009).

Non-disclosure of sexual practices and/or identity to a healthcare provider in BMSM has been linked with a positive HIV status (Eaton et al., 2010). In a case-control study of BMSM, HIV positive men were seven times as likely as their negative counterparts to have concealed their sexual behavior from their healthcare provider (Dorell et al., 2011). Additionally, a lack of physician's cultural competence and comfort with discussing sexual identity with patients was suggested as a hindrance to HIV prevention (Dorell et al., 2011). Cultural interpretations of gender identity, particularly how male-to-male sexual behavior is viewed in terms of masculinity, obfuscate what researchers look for in terms of "MSM" (Behel et al., 2008). Nearly every available study of MSM sexual behaviors has been conducted at gay bars, a venue-based convenience sampling, which does not necessarily capture all BMSM behavior, if indeed nearly half, by Mimiaga's estimate, of said population does not identify as gay or bisexual (Mimiaga et al., 2009).

### **Physical Environment**

The physical locations (e.g., cities, prisons) within which people interact can promote or encourage risky health behaviors (Schensul, Levy, & Disch, 2003) and may account for some health disparities. Population estimates of MSM and BMSM (particularly the estimate of 1% of the total population in rural areas, 4% in suburban areas, and 9% in urban areas) have been widely cited by researchers in the field of HIV prevalence among sexual minorities (Lieb et al., 2011). Noting the disparity of HIV prevention delivery to racial minorities in the southeast, the 2011 study's findings of a large gap between White and Latino MSM compared to BMSM may come as little surprise. Promotion and treatment efforts among rural MSM are impaired given the relative lack of rural findings among any group (Lieb et al., 2011).

One well-documented challenge among urban populations addresses housing and healthcare access. The compounded variables of lack of education and low income, which commonly impact people living in urban government housing, have been shown to negatively influence knowledge of HIV risks and treatment (Djokic et al., 2009). Discrimination in education that affects literacy skills can mean that messages regarding risk and prevention are inaccessible (Fenton, 2004). Among participants living with HIV recruited for a housing study conducted in New York City, 53% identified as non-Hispanic Black and 28% identified as MSM (no racial identity data was collected among MSM). Of all respondents, 36% reported insufficient housing, and housing need was found to be the strongest influential factor for sustaining medical care (Aidala, Lee, Abramson, Messeri, & Siegler, 2007).

Compared with the general population, persons incarcerated in correctional systems have a disproportionately greater burden of infectious diseases, including HIV, viral hepatitis, STIs, and tuberculosis infections (National Commission on Correctional Health Care, 2002). Generally, research suggests that while sex and drug use decrease overall among incarcerated persons, sex and drug use behaviors are

conducted in a riskier manner inside prison than outside (Inciardi, 1995; Wohl et al., 2000). Although it is difficult to assess whether Blacks and Whites have different risks of transmitting STIs while in prison, some studies indicate that there are few differences in their risk behaviors during incarceration (Kassira et al., 2001; Wohl et al., 2000). Therefore, any association between incarceration and Black-White disparities in STIs relating to prisons as a risky environment results from the greater likelihood that Blacks will be exposed to this environment (Blankenship, Smoyer, Bray, & Mattocks, 2005).

### **Healthcare**

A disconnect between number of racial minority HIV positive diagnoses and prevention services directed toward the same clients has been reported (CDC, 2011; Dorell et al., 2011; Gasiorowicz & Stodola, 2011). Black populations may have poor access to health and medical services and inconsistent relationships with health care providers because doctors historically do not practice in minority communities (Smedley, Stith, & Nelson, 2002). A study of physician practice found that wealthier areas had 33 to 50 times more physicians than poorer areas (Ginzberg, 1994). Demographics collected by Gasiorowicz and Stodola (2011) indicated that BMSM accounted for nearly 60% of cases, but only 20% of targeted testing. One indicator given is that training for such preventive services has been focused on heterosexual women and men rather than Black or Latino MSM (Gasiorowicz & Stodola, 2011). As both healthcare services and racial demographics vary by state, access to healthcare on a regional basis should be evaluated. For example, data collected in Jackson, Mississippi indicated that HIV positive BMSM were more likely to be without health insurance coverage or a primary-care physician, and that individuals without health insurance were more likely to report a lack of access to adequate care (Dorell et al., 2011).

In comparison, a sampling of five major metropolitan cities with large HIV prevalence rates concluded that racial minority MSM with healthcare access were more likely to consume preventive services and believe in the importance of preventive care than their White counterparts (Behel et al., 2008). Although similar access was reported, Black and Latino MSM were more likely to use hospital or community clinic care. This study analyzed MSM who reported access to healthcare or were HIV negative. Interestingly, MSM who reported access to healthcare who were HIV positive and unaware of their infection reported a similar assessment of utilization and preventive care beliefs as those that were uninfected (Behel et al., 2008). The comparison of the two studies strengthens the notion that lack of access to healthcare is a larger problem for minority MSM than a lack of utilization.

### **Effective Programs and Interventions**

Since the eruption of HIV in the United States, constructing sound HIV prevention interventions to HIV/AIDS service agencies to be implemented in their local communities has proven to be a challenge. In response to an outcry from service providers requesting such information, the CDC launched the Diffusion of Effective Behavioral Interventions (DEBI) project in 1999 to disseminate empirically tested prevention programs that are effective in preventing HIV transmission (Effective Interventions, 2012).

An evident gap of evidence-based prevention interventions specifically for the BMSM population has emerged, despite many evidence-based interventions for HIV prevention interventions for most other subpopulations (CDC, 2012). Multiple systematic literature reviews have affirmed a lack of effective interventions for BMSM (Beatty et al., 2004; Millet & Peterson, 2007; Wheeler et al., 2008). Too few studies focus on the effects sociocultural predictors, such as racism, homophobia, religion, or dual minority status, have on the risk of HIV transmission for BMSM (Beatty et al., 2004; Millet & Peterson, 2007). Additionally, too little research has addressed the structural challenges (e.g., low economic status, high incarceration rates, limited access to antiretroviral therapy, etc.) that impact BMSM (Millet & Peterson, 2007). Further investigation is needed to identify factors that may inhibit high-risk behaviors (e.g., connectedness to family, spirituality, strong racial identity) and incorporate those factors into HIV prevention strategies that either encourage or sustain preventive behaviors. To better build future prevention efforts to intervene with BMSM, it may be helpful to break down the only two CDC recommended interventions that have demonstrated effectiveness in reducing sexual risk-taking in BMSM (i.e., the *Many Men, Many Voices (3MV)* project and *d-up: Defend Yourself!*). Though not developed by the CDC, these recommended interventions were evaluated by the Department of HIV/AIDS Prevention at the CDC as best-evidence, which is defined as “behavioral interventions that have been rigorously evaluated and have been shown to have significant and positive evidence of efficacy” (CDC, 2001, p. vii). The studies where these recommended interventions originated are outlined below and should be replicable.

### **Many Men, Many Voices (3MV)**

*Many Men, Many Voices (3MV)* is a group-level intervention that addresses behavioral and social health determinants influencing HIV/STI risk-taking (Wilton et al., 2009). The program focuses on the effects of racism and homophobia on the sexual, substance use, and health decision-making behaviors of BMSM. Participants select from a menu of options to reduce HIV/STI transmission designed for this population. The 3MV intervention was developed at two community-based organizations in NY state (Brooklyn and Buffalo) in cooperation with the University of Rochester.

**Theoretical Underpinning.** The social cognitive theory underpinning in the *Many Men, Many Voices (3MV)* project explores the dynamic manner in which personal characteristics, environmental factors, and human behaviors influence each other (Fishbein, 2000). The theory purports that these factors are neither static nor independent, but rather, they are all reciprocal. For example, each behavior witnessed can change a person’s way of thinking. Similarly, the environment where one is raised may influence later behaviors, just as a father’s mindset will determine the environment in which his children are raised (Fishbein, 2000; Jones et al., 2008a). Within its tenets, social cognitive theory purports that three primary factors affect the probability that a person will change a health behavior: self-efficacy, goals, and outcome expectancies (Fishbein, 2000). The theory integrates concepts and processes from cognitive and emotional models of behavior change.

**Logistics.** In the Wilton et al. (2009) study, one of the two community centers involved in developing the intervention (People of Color in Crisis of Brooklyn, NY) spent 15 months recruiting Black MSM in New York City through a variety of means

(i.e., street outreach, Black Gay Pride events, snowball sampling, connection with cultural gatekeepers identified by the community organization, nightlife venues, and print media). Eligible participants lived in the New York City area, self-identified as a BMSM (for the purposes of this study: gay, bisexual, same gender loving, sexually involved with other men or sexually or emotionally attracted to men), were 18 years or older, were either HIV-negative or did not know their HIV status, and willing to attend and participate in an HIV/STI prevention intervention retreat without their primary partner. Participants (n = 338) were randomly assigned to one of two groups, the *Many Men, Many Voices (3MV)* intervention group (n = 164) or the wait-list control group (n = 174). The control group was scheduled to receive a delayed intervention six months following the completion of their baseline assessment (Wilton et al., 2009).

A baseline of sexual behavior data was collected from the men about their past three months of activity, and participants were measured again at three and six months after the intervention (Wilton et al., 2009). Study participants were asked the number of male sex partners, number of episodes of unprotected insertive or receptive intercourse acts with main or casual partners, condom use during anal intercourse with main or casual male sex partners, and the number of episodes of unprotected and protected vaginal and anal sex with women (Wilton et al., 2009).

**Intervention Setting.** The intervention consisted of six consecutive 2 to 3 hour sessions delivered during a weekend retreat (i.e., half-day Friday and all day Saturday and Sunday). However, according to the *3MV* curriculum, the intervention sessions can also be delivered over the course of six weekly sessions. Rather than a singular emphasis on condom use, *3MV* uses a menu of behavior change options for HIV/STI prevention. The program was delivered by two trained BMSM peer co-facilitators through discussions, role-plays, and by creating a risk-reduction plan (Wilton et al., 2009).

**Findings.** Relative to the control group participants, *3MV* participants in the Wilton et al. study reported a 25% reduction in the number of male sex partners, a 66% reduction in unprotected anal intercourse with casual male partners, a 51% reduction in insertive unprotected anal intercourse, and a 33% likelihood of being tested for HIV and other STIs. The study was a milestone in HIV prevention research as it was the first randomized trial to demonstrate the efficacy of an HIV/STI prevention intervention designed for BMSM (Wilton et al., 2009). The only other CDC recommended intervention is *d-up: Defend Yourself!*.

#### **d-up: Defend Yourself!**

*d-up: Defend Yourself! (d-up!)* is a community-level intervention that seeks to mobilize an existing social network of BMSM to support condom use and improve their sense of self-worth (Jones et al., 2008a). The program was specifically adapted for BMSM from the *Popular Opinion Leader (POL)* intervention used with all MSM. *d-up!* uses specific social network members, called opinion leaders, who are respected and trusted by their peers, to promote the benefits of consistent condom use and increase self-worth among their friends and acquaintances. The CDC cites a study by Jones et al. (2008a) to substantiate their support of the intervention.

**Theoretical Underpinning.** The *d-up: Defend Yourself!* intervention applied the diffusion of innovations theory, an underutilized theory in social work, which

suggests that if key members of the community endorse a practice or behavior, community members will adopt that practice or behavior over time (Wilton et al., 2009). In order for success, community members must believe that there are some advantages to adopting the practice or behavior. Additionally, the behavior change must be observable, easy to execute, compatible with existing community values, and able to be integrated into social norms (Wilton et al., 2009).

Within the BMSM population, a key member of the community would need to be socially significant within specific segments of the social network (Wilton et al., 2009). This member should have influence and credibility with those in their social networks. For example, once key members are identified, they would openly endorse safer sex practices while highlighting the benefits and ease of adopting such practices. These messages are communicated throughout social networks, and others' behaviors are impacted as the social norms become operant within the community (e.g., consistent condom usage, regular HIV testing, etc.) (Wilton et al., 2009).

**Logistics.** The research study was conducted in three North Carolina cities (Raleigh, Greensboro, and Charlotte) that had nightclubs in which BMSM could be accessed, recruited, and trained for the intervention (Jones et al., 2008a). Skilled local prevention specialists used ethnographic techniques to identify opinion leaders ( $n=299$ ) at local nightclubs frequented by the target population. According to the article, 15% of those in the target population of the community were trained as opinion leaders (Jones et al., 2008a).

**Intervention Setting.** Once recruited, opinion leaders participated in four 2-hour sessions facilitated by two skilled trainers covering local and state epidemiology of HIV/AIDS, STIs, facts/myths of HIV/AIDS, and how to reduce one's risk (Jones et al., 2008a). Intervention sessions discussed topics such as racism, homophobia, bisexuality, employment, poverty, and religion, while incorporating culturally relevant messages, materials, and activities. Using role-play scenarios, opinion leaders learned how to deal with challenges facing BMSM should such conversations arise in their social networks. To ensure that the learning objectives were met, participants were given tests measuring their knowledge before and after the intervention sessions (Jones et al., 2008a).

Over the next year researchers convenience sampled self-identified BMSM, aged 18 to 30 years, who were permanent residents in the area at the same bars from which opinion leaders were recruited (Jones et al., 2008a). No effort was given to recruit the same individuals from subsequent waves. The eligible men were asked to take a self-administered assessment of their sexual practices over the last two months (Jones et al., 2008a).

**Findings.** Jones et al. (2008a) found significant reductions in risky behaviors and an increase in consistent condom use. Unprotected receptive anal intercourse was significantly decreased at 4 months (24%), 8 months (25%), and 12 months (44%). Also at 12 months, the average number of partners and episodes of unprotected insertive anal intercourse decreased by 40% and 53%, respectively. Additionally, the number of BMSM who reported that they always used condoms for intercourse increased by 23% for insertive and 30% for receptive (Jones et al., 2008a).

### Recommendations for Future Prevention Models

Growing evidence supports that well-designed, targeted, and theory-based behavior change interventions can be effective in reducing the spread of HIV (Fishbein, 2000; Jones et al., 2008b; Wilton et al., 2009). Although each person's thinking about their risk-taking behavior is unique, understanding the theoretical variables behind a specific subpopulation's health determinants can guide the development of an effective intervention (Beatty et al., 2004). Social cognitive theory and diffusion of innovations theory, which were used in the *Many Men, Many Voices (3MV)* project and *d-up: Defend Yourself!* interventions, are also recommended for future intervention programs.

Additionally, researchers found that promoting individual self-worth and racial pride were essential in both programs (Jones et al., 2008a; Wilton et al., 2009). With the social aspect in mind, it may be beneficial to include a community-based participatory research (CBPR) approach to future interventions and their subsequent evaluations to emphasize participants' self-efficacy and racial pride. A CBPR approach could take the diffusion of innovation theory to the next level. CBPR is conducted as an equal partnership between both formally trained researchers/trainers and members of the community (Minkler & Baden, 2008). Equitable partnerships require sharing power, resources, credit, and knowledge, as well as a reciprocal appreciation of each partner's knowledge and skills at each stage of the project. Specifically with HIV prevention, it may be helpful for BMSM to be closely involved with the problem definition/issue selection, implementation and research design, conduct of the evaluation, interpretation of the results, and decisions regarding how the results should be used for action. One of the principle ways in which CBPR differs from traditional research is that CBPR is an iterative process, incorporating research, reflection, and action in a cyclical process (Minkler & Baden, 2008), which takes the *d-up: Defend Yourself!* intervention one step farther by including leaders in the community in the entire process, not just spreading the information provided by trainers who may not be part of that community.

Along the same lines, social work researchers and practitioners who create prevention interventions should consider soliciting support through online local BMSM communities to better understand the impact of the similar interventions with these men, as venue-based sampling in areas such as bars and pride events tend to recruit individuals that identify as gay or bisexual, which may cause overrepresentation in a group that does not uniformly identify as a sexual minority. Prevention programs are encouraged among diverse BMSM populations, in assorted delivery settings, and in various geographic areas. As social networks play a large role in the BMSM community, prevention programs should incorporate networking into their intervention strategies similar to the *d-up: Defend Yourself!* program. Also, future research should focus on the degree to which intervention programs facilitate a sense of community among BMSM and whether these social networks help reinforce HIV/STI risk reduction. However, even if such gaps in intervention research are addressed, HIV prevention programs may not be directly transferable to other BMSM communities. The overall Black community in the U.S. is not homogenous, and similarly, neither is the BMSM community (Beatty et al., 2004).

Lastly, BMSM often have poor access to health and medical services and inconsistent relationships with health care providers (Smedley et al., 2002).

Therefore, future prevention efforts should include linking participants with health services, including HIV testing. Programs can include education and discussions about feelings of fear or mistrust of medical institutions and encourage participants to be knowledgeable about their health. In fact, a high percentage of HIV-infected men who have sex with men (MSM) do not know they are infected (CDC, 2008). The CDC's National HIV Behavioral Surveillance system (NHBS) found that of 1,562 men who tested positive for HIV, 44% were unaware of their infection (CDC, 2008). Future intervention programs should link HIV testing with other prevention efforts. Individuals who know their infection status can take additional measures to ensure that they are not spreading the virus to others.

### **Implications for Social Work Practitioners**

Although some intervention strategies have been shown to be effective with the BMSM community, social work practitioners and researchers who implement prevention strategies should build upon, broaden, and modify these strategies to reach greater numbers within the BMSM community. New interventions should be crafted by incorporating health disparities specific to BMSM population(s) that exist within a variety of contextual settings and/or geographical areas. In addition to these group-level and community-based interventions, other settings where BMSM reside could provide an open door to other levels of interventions. For example, advocating for HIV prevention education aimed at incarcerated young Black men within a prison setting could have resounding implications both within that institutional framework and in the streets beyond.

Social workers should also stress the importance of knowing one's HIV status and knowing the status of one's sexual partner(s) with their clients. Men who know their current HIV infection status can be linked to appropriate medical care and prevention services and ensure that they are not spreading the virus to others. The sooner someone finds out they are HIV positive, the sooner they can receive life-extending treatment.

Additionally, more research involving an equal partnership between both formally trained researchers and members of the community is desperately needed to understand at which level such prevention interventions are most effective and bring about lasting change. Regardless of which methods are utilized, the message remains the same: Increasing awareness about HIV risk and prevention within the BMSM community as a whole is critical, no matter how disjointed the population appears to be (CDC, 2011; Dorell et al., 2011; Gasiorowicz & Stodola, 2011).

### **Conclusion**

While statistics clearly indicate the existence of a health disparity between the races, many pieces of the BMSM/HIV prevention puzzle are obscured from view. This population, more than any other, requires a skilled approach and intricate knowledge of health determinants in order to facilitate the most effective intervention strategies. Efforts will not be met without challenges, as this population represents a community within a community that may be seen by others, as well as by itself, to be disenfranchised and therefore, incapable of identifying with a larger specific group. Beneath a seemingly impenetrable layer of racial/ethnic boundaries, there exists a plethora of sub-cultural norms, practices, beliefs, and prejudices commingling to

influence HIV infection and prevalence trends that must be better understood by social work researchers and practitioners if successful HIV prevention is to be achieved.

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