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The Promises and Challenges of Preexposure Prophylaxis (PrEP) in Mississippi

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Abstract

Mississippi is ranked sixth in the nation in the number of HIV/AIDS cases, and the City of Jackson, ranks 4th highest in the rate of new HIV infections in the nation. A review of the literature and personal communications with health providers reveals that public health policy, stigma, cost, and distrust of the healthcare system, are significant barriers to managing the spread of HIV. Education of elected officials and the general public as well as policy advocacy are desperately needed to curb the rising HIV epidemic in Mississippi.

Keywords: HIV; AIDS; Stigma; Health care policy

HIV in Mississippi

Mississippi's HIV infection rates are among the highest in the country, and the capital City of Jackson has the fourth highest rate of new infections in the country and the highest rate in the country among young black men who have sex with men [1]. Mississippi ranks second in the rate of new infections among 13-24 year-olds. Compared to other states, Mississippi has the highest rate of death from HIV/AIDS, and Mississippians diagnosed with HIV/AIDS have twice the risk of death than those in other states [2]. Half of all Mississippians diagnosed as HIV positive are not receiving treatment [3]. In Mississippi one in every six HIV positive persons does not know his/her status, and half of all new infections are a result of individuals who do not know their status and participate in risky behaviors [4]. Stigma, inferior academic and health education, and lack of access to care exacerbate these circumstances.

Due to the state's budget woes and lawmakers' decisions to cut funding to programs and services, people who test positive for HIV and the agencies who serve them are at a loss for resources. In 2017, the state cut the Mississippi Department of Health budget by 32% [5]. The Department is now closing most public health offices that are key to meeting the healthcare needs of rural populations. In addition, the Department threatened to implement a \$25 fee for an HIV test. Kenyon Farrow, U.S. and Global Health Policy director for the Treatment Action Group, described the impact this decision will have on

the state as a major crisis that "lingers in the background" [6]. Farrow was quoted as saying, "Certainly in a state with as much poverty as Mississippi, charging people 25 dollars, which is a lot of money to a lot of people, will be utterly devastating to doing any kind of work to curb new infections, particularly for poor Black people. There's just no doubt about it" [6].

Mississippi's decision not to expand Medicaid and subsequent cuts to Medicaid has a domino effect on access to care. Eighty-nine percent of Mississippians with HIV/AIDS receive care through Ryan White funds and would have become eligible for Medicaid had the state expanded the program [7,8]. And, while HIV medications are provided to many patients through Ryan White funding, Mississippi receives less than states with lower infection rates, because the formula used for the disbursement of Ryan White funds is based on the total number of HIV infections instead of the number of new infections [9]. Also, the formula does not take into account factors such as rural areas that lack medical providers or the cost of transportation for individuals living in rural areas to travel to medical providers in other areas [10].

These policies are the result of widespread and deeply held conservative religious and cultural beliefs and practices that include the condemnation of HIV and homosexuality. The stigma that stems from such beliefs manifests in the delivery of healthcare services and greatly contributes to the disparities among races and ethnicities [11]. Sex education in schools is limited to "abstinence only" or "abstinence plus" curricula. Further compounding the issue is the State's abject poverty. Mississippi is the poorest state in the United States with 21.5% of adults and 35% of its children living below the poverty line [12]. Poverty combined with the challenges of rural life (i.e., distance to services and lack of transportation), stigma, and oppressive practices creates serious barriers in the efforts to curb HIV infection.

The Promise of Preexposure Prophylaxis (PrEP)

In this environment with HIV infection rates so high and access to services so scarce, PrEP would seem to be the key to reversing the trend. According to the Center for Disease Control and Prevention (CDC), "Daily PrEP reduces the risk of getting HIV

from sex by more than 90% in populations who are at high risk for contracting the HIV. Among people who inject drugs, it reduces the risk by more than 70% [13]. Truvada® is the brand name of the drug manufactured by Gilead, Inc. Gilead reports that in clinical trials with men who have sex with men (MSM), there was a 92% decrease in the chance of HIV infection among participants who took the medication as opposed to a 42% decrease among those who took a placebo. Among heterosexual couples, the statistics showed a 90% reduction among Truvada® users compared to 75% decrease with placebo [14]. While there has been some critique of these findings [15], it is widely accepted that infection rates are significantly reduced with the daily use of PrEP. The CDC touts a greater than 90% reduction and advises that, "People at high risk who should be offered PrEP include about 1 in 4 sexually active gay and bisexual men, 1

in 5 people who inject drugs, and 1 in 200 sexually active heterosexual adults" [16].

Protocol

The **Figure 1** below demonstrates the accepted protocol for the prescription and management of PrEP. Once PrEP is deemed appropriate for the patient, a schedule of follow-up labs is required for continuation. Patients often fail to take the medication as prescribed and/or report for their follow-up lab tests. While care management techniques have proven effective in improving patient compliance in other areas [17], people using PrEP are not ill, and typical care management practices do not apply.

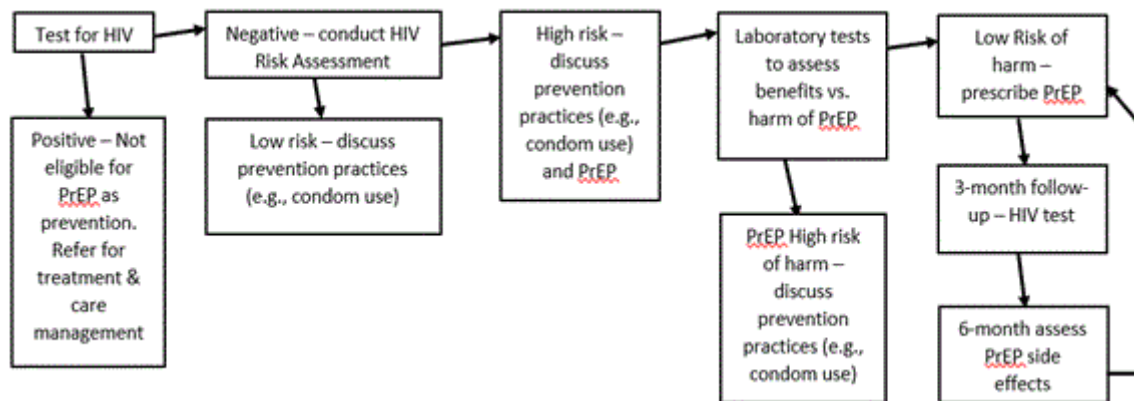


Figure 1 PrEP Management Protocol [18].

Challenges in the Use of PrEP

Given these remarkable results and the current rates of infection in Mississippi, it would be reasonable to expect that PrEP would be broadly prescribed and reductions in infection rates already evident. In fact, since its approval by the FDA in 2012, usage in Mississippi has been very low. Dr. Leandro Mena is Director of the Center for HIV/AIDS Research, Education and Policy for the Myrlie Evers-Williams Institute for the Elimination of Health Disparities, Associate Professor of Medicine with the Division of Infectious Diseases, and Medical Director of two HIV/AIDS clinics in Jackson, Mississippi. Dr. Mena reported that "For the first time in 35 years, we have the most effective prevention that we have ever had against HIV... [but] ...probably more than 90 percent of gay men who may be at risk for HIV are not on PrEP"[3].

The Mississippi State Department of Health's 2017-2012 Integrated HIV Prevention and Care Plan [19], has as one its goals to reduce the rate of new HIV infections. Objective 4 of that goal is to "Annually, by December 31, identify at least one (1) new PrEP/PrEP health provider and inform the public" (p. 12). Currently, only three providers of PrEP are identified by the PrEP Locator, the Greater than AIDS website linked to the MSDH website [20]. The director of one of Mississippi's Ryan White clinics has found that, "Many patients are not knowledgeable about the use of PrEP. The lack of knowledge is impacted by

minimum promotion of PrEP in some health care facilities" (T. Green, personal communication, February 1, 2018). Green also noted that compounding that lack of knowledge is the fact that there very few providers prescribing PrEP. Meanwhile, the State of Florida, Department of Health will make PrEP available and free at all of its health departments in 2018 [21].

Cost, lack of transportation, stigma, distrust of the healthcare system, lack of awareness that a drug that can prevent the contraction of HIV exists, and fear of side-effects preclude patients from asking about, asking for, or agreeing to PrEP use. In a study of young men who have sex with men (YMSM) conducted in Jackson, MS; Arnold, and colleagues [22] found that many participants in the study believed PrEP would be too expensive for them until they found medical assistance programs would pay for it. They concluded that the perception that PrEP is inaccessible due to its cost prevents many people from asking their physicians to prescribe it. Also, while some patients have found assistance programs (often from pharmaceutical companies) in purchasing the medication itself, some lab costs associated with follow-up have made continued use impossible. One of the few prescribing physicians in the state, Dr. Otaigbe stated that she has been offering PrEP to the local community for a little over a year. "In that time period, I have had a buzz of interest, but only about 2-3 active patients. Insurance coverage of services is a big impediment. Because we have to use preventive codes for the visits, these codes are not

covered for payment but once a year. However, patients need to be seen every 3 months. They need surveillance labs every 3 months, for which coverage is also quite sketchy. I have had patients start in the program, but drop out when they are stuck with high lab costs" (L. Otaigbe, personal communication, January 26, 2018). Indeed, insurance coverage is "sketchy" with the numbers of people without insurance growing due to cuts to Medicaid and the dismantling of the Affordable Care Act [20]. In addition to cost, the lack of transportation to and from doctors' offices is a barrier for many moderate and low-income people in rural Mississippi.

Stigma is one of the most significant barriers to HIV prevention, detection, and treatment in Mississippi. The conservative Mississippi Legislature has a long history of blocking attempts to allow comprehensive, accurate sex education in schools and to provide services to people with HIV/AIDS [10]. Propagated by laws that criminalize potentially exposing another to HIV and the Protecting Freedom of Conscience from Government Discrimination Act (also known as HB 1523) [23] and by the teachings of conservative churches, stigma and condemnation of LGBTQ+ persons keep them in the closet and away from HIV related services. With specific regard to the use of PrEP, Arnold and colleagues [20] found that participants in their study worried that parents or family members would see charges for PrEP on medical bills or insurance statements or the fellow church members would find out their use of the drug which would then expose their sexual orientation.

The limited use of PrEP can also be attributed to distrust of the healthcare system and fear of side-effects. In a study of MSM in Boston, MA and Jackson, MS, Cahill et al. [24] found that participants, particularly Black MSM, were hesitant to seek PrEP because of previous negative experiences with the health care system. Health providers often lack the cultural competence to engage patients in appropriate and respectful care. Less than half of the Jackson participants were out to their health care provider. Many participants, especially Black MSM, were also mistrusting of medical personnel, researchers, government related services (such as the Department of Health), and of PrEP in particular. According to Scharff [25], "Mistrust stems from historical events including the Tuskegee syphilis study and is reinforced by health system issues and discriminatory events that continue to this day".

Conclusions

Many of Mississippi's most vulnerable citizens are being overlooked, namely African-Americans, LGBT persons, and those living in poverty. They are deprived of the most basic health information that allows them to make educated decisions related to behaviors that increase the transmission of HIV. Systemic barriers including a lack of providers, poor transportation, cost, and societal stigma impede their abilities to access HIV testing and their access to preventive treatment. Even though the use of PrEP is shown to be highly effective with combatting the transmission and spread of HIV, few Mississippians who are in high risk groups are aware of its existence. Further, few healthcare providers inform their

patients about the availability of PrEP. Evidence suggests that PrEP provides a roadmap to address this public health issue but sweeping changes must be made to reach Mississippians who are at the most risk of being affected by HIV. This will require Mississippi lawmakers, public officials, healthcare providers, and community-based organization working together to counter the widely accepted practices and policies that promote discrimination and perpetuate the stigma that leads to the spread of HIV.

Physicians must hold each other accountable to the American Medical Association's Code of Medical Ethics which calls on physicians to protect and promote the health of the public and set aside their biases that may "contribute to health outcomes that are considerably worse in members of some populations than those of members of majority populations" [26]. Further, physicians and other healthcare providers are well positioned to educate lawmakers on the best practices, including education and availability of PrEP, to address the HIV health crisis in the state.

Mississippi lawmakers must consider legislation that promotes prevention and treatment rather than continuing to push forward legislation that perpetuates this public health issue. Clearly; reducing the availability of public health facilities, adding fees that deter access to HIV testing, prevention, and treatment is a move, which will exacerbate the issue. Investing in education and prevention strategies such as PrEP will amount to significant saving in public funds and lives. Finally, lawmakers must appoint and secure public health officials who are committed to working with healthcare providers to maximize public and private resources that the State Department of Health and medical providers need to combat the HIV crisis in Mississippi.

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