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The Need for Multi-level Mitigation of Medical Mistrust: Comment on Bogart et al. (2016), Medical Mistrust among Social Network Members May Contribute to Antiretroviral Treatment Nonadherence in African Americans Living with HIV

Leah M. Adams, Ph.D. and

Group Health Research Institute Seattle, WA

Jane M. Simoni, Ph.D

University of Washington Department of Psychology Seattle, WA

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In the context of heightened awareness of discrimination faced by African Americans in the United States (US) exemplified by the Black Lives Matter movement, exploring the equity of health care toward African Americans is timely. To this end, Bogart et al. (2016), in this issue, present an analysis of one potential source of disparate engagement in treatment - medical mistrust of social network members- among African Americans living with HIV.

Compared to Whites, African Americans experience considerable disparity in general health and well-being, with higher rates of impairment, illness and death (Williams, 2012). Across multiple health conditions, African Americans have an earlier onset of disease, with worse disease courses. Economic constraints contribute to poorer health for African Americans. Simons and colleagues (2016) found that low income was associated with accelerated aging in a sample of middle-aged African-American women. This relationship was explained by financial pressure (e.g., difficulty paying bills, difficulty affording daily expenses) and not by health-related behaviors (e.g., exercise, diet). However, economic hardship does not fully explain the disparate health burden of African Americans. Based on data from the National Health and Nutrition Examination Survey (NHANES IV), Geronimus and colleagues (2006) created an index of the cumulative wear and tear on the body's biological systems as a result of repeated adaptation to stressors (allostatic load) using indicators such as blood pressure, body mass index, creatinine clearance, and triglycerides. The authors found that African Americans showed more physical "weathering" than Whites at all ages, with particularly wide disparities during middle age. These differences were not explained by poverty, corroborating other findings that highlight the sustained association between race

and health, even after accounting for socioeconomic status (Williams, Priest, & Anderson, 2016).

Disparities in overall health among African Americans are mirrored in the US HIV/AIDS epidemic, with African Americans disproportionately burdened in terms of HIV/ and AIDS diagnoses and at every step in the continuum of care. Despite constituting only 12% of the population, African Americans accounted for 44% of all new HIV diagnoses in the US in 2014 (Centers for Disease Control [CDC], 2016). Once diagnosed with HIV, African Americans are less likely to be engaged in care, to receive antiretroviral treatment (ART), and to adhere to ART. Indeed, Simoni and colleagues (2012), in a study of nearly 2,000 HIV-positive individuals in HIV clinics across the US, found that African Americans had significantly lower adherence to their HIV medications than Whites and Latinos. These disparities persisted even after controlling for age, gender, income, education, clinic site, depression, and substance use. Ultimately, African Americans are less likely to be virally suppressed than members of other racial/ethnic groups and are more likely to die from HIV/AIDS-related complications (CDC, 2016; Siddiqi, Hu, Hall, & CDC, 2015; Simoni et al., 2012; The Antiretroviral Therapy Cohort Collaboration [ART-CC], 2013). Access to health care is a major impediment to parity in health for African Americans, though once connected, supporting adherence to life-saving ART among African Americans has been a challenging.

In explaining health disparities for African Americans, Bogart et al. (2016) commendably implicate multiple levels of influence, including structural, interpersonal (social network), and individual factors. Racism at each of these levels has been posited to have a negative effect on African Americans' mental and physical health (Williams & Mohammed, 2013). Institutional or systemic racism creates an environment in which many African Americans have reduced access to housing, poorer neighborhood quality, lower educational quality and attainment, fewer employment options, and harsher incarceration sentences, all of which can negatively impact health behaviors. Notably, Bogart et al. (2016) found that having a history of incarceration and being unemployed were both associated with lower adherence to ART. Cultural racism, evident in the maintenance of negative stereotypes about African Americans, as well as individuals' experiences of racial discrimination can also have deleterious effects on mental health and health behaviors (Corral & Landrine, 2012; Williams, Neighbors, & Jackson, 2003; Williams & Mohammed, 2013). One study of HIV-positive African American men who have sex with men found that 40% of the sample experienced an incident of racial discrimination within the past six months, which was associated with poorer ART adherence in longitudinal analyses (Bogart, Wagner, Galvan, & Klein, 2010).

To elucidate disparities in HIV care specifically, Bogart et al. (2016) cite the role of racial discrimination and the stigma associated with HIV/AIDS, but then focus on the high levels of medical mistrust found among African American communities. Their conceptualization of medical mistrust is based on the endorsement of HIV conspiracy theories, which have previously been identified as having two distinct categories: genocidal beliefs (e.g., HIV was created by humans) and treatment-related beliefs (e.g., HIV medication causes AIDS), both of which have been shown to relate to adherence (Bogart, Wagner, Galvan, & Banks, 2010).

Conspiracy beliefs most commonly endorsed by the sample were genocidal beliefs, focused on the government's role in manufacturing, disseminating, and controlling the spread of HIV/AIDS. Specifically, about one third of the sample of 175 HIV-positive African Americans endorsed the beliefs that HIV is a manmade virus, there is a cure for AIDS but it is being withheld from the poor, and AIDS was created by the government to control minority populations. Nearly two thirds of the sample agreed with at least one of the 10 beliefs. Considerably fewer participants agreed with treatment-related beliefs about the effect of ART, such as that ART is poisonous (11%) or causes AIDS (6%). The authors extend this line of research, demonstrating how stated beliefs about medical mistrust among the social network members of their participants are linked to the participants' own poor ART adherence.

The findings have relevance for future intervention research aimed at reducing disparities. Importantly, as Bogart and colleagues underscore, work in this area must not isolate medical mistrust among African Americans; effective interventions would need to contextualize mistrust within the long history of racism in the United States. Attempts to mitigate medical mistrust must be mindful of the root causes of it. If not, they risk blaming the victim, attempting to "correct" these beliefs without considering fully why they might appear credible in the first place.

The context for such mistrust includes multiple examples of the welfare of African Americans being subverted in the past; experiments on enslaved Africans and the Tuskegee Syphilis Experiment are highly cited examples. However, it is crucial to recognize that these events are not relegated to history. . Current events and recent experiences continue to contribute to the mistrust and lack of faith that many African Americans have toward the medical community. For example, the Institute of Medicine's 2002 report documented significant variation in rates of routine medical procedures and referrals for treatment by race, even when insurance status, income, age, and severity of conditions were comparable (Smedley, Stith, & Nelson, 2002).

With regard to HIV, medical mistrust may also persist among African Americans due to concerns about inequitable treatment as compared to Whites. Evidence suggests that when all other demographic traits are held equal, physicians may be less likely to start their HIV-positive African American patients on ART than their white patients (Bogart, Catz, Kelly, & Benotsch, 2001). Further, King and colleagues (2004) have found that African Americans receive ART later in the course of their disease with a White provider than they do when they have a provider of the same race; this remained true even after controlling for trust in the provider.

A poor patient-provider relationship also may contribute to sustained medical mistrust. African Americans are more likely to perceive that they have a poor relationship with their medical provider, which may undermine adherence to treatment recommendations (Saha et al., 2011). HIV-positive African American patients report having frequent communication difficulties with their providers—endorsing trouble understanding their provider, believing that their provider did not listen or elicit their concerns, and feeling as though they are not involved in decisions about their care (Stone, 2005). Several researchers have identified

possible mechanisms by which poor relationships with providers erode trust and contribute to worse health outcomes among HIV-positive adults. A study of 1886 HIV-positive adults (54% White, 28% Black, 14% Hispanic) reported that 40% of the sample had a discriminatory health care experience following an HIV diagnosis, which resulted in more distrust in health care providers (Thrasher, Earp, Golin, & Zimmer, 2008). The experiences also produced greater treatment-related psychological distress and reduced belief in treatment-related benefits, which was associated with poor adherence. Kalichman and colleagues (2015) found that medication concerns (e.g., health-related worries, inconveniences associated with taking medications) fully mediated the relationship between medical mistrust and ART non-adherence in a sample of African Americans living with HIV/AIDS.

Clearly, any constructive approach to addressing disparities among African Americans living with HIV cannot construe medical mistrust solely as a misguided belief in patently false assertions. Likewise, it cannot stereotype all African Americans as being mistrustful of medical care broadly, or HIV care specifically. Innovations in HIV prevention, namely treatment as prevention and pre-exposure prophylaxis (PrEP), bring to the forefront concerns about the role of medical mistrust in protecting African Americans from acquiring HIV/AIDS. Findings from implementing PrEP in international contexts demonstrate the negative effect that mistrust can have on successful uptake (Toledo, McLellan-Lemal, Henderson, & Kebaabetswe, 2015). As acceptance of PrEP increases in the U.S., researchers and healthcare practitioners would benefit from anticipating and addressing similar challenges related to medical mistrust that may arise within African American communities.

As Bogart et al. (2016) wisely caution, interventions at the structural and interpersonal levels are needed to address the origins and maintenance of medical mistrust, which lie in historical and contemporary discrimination in health care and the wider social milieu. Addressing the origins and maintenance of medical mistrust likely requires a series of multifaceted long-term interventions. Meanwhile, some more immediately achievable strategies may serve to reduce its impact. These include continued efforts to better represent African Americans and other minorities within healthcare professions. Greater reliance on shared decision-making between providers and their African American patients may help reduce the impact of mistrust on health behaviors. Finally, healthcare organizations may also find success in engaging African Americans by reaching out to important community resources and institutions (e.g., faith communities). This broader perspective will discourage narrow, individually based interventions to correct specific cognitions and facilitate addressing the root causes of why a sizeable proportion of African Americans continues to believe in the genocidal intent of their own government.

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