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A State of the Science on HIV Prevention Over 40 Years Among Black and Hispanic/Latinx Communities

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Abstract

We present a state of the science on HIV behavioral prevention interventions in Black and Hispanic/Latinx communities. The purpose of this article is threefold: (a) highlight the early documented underlying social and political barriers that constrained interventions to prevent new HIV infections; (b) address the structural inequities in HIV prevention and treatment; and (c)

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describe the need for increasing HIV multilevel prevention interventions that support greater HIV testing and pre-exposure prophylaxis uptake. To address HIV prevention, multilevel interventions that address individual, structural, and social level components have demonstrated more sustainable outcomes. Implications for research and clinical practice include (a) updating antiquated curricula in nursing, medicine, and public health that perpetuate racial, structural-level inequities and (b) increasing the pipeline for Black and Hispanic/Latinx persons to pursue research or clinical-focused doctorate degrees.

Keywords

Behavioral interventions; HIV; racism; review; sexual and gender minorities

Reflecting on HIV prevention among Black and Hispanic/Latinx communities over the past 4 decades, we begin with the first report by the Centers for Disease Control and Prevention (CDC, 1981) on *Pneumocystis* pneumonia in Los Angeles, California. At that time, several hypotheses on the mode of infection swirled around in the scientific community until a year later, when the CDC reported specific precautions for clinical and laboratory staff (CDC, 1982). In the 1980s and 1990s, more Whites were being infected and dying of AIDS; however, by 1996, cases in Black, Hispanic/Latinx, and other racial/ethnic populations began to increase (CDC, 1997).

In 2018, new HIV cases reported by race/ethnicity included the following: 37% Black/African American; 30% Hispanics/Latinx; 3% identifying as multiple races; 3% Asians; 1% Native Americans/Alaska Natives; and Pacific Islanders were less than 1% (CDC, 2020a). This illustrates that the HIV pandemic is not yet over, and it disproportionately affects Black and Hispanic/Latinx communities. Biomedical strategies to HIV prevention, such as pre-exposure prophylaxis (PrEP), have been very successful in preventing new infections; however, uptake in Black and Latinx communities has not been profound, demonstrating that the needle has not been moved in communities of color.

HIV prevention strategies and policies have concentrated on those from privileged demographics without recognizing that structural racism and social inequities are embedded in the economic, education, health care, and criminal justice systems. In general, they have focused on proximal-level (downstream, behavioral, and biological) interventions. Yet, there have been some important distal-level (upstream, social, and policy) interventions, such as Ryan White Care Act legislation (Health Resources Services Administration, 2020) that was initiated in 1990. Downstream examples include behavioral interventions focused on Black and Latinx communities led by nurse scientists, which are described later.

Purpose

The purpose of this state of the science review is threefold. First, we will highlight the early documented underlying social and political barriers that constrained interventions to prevent new HIV infections. Second, we will address structural inequities in HIV prevention and treatment. Third, we will describe the need for increasing HIV multilevel prevention interventions, to include increasing HIV testing and PrEP uptake. This state of the science

review will focus exclusively on Black and Latinx populations as their disproportionate HIV burden is well documented.

The structure of this article is as follows: (a) First, we will address HIV prevention interventions for men who have sex with men (MSM) and for women. (b) Second, we will provide a summary of community-based and multilevel HIV prevention interventions. (c) Third, we will summarize how health disparities continue to affect Black and Hispanic/Latinx communities. (d) We will discuss research and clinical implications on steps that need to be taken at the structural level to begin to decrease health disparities in Black and Hispanic/Latinx communities.

Social and Political Barriers to HIV Prevention Efforts: An Evolution of U.S. HIV Prevention Behavioral Interventions

Men Who Have Sex With Men

HIV prevention efforts have evolved since the early days of the epidemic. The earliest HIV prevention programs in the United States were in 1982 and were community-based grassroots interventions led by gay men in San Francisco and New York City (CDC, 2006). These early HIV prevention activities focused on increasing AIDS awareness, reducing transmission myths and fears, and providing basic information about the disease, such as symptoms, usual transmission routes, and risk reduction strategies (CDC, 2006). The first federal HIV risk-reduction guidelines for gay men were published by the Public Health Service in 1983 and were simply two sentences advising the avoidance of sexual contact with persons known or suspected to have AIDS, as well as the statement, "...Members of high-risk groups should be aware that multiple sex partners increase the probability of developing AIDS" (Shilts, 2011).

In the late 1980s, community-level interventions and promoting "safer sex" by the use of condoms became the focus of HIV behavioral interventions. For example, Kelly et al. (1992) reported on their "Popular Opinion Leader" study, which trained a small group of "trendsetter" gay men as peer educators. The study, conducted in three small southern cities in Mississippi and Louisiana, found reductions in high-risk behavior (unprotected anal intercourse) in all three cities. The community-level HIV prevention program called "Mpowerment" for young gay men was implemented in Oregon and found a decrease in unprotected anal intercourse (Kegeles et al., 1996).

In 1999, the Institute of Medicine (IOM) published a report, "No Time to Lose: Getting More from HIV Prevention" (IOM, 2001). The IOM report discussed persistent challenges regarding the United States' efforts to slow the spread of HIV infections. As an example of one of these challenges, the IOM report stated, "...underlying social and political barriers have acted as constraints to meeting the objective of preventing new HIV infections" (IOM, 2001, p. 97). As another example, the report stated, "Among the most pernicious of social barriers are poverty, racism, gender inequality, AIDS-related stigma, and society's reluctance to openly address sexuality" (IOM, 2001, p. 97). As a third example, the IOM report noted that societal barriers of racism have been particularly burdensome in urban

communities (IOM, 2001, p. 98). The report also included comments and discussion from community members about the burden and barriers attendant to implementing HIV prevention interventions and the economics of HIV prevention interventions. A recommendation was made that, “Key Department of Health and Human Services agencies that fund HIV prevention research and interventions...invest in research on how best to adapt effective programs for use in community-level interventions and research on what constitutes effective technical assistance for optimal research-to-community transfer of prevention programs; these agencies should also be responsible for the widespread dissemination of the results of this research” (IOM, 2001, p. 77). This resulted in the CDC’s Diffusion of Effective Behavioral Interventions (DEBI) Project.

To move HIV prevention research into practice, the CDC’s Prevention Research Synthesis (PRS) Project first identified behavioral interventions that met the CDC’s efficacy criteria. Next, the Replicating Effective Programs Project developed intervention packages in partnership with the original efficacy researcher. Last, DEBI disseminated interventions into preventive practice (Collins Jr. & Sapiano, 2016). A variety of lessons were learned by the DEBI teams over the 15 years of the DEBI Project. The DEBI teams comprised a diverse assembly of individuals initially involved in the intervention research, as well as experts in training and capacity building (Collins Jr. & Sapiano, 2016). Collins Jr. and Sapiano (2016) reported that, of the 93 identified interventions from the PRS project, 36 were developed into packages for dissemination.

One of the first issues the DEBI teams found was that although MSM were the population most affected by HIV, the CDC’s Compendium of Effective Interventions had twice as many behavioral interventions for heterosexuals as compared with MSM (Collins Jr. & Sapiano, 2016). In response, the CDC funded an adapted behavioral intervention, Defend Yourself, which had been primarily tested with White MSM. The adapted intervention was found to be effective in promoting condom use among African American MSM (Jones, et al., 2008). The CDC also funded an evaluation of a locally developed HIV/sexually transmitted infection (STI) prevention program, Many Men, Many Voices (3MV), which was shown to significantly reduce the sexual risk behaviors of African American men (Herbst et al., 2014). Black MSM are particularly susceptible to high rates of HIV infection due to social determinants of health, such as stigma, discrimination, and homophobia (Herbst et al., 2014). These social determinants were included as part of the intervention study (Herbst et al., 2014). Regarding behavioral intervention, the study’s findings for 3MV participants indicated a trend toward more consistent condom use during receptive anal intercourse with casual partners (Herbst et al., 2014).

Technology-enabled interventions have created new advances in HIV prevention. Advances in digital technology fostered the growth of computer-based and mobile health (mHealth) strategies for prevention strategies (Thakkaret al., 2016). The lack of computer-based interventions for Black men was an untapped area for HIV interventions. One such intervention was Real Talk, a computer-delivered sexual health program for Black MSM (Klein & Lomonaco, 2016). Real Talk is broadly based on three behavioral interventions for African American women: Sisters Informing Sisters about Topics on AIDS, Sistering, Informing, Healing, Living, and Empowering, and Women Involved in Life Learning from

Other Women. These are now available in computer-delivered versions. Real Talk is based on a sexual harm reduction framework that goes beyond just the use of condoms and acknowledges the multiple HIV prevention strategies that MSM currently use in their lives (serosorting, negotiated safety agreements, and PrEP for those who are uninfected). In a preliminary study that compared Real Talk with a standard of care control condition, participants who completed Real Talk were more likely to disagree that they had intended in the past 6 months to (a) engage in sex without a condom with a partner of unknown status, (b) engage in anal sex without a condom with a man who was on HIV medications, and (c) disengage while having intercourse with a partner of unknown status (Klein et al., 2017). Although there was no significant difference between Real Talk and control participants regarding actual condom use (Klein et al., 2017), Real Talk is a promising intervention that is based within the real lives and context of Black MSM and may represent the future of HIV prevention behavioral interventions for minority MSM.

Moreover, mHealth interventions, specifically text messaging, are widely available, accepted, inexpensive, and prompt (Cole-Lewis & Kershaw, 2010). A recent study describes the protocol for an intervention in a LifeSteps program (Biello et al., 2019). LifeSteps is an evidence-based HIV medication adherence intervention for persons living with HIV (Safren et al., 1999) that has been adapted for use with young vulnerable MSM ages 15 to 17 and 18 to 22 years. LifeSteps is being tested in specific subject recruitment venues and clinical centers in Atlanta, Boston, and Chicago and is anticipated to show effectiveness for improving medication adherence in this population.

Women

In this section on women and HIV, we describe the findings of two systematic reviews and one meta-analysis. In the first systematic review, the authors used the Preferred Reporting System Reviews and Meta-Analyses to assess the incorporation of culture into behavioral interventions to prevent HIV and STI in women of color (Crooks & Muehrer, 2019). Seventeen articles met the criteria of targeting women of color between the ages of 13 and 65 years and included approaches such as (a) using focus groups to make the intervention more culturally relevant, (b) using community-based participatory and narrative ethnographic methods to reveal cultural narratives, (c) using qualitative methods and field testing the intervention for cultural appropriateness, (d) using community input to increase cultural relevance, (e) using telenovelas-style videos, and (f) using a friendship intervention for African American women that incorporates social and cultural factors.

Overall, Crooks and Muehrer (2019) found that multiple sessions conducted in person or in groups, as well as theory-based interventions, were more effective than single interactive or media-based interventions for reducing STI/HIV risk behaviors. Additionally, studies that used both community-based and qualitative methods to integrate culture into the interventions were more successful at reducing STI/HIV risk behaviors (Crooks & Muehrer, 2019). Only one study, which used an interactive media platform as part of an in-person intervention, was found to be economical and effective (Crooks & Muehrer, 2019).

HIV behavioral interventions, in general, lack effective diffusion to build capacity for implementation in field settings for women. This was true for these studies. In addition, the

majority of the interventions were not assessed beyond 2 to 3 months; thus, the durability of the observed effects is not known.

The second study was a meta-analysis on the efficacy of HIV/STI behavioral interventions for African American female participants that included 37 studies published from 1998 to 2007 (Crepaz et al., 2009). The studies encompassed individual and group-level interventions. Participants' median age was 27 years, with a range from 12 to 63 years. More than half of the studies had at least one of the following intervention features: formative research that guided the development of interventions ($n = 23$), culture-specific materials ($n = 23$), ethnically matched deliverers ($n = 23$), gender-specific materials ($n = 20$), and female deliverers ($n = 26$). These intervention features were highly associated with reduction of HIV risk. No community-level or structural-level factors affecting HIV infection were included in this meta-analysis.

The final study was a systematic review of 18 HIV and STI behavior change interventions for female sex workers in the United States that focused on reducing sexual or drug-related risk behaviors (Abad et al., 2015). The majority of the studies included Black and Hispanic/Latinx women engaged in interventions that provided HIV/STI information ($n = 15$) and/or substance abuse prevention ($n = 13$); the topics are not mutually exclusive from the total number of studies. A few studies included content tailored to female sex workers. The findings indicated a lack of HIV/STI prevention regarding women's needs, particularly those who are female sex workers and do not use drugs but are at high risk. Also, few of the interventions included psychosocial risk factors due to violence with paying partners, police, and others on the street. One study developed a microenterprise intervention that reported reductions in the greatest number of risk behavior outcomes, which highlights positive behavioral outcomes when structural inequities are leveled. Positive outcomes were increased condom use, decreased number of sex-paying partners (sex-risk behavior), and increased income, predominantly from microenterprise. Of the 18 studies reviewed, only three met the criteria for inclusion in the CDC's Compendium of Evidenced-based HIV Prevention Interventions: the Women's Co-Op (Wechsberg et al., 2004), the Negotiation Intervention (Sterk et al., 2003), and Community Promise (Corby & Wolitski, 2009).

HIV behavioral interventions have evolved for women, but not far enough. The evidence-based information incorporated into the interventions needs to be more concise, efficient, theory-based, focused on HIV/STI prevention, and responsive to women's needs. The three studies that met the CDC's Compendium included: (a) concepts on self-empowerment strategies grounded in activities that focused on increasing personal confidence and economic resources; (b) women with high-risk behaviors benefited from emphasis on culture, gender, and special life circumstances; and (c) peer support using role-modeling stories.

Community-Based and Multilevel Interventions

Community-Based Interventions

The first community-based intervention type that we will discuss is DEBI. The DEBI teams worked with the principal investigator to identify core elements and changed them if new

findings emerged after the intervention was disseminated into community practice. For example, the DEBI team worked with Dr. Loretta Jemmott on her Sister to Sister intervention (Collins & Sapiano, 2016). Sister to Sister is a brief, one-on-one risk reduction behavioral intervention for sexually active African American women ages 18 to 45 years that is delivered during a routine medical visit. The goals of Sister to Sister are “to enhance women’s knowledge, beliefs, confidence, and skills to help reduce their risk for sexually transmitted diseases (STDs), especially HIV” (CDC, 2020b, Para. 2, bullet 3). The primary research study used a nurse to deliver the intervention (Jemmott et al., 2007); however, clinical staff in the practice setting reported the same effectiveness when the intervention was delivered by a patient educator. Dr. Jemmott concurred with the new evidence, and the intervention was updated to state “Sister to Sister is a brief (20-minute), one-on-one, skill-based HIV/sexually transmitted disease (STD) risk reduction behavioral intervention that is highly structured and is implemented in primary health care settings by nurses, health educators, or other professional clinic staff using a scripted teaching guide” (CDC, 2020b, para 1).

Dr. Loretta Jemmott was the first nurse researcher to have the CDC designate her intervention as an effective behavioral intervention. Other nurse researchers that worked with the DEBI Project were Dr. Nilda Peragallo for her Salud/Health, Educación/Education, Promoción/Promotion, y/and Autocuidado/Self-care intervention for Hispanic women (Peragallo et al., 2012) and Dr. Antonia Villarruel for her ¡Cuídate! (Take Care of Yourself) intervention for Latino adolescents (Villarruel et al., 2006).

In 2010, the CDC began to move toward high-impact prevention, which includes the use of “scalable, cost-effective interventions with demonstrated potential to reduce new infections in the right populations” (CDC, 2011, para 4). Gaps had been revealed between existing program efforts and impact; although HIV incidence was stable, HIV prevalence was still increasing (Purcell et al., 2016). The belief was that better impact would be achieved with a focus on using resources for HIV testing; people living with HIV; at-risk populations; and gay, bisexual, and other MSM (Purcell et al., 2016). In 2015, the CDC prioritized interventions to focus on those with the lowest delivery costs to reach the highest risk populations.

In addition to the CDC-designated effective behavioral interventions that have been described, researchers are working on other interventions for minority MSM. For example, HOLA en Grupos is a community-based behavioral HIV/STD prevention intervention for Spanish-speaking Hispanic/Latinx MSM that was developed locally, was enhanced, and then was evaluated with support from the CDC (Rhodes et al., 2015). Findings from the enhanced intervention included that participants reported increased consistent condom use and HIV testing and also demonstrated increased knowledge of HIV and STIs; condom use skills; self-efficacy; condom use expectancies (e.g., beliefs about the potential consequences of using condoms); and intentions (e.g., whether the participant intended to use condoms), sexual communication skills, and decreased fatalism (Rhodes et al., 2017).

Finally, technology-enabled interventions have been used for HIV prevention in African American and Latinx women. Dr. Rachel Jones’ National Institutes of Health (NIH)-funded,

multidecade study on Love, Sex and Choices (LSC) has been at the forefront of HIV and STI prevention focused on women of color. LSC is an urban soap opera accessible on a laptop or smartphone. The 12 vignettes are streamed to participants' smartphones (Jones et al., 2013) and focus on important issues impacting Black and Latinx women, such as how to negotiate safe sex, personal advocacy about condom use, and STI and HIV prevention.

Multilevel Interventions

Unlike earlier in the HIV pandemic, multilevel HIV prevention intervention research has targeted social processes and structural forces that had previously been considered outside the scope of serious or rigorous scientific endeavors. Nonetheless, with the overwhelming evidence implicating social and political determinants as driving forces behind racial/ethnic disparities in HIV infections, epidemiologists—including nurse scientists—have been at the forefront, leading groundbreaking research to disrupt the negative impact of these determinants on Black and Hispanic/Latinx communities.

One of the earliest known multilevel interventions to address the influences of social and political determinants on HIV disparities was a community-based participatory study in Harlem, New York, involving an intersectoral partnership formed among community-based organizations, local health department, and academic institutions (Galea et al., 2001). This partnership identified HIV prevention as a shared priority and sought to reduce sharing and reusing of injection drug equipment by launching the Expanded Syringe Access Program (ESAP) coalition.

The ESAP coalition cooperated in the development of materials describing the benefits of syringe exchange, using consistent messaging, which were disseminated through their individual platforms (e.g., churches, community forums, and drug counseling programs). The coalition's goal was to raise awareness of ESAP among injecting drug users (IDUs), sensitize the community to the needs of IDUs, and reduce stigma (Fuller et al., 2007; Galea, et al., 2001).

The ESAP coalition developed a survival guide for substance users (information sharing) that included evidence-based health education guidance and a reference list of community services, such as drug treatment, housing, and job placement services (Fuller et al., 2007). The ESAP also created and implemented a web-based resource for service providers (information exchange) that served as a database for organizations to update information on their available services and to quickly search and identify externally available services for IDUs based on their needs and preferences. The efforts to increase efficiency of access to clean syringes were accomplished in coordination with local pharmacists who agreed to provide the nonprescription sale of syringes. The intersectoral coalition resulted in a significant increase in providers' awareness of ESAP and a decrease in the proportion of pharmacists with unsupportive attitudes about ESAP (Fuller et al., 2007). Moreover, there was an increase in use of pharmacies for obtaining syringes among Black IDUs (22 vs. 5%, $p < .02$) in the intervention community and no significant change in pharmacy use among Black IDUs in the comparison community (Fuller et al., 2007).

The influence of ESAP and other multilevel interventions can be observed in research studies conducted over the past 10 years, ranging from an intervention that was associated with increased service engagement among MSM living with HIV through increasing community-level sensitization and acceptance in India (Chakrapani et al., 2020) to an HIV prevention intervention in San Francisco that engaged gay bar owners to collaboratively provide free self-service access to water and used media inside their bars to share information encouraging the use of water to pace alcohol intake (Charlesbois et al., 2017). The bars also coordinated an online networked platform in which patrons who used a breathalyzer could see their individual blood alcohol content (BAC) on an iPad alongside real-time comparisons to the average BAC of patrons in the bar and the average BAC of patrons in the other intervention bars (Charlesbois et al., 2017).

The latter part of this decade has seen the emergence of multilevel interventions to minimize the impact of social determinants on HIV disparities observed among groups characterized by intersecting racial and sexual minority group identities, such as Black MSM. HIV Prevention Trials Network (HPTN) 073 was a nonrandomized, open-label study that used client-centered care coordination (C4™) in three U.S. cities to facilitate PrEP initiation, utilization, and adherence among Black MSM who were followed for 52 weeks (Wheeler et al., 2019).

The C4™ model is a multilevel, multicomponent intervention that is a product of integrating comprehensive risk counseling and services (CRCS) with a self-determination theory (SDT)-based approach to counseling and client engagement. In addition to the client-focused component of C4™, a key feature is its concurrent focus on assisting health care staff with understanding the ways in which they operate as part of the social setting that affects how clients are motivated to engage in targeted health behaviors, such as adherence to HIV PrEP. This is unique from most interventions in HIV prevention for Black MSM, which focus solely on the individual as the target of attitudinal and behavioral change (Herbst et al., 2014; Jones et al., 2008). CRCS, for example, focuses on intensive behavioral counseling and case management of the clients. In contrast, the integration of SDT with CRCS encompasses a socio-ecological focus that also targets the behavior of the health care facility staff in a way that is theorized to both amplify and sustain the effect of individual-level behavioral counseling and case management, thus achieving outcomes that are not possible by focusing only on the individual.

Current HIV prevention paradigms involve bold and complex multilevel studies that build on the work of the past decade by scholars such as Fuller et al. (2007) and Wheeler et al. (2019). These new studies are addressing pressing issues to effect reductions in HIV infections and improved treatment outcomes. These issues include stigma and discrimination in health care facilities, institutional racism, and access to local health and social services. For example, the HPTN is currently developing a trial that involves a multilevel, status-neutral approach to HIV prevention among Black MSM (Nelson et al. et al., 2020) and is aligned with the federal-level plan to End the HIV/AIDS Epidemic by 2030. The study will be a community-randomized controlled trial of an integrated intervention hypothesized to reduce new HIV infections by increasing HIV testing, increasing rates of PrEP use among uninfected Black MSM, and increasing rates of viral suppression among Black MSM living

with HIV. The integrated intervention promotes health equity through implementing a program model of community-coalition building, the development of intersectoral partnerships to promote coordination and cooperation between service providers in support of PrEP use, and treatment engagement of Black MSM. Additionally, the intervention includes the use of social media influencers, a network of trained online peer supporters, home-based/mail-in HIV/STI screening and linkage to care, as well as an intersectional stigma reduction intervention designed to transform the climate of health care facilities toward autonomy-supportive and affirming of Black MSM. This 18-community study is estimated to be in the field in 2021 and represents the future of intervention research, which seriously attends to the social determinants that have driven 3 decades of HIV inequities.

Summary of Black and Hispanic/Latinx Disparities

Our review identified social and structural inequities related to the treatment and prevention of HIV, including socioeconomic barriers, health care access challenges, and stigma as contributors to HIV-related disparities among several Black and Latinx populations (Calabrese et al., 2019; Ransome et al., 2016).

Socioeconomic challenges, poor health care access, and stigma are direct barriers to HIV prevention efforts in Black and Hispanic/Latinx populations. Socioeconomic difficulties may include inability to afford health insurance or co-pays, a lack of transportation access to health care providers, and a relative absence of health care serving organizations in socioeconomically deprived areas (Garcia & Saw, 2019; Ransome et al., 2016; Turner et al., 2019). These difficulties, driven in part by discrimination in employment, education, income, and housing, create challenges in accessing and using health care (Logie et al., 2018). This is evident in ecologic-level socioeconomic measures; higher Gini coefficients, a measure of area-level income inequality, are associated with greater rates of late-stage HIV diagnosis (Ransome et al., 2016). Stigmatizing beliefs regarding people living with HIV (PLWH) are also direct deterrents to HIV testing, initiation of treatment, and adherence to treatment. The aforementioned challenges related to medical mistrust among marginalized populations are similarly relevant to the HIV treatment cascade. These factors are compounded by individual-level challenges that may be faced by PLWH, including depression, anxiety, intrapersonal support, and substance use (Chapman Lambert et al., 2020). Intrapersonal context is critical to understanding the nuances of how these structural barriers contribute to HIV-related health disparities, both related to HIV prevention as well as treatment among PLWH.

Overall, effective HIV prevention efforts in Black and Hispanic/Latinx populations have required a focus on delivering culturally competent HIV prevention services. Often, delivery of HIV prevention services has failed for Black and Hispanic/Latinx individuals because experiences of racism within health care settings, both covert and overt, result in unsatisfactory quality of care and deter future health care engagement. This is also true for sexual minorities who face similar challenges regarding a lack of culturally competent health care. For sexual minority men, who make up 70% of new HIV diagnoses in the United States, this has a substantial impact on larger efforts to combat the HIV epidemic (CDC, 2020c). At the intersection of these two groups, racism, homophobia, and unique

intersectional stigmas are structural barriers to HIV prevention and treatment among black sexual minority men (BSMM; Quinn, 2019). Approximately one third of BSMM are living with HIV; current estimates project that 50% will acquire HIV in their lifetime (CDC, 2020c). Given that racial/ethnic and sexual minorities account for the majority of HIV cases in the United States, culturally competent promotion and delivery of HIV prevention services to these communities are necessary for achieving equity in HIV-related health outcomes. This is especially salient for promotion of the uptake of PrEP because mistrust in health care is a notably salient factor for Black and Latinx populations who have experienced, and continue to experience, a litany of abuses related to the medical system. This is evidenced by the substantially lower proportions of PrEP uptake among Black populations compared with other races within several populations prioritized for PrEP initiation, including BSMM and IDUs (Kanny et al., 2019).

Implications for Research

HIV health disparities are overwhelmingly disparate when compared across race and ethnicity. The fundamental reason for health disparities is racism (Churchwell et al., 2020). Racism has created systemic inequalities in access to quality education, resources, and opportunities. This has resulted in a profound shortage in Black and Latinx representation in higher education, science, technology, engineering, math, and research. According to National Science Foundation data from 2018, only 7% of African Americans and Hispanic/Latinx held a doctoral degree (National Science Foundation, 2018). Of those, most African Americans earned their doctorates in education, social sciences, and psychology, whereas Hispanic/Latinx earned their doctorates in humanities and the arts (National Science Foundation, 2018). This statistic highlights the disparity in underrepresented minorities pursuing clinical or health-focused doctoral degrees. Greater efforts need to focus on increasing the pipeline to a research doctorate in health-related areas. Early exposure and engagement in HIV research during the undergraduate years is paramount to reaching this goal. Additionally, high visibility of underrepresented minorities with doctorates is essential to show feasibility and accessibility to earning a terminal clinical or health-focused research degree. Representation is one active step that can be made to reduce these preventable disparities. However, if racism and the systemic inequalities it perpetuates is not directly addressed through increasing representation and access, we will continue to fail in moving the needle in HIV prevention. Moreover, given the disproportionate rates of HIV infection in Black and Hispanic/Latinx populations, research that targets these populations should be led with and/or include high collaboration with Black and Latinx researchers as principal or coprincipal investigators. Multilevel and theory-based, culturally relevant behavioral prevention interventions, although impactful, may exponentially move the needle on HIV prevention through increased representation. The NIH diversity statement affirms that overall research quality, recruitment, and public trust are augmented by having a diverse research team (NIH, 2019).

Implications for Clinical Practice

Policies, structures, and systems that maintain a White-dominated culture of advancement and silence any movement toward dismantling institutional racism have been the driving forces that perpetuate inequities. Comprehensive action plans from health care accrediting

bodies are urgently needed to address racism as the root cause of disparities in HIV-related outcomes. In this context, racism occurs as a result of bias due to poor medical coverage and results in biased, poor-quality health care where Black and Latinx individuals are chronically unprioritized (Churchwell et al., 2020; Sohn, 2017; Williams, 1999). National associations of nursing, medicine, and public health need to activate a collective voice against racism and discrimination. This starts with removing vintage curricula that contain outdated, biased stereotypes on how to engage with non-White populations. Curricula with this type of content perpetuate the disparities in an already flawed health care system. In this regard, multilevel interventions conducted in the community and in the clinical setting will carry the most leverage and impact when racism is addressed at the highest levels of governance within the organizing bodies of nursing, medicine, and public health. Although multiple statements on diversity and inclusion within academia and health care have been issued, the systemic lack of preparation to address structural and institutional racism in nursing, medicine, and public health will continue to be a barrier to moving these efforts forward.

Conclusions

This article reviewed culturally relevant behavioral prevention interventions initiated by nurse researchers that have been successful with Black and Hispanic/Latinx persons, as well as selected systematic reviews and meta-analyses that have been conducted with persons from these same communities. Consistently, the most successful behavioral prevention interventions are those that use theory-based interventions for reducing STI/HIV risk behaviors. ESAP and other multilevel interventions have been effective for increasing service engagement among MSM living with HIV by increasing community-level sensitization and acceptance. Multilevel community interventions yield more robust and sustainable outcomes while addressing individual-, structural-, and social-level components (Eaton & Kalichman, 2020). Looking ahead, multilevel interventions are addressing intractable issues, such as stigma and discrimination in health care facilities, institutional racism, and the access to local health and social services. There is a severe shortage of Black and Hispanic/Latinx researchers, and greater efforts need to focus on increasing the pipeline to a research doctorate. A commitment to anti-racism begins with overhauling nursing and medical curricula that contain outdated, biased stereotypes on how to engage with Black and Hispanic/Latinx populations. Failure to do so will only perpetuate systemic racism in health care and science.

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Key Considerations

- Nurses have been key in developing HIV prevention interventions that directly or indirectly focus on high HIV-burden populations, such as Black and Latinx communities.
- HIV prevention interventions have evolved from single-level to more person-centric and holistic multilevel interventions to address the many complexities that influence prevention and treatment.
- Dismantling racism in nursing and medicine's curricula is one of the first steps in eliminating HIV disparities in Black and Latinx populations.