

# Changing the PrEP Narrative

Subjects: **Others**

Contributor: Jay Golden

Pre-exposure prophylaxis, when taken appropriately, is an effective and well-tolerated option to assist in prevention of HIV transmission. This medication has been tested in several patient populations and has shown efficacy across the board. Further research is needed to advance the study and implementation of PrEP in cis-gender women in order to stop the spread of HIV in this vulnerable group.

PrEP

truvada for PrEP

women

HIV-negative

## 1. Introduction

In the early 1980s, the landscape of infectious diseases changed dramatically and forever upon the identification of a mysterious disease later termed human immunodeficiency virus (HIV). The HIV virus is the pathogen that causes the disease “acquired immunodeficiency syndrome” Initially, scientists worldwide were intrigued and challenged by a new disease with features that did not appear to resemble characteristics of any known pathogens. However, there is a medication that can be taken to help reduce the risk of HIV infection and is known as pre-exposure prophylaxis (PrEP).

The current World Health Organization guidelines recommend the initiation of PrEP to any individual at high risk of contracting HIV <sup>[1]</sup>. PrEP is recommended for people at high risk of being infected with HIV from sex or injection drug use, sexually active gay and bisexual men who are HIV negative, and sexually active heterosexual men and women who are HIV negative <sup>[2]</sup>. In the same vein, the General Assembly of the United Nations signed in 2016 a “political declaration to end the AIDS epidemic by 2030,” which highlighted the development of collaborations among Member States to promote access to HIV prevention services <sup>[3]</sup>.

Obstacles that have hindered the uptake of PrEP include cost, stigma, lack of awareness, poor PrEP policies in certain countries, and poor access to health services <sup>[4]</sup>. For example, Calabrese et al., 2020, suggested PrEP therapy to be marketed in an innovative way that is inclusive to all and not focused on patients who may engage in risky behaviors sexually <sup>[5]</sup>. In the same vein, Goparaju et al. 2017, suggested additional education from providers and decreased stigma from society would benefit women who would be more willing to discuss the need for PrEP <sup>[6]</sup>. As women continue to be at increased risk of contracting HIV, all healthcare professionals must bring awareness about PrEP to women who qualify for this prevention therapy.

This review provides an overview of the current landscape of PrEP use among women, promotes women’s health by changing the narrative, and offers recommendations to increase the usage of PrEP in this understudied

population. Thus, PrEP education might empower women to take control and protect themselves from an HIV infection without sole reliance on condom usage by their sexual partner.

## 2. PrEP Approval: What Does This Mean for Women?

Safe sex practices, condom use, and limiting sexual partners, are measures to prevent sexual transmission of HIV [7][8]. In addition, there have been several studies highlighting the importance of antiretrovirals in limiting the spread of HIV. The clinical trials were promising, showing that the daily oral medication could protect against HIV-1 infection among men who have sex with men (MSM), heterosexual men and women, and intravenous drug users. This treatment would come to be known as pre-exposure prophylaxis, or PrEP [9][10].

A decrease of 42% in HIV-1 incidence with daily use of Truvada® was shown in the pre-exposure prophylaxis initiative (iPrEx) trial in men who have sex with men (MSM) [11]. This large-scale global clinical trial also demonstrated that Truvada® decreased the risk for HIV infection in transgender women who have sex with men by 44% [11][12]. Two studies, the tenofovir-based pre-exposure prophylaxis for HIV infection among African Women (VOICE Study) and the pre-exposure prophylaxis for HIV infection among African Women (FEM-PrEP) study, assessed Truvada® vs. placebo and did not find a difference in the rates of HIV infection [10][13]. However, two additional studies, antiretroviral prophylaxis for HIV prevention in heterosexual men and women (Partners PrEP) and antiretroviral pre-exposure prophylaxis for heterosexual HIV transmission in Botswana (TDF2 Study), did find that Truvada® lowered the risk of HIV infection by 75% and 62.2%, respectively [14][9].

## 3. Disparities in Healthcare Access to PrEP among Women

Although men who have sex with men [15] and transgender women [16] are disproportionately affected by HIV in the US and have been targeted for PrEP use, cis-gender women are also at risk. Nearly 20% of all new HIV diagnoses in the US each year are among women [17], yet PrEP use is suboptimal in this population [18]. This is a disheartening reality, considering the impact that HIV has on women, particularly women from minority ethnic backgrounds, such as Black/African American and Latina women [19]. There are many factors that may directly or indirectly impact PrEP access and uptake by women, and these factors should be considered when targeting women for increased PrEP usage.

As a result, healthcare insurance may be limited, which may directly affect healthcare access and subsequent PrEP access. One study has even highlighted the impact of poverty and lack of insurance on limited PrEP access [20]. This is of particular importance when targeting low-income women and women of color for improving PrEP access and uptake, as many are less likely to seek preventative services or have routine visits with a healthcare provider [21]. Without insurance, a one-month supply of PrEP is approximately \$2200, presenting a substantial barrier for uninsured patients.

Economic factors are major barriers to accessing healthcare, but so are structural concerns such as implicit bias among healthcare providers. This type of bias, defined as having a preference for or an aversion to a person or

group of people, typically due to stereotypes, can negatively impact healthcare access and contribute to health disparities [22][23][24]. For example, if a healthcare provider perceives an African American female patient as non-compliant to medications due to a stereotype of non-compliance among the African American community and chooses not to initiate a conversation about PrEP because of this stereotype, this is a missed opportunity for HIV prevention. Implicit bias may manifest as poor interpersonal skills from the healthcare provider, and as a result, patients lose trust in their healthcare provider and eventually become less engaged in the healthcare system.

In a study regarding hesitancy and receptivity to HIV prevention, it was found that properly educated, black college-aged women were highly likely to accept treatment with PrEP [25]. This is of importance, as women have indicated a lack of knowledge about PrEP as a reason for not taking PrEP [26][27][28][29], and in some cases this has been directly related to their unmet healthcare needs [26]. Women prefer to engage with regular healthcare providers they can trust, and engagement has been cited as an important factor supporting PrEP initiation among women [26]. If women are engaged in healthcare, they may be more likely to be educated about preventive services such as PrEP.

## 4. Changing the PrEP Narrative

PrEP is recommended for uninfected people who are at risk of contracting HIV. The relative invisibility of studies exploring women's perspective on the usage of PrEP prompts new questions that are addressed in this section: How can we change this perspective? How can we empower women to be more engaged in HIV prevention? Consequently, it is imperative to make women's voices heard through conducting more research, ensuring sufficient access to PrEP, and enhancing knowledge about PrEP as viable prevention strategy for women.

Due to unfavorable results from the VOICE and FEM-PrEP studies [10][13], more evidence is needed to inform healthcare providers when making decisions about PrEP initiation in women. In addition, as new medications are approved for PrEP, cis-gender women must be included in clinical trials as they are also at a disproportionate risk for HIV infection and should be targeted for HIV prevention. It is important to note that global studies have reported the usage of "informal PrEP" [30], which may be a potential option for women who are not interested in taking a daily pill. The "informal PrEP" terminology refers to "off-label" PrEP use or "nonprescribed" [30].

Informal PrEP was obtained through different methods such as online pharmacies, overseas pharmacies where generic PrEP could be purchased at a decreased cost, and medication sharing of Persons Living With HIV/AIDS (PLWHA) who take antiretroviral treatment [30][31]. Studies conducted in France, The Netherlands, and Australia have indicated informal use of PrEP [31][32][33][34][35], however, data on informal PrEP use are insufficient, and these studies explored "informal PrEP" in MSM. Thus, there is a need for additional studies on the viability of informal PrEP in women and women's perspective about this option. Furthermore, a recent study conducted in the Netherlands showed that generic PrEP facilitated the participants to change the procurement of "informal PrEP" from overseas to local pharmacies in the Netherlands as the prices decreased.

As studies have indicated that women at risk for HIV are not aware of the existence of PrEP as a viable preventive measure [26][27][28][29], particular efforts must focus on improving awareness. Increased representation in marketing campaigns will help to spread a broader message about PrEP use and may make women feel that this is an appropriate method of HIV prevention. Although studies and campaigns related to PrEP have targeted transgender women, increased awareness is similarly warranted in this population. A study that explored trans women's views on the facilitators and the obstacles to PrEP acceptability indicated that very few of the interviewed transgender women were aware of PrEP as a method of HIV prevention.

To alleviate financial concerns regarding PrEP, an option for uninsured or under-insured patients is through the manufacturer's patient assistance program, known as Gilead Advancing Access [18]. In order to qualify for this program, the patient's income must fall below 500% of the federal poverty guideline (FPG), with consideration to the cost of living and the number of individuals in the household [17]. With a valid prescription for Truvada or Descovy, pharmacies or healthcare professionals can enroll a patient into the program either online or over the phone, and the enrollee can be approved within minutes, thus expediting PrEP initiation. Women who are concerned with the cost of obtaining PrEP can be reassured that there is funding available, but healthcare professionals must also be aware that this option exists.

## References

1. World Health Organization. Pre-Exposure Prophylaxis. 2020. Available online: (accessed on 1 March 2021).
2. Centers for Disease Control and Prevention. 2020. Available online: (accessed on 27 March 2021).
3. United Nations Declaration UNPDoEAswotF-TteteB. 2016. Available online: (accessed on 27 March 2021).
4. Cáceres, C.F.; Bekker, L.-G.; Godfrey-Faussett, P. No one left behind: How are we doing in the roll-out of PrEP as part of combination HIV prevention? *J. Int. AIDS Soc.* 2016, 19 (Suppl. 6), 7.
5. Calabrese, S.K. Understanding, Contextualizing, and Addressing PrEP Stigma to Enhance PrEP Implementation. *Curr. HIV/AIDS Rep.* 2020, 17, 579–588.
6. Goparaju, L.; Praschan, N.C.; Warren-Jeanpiere, L.; Experton, L.S.; Young, M.A.; Kassaye, S. Stigma, partners, providers and costs: Potential barriers to PrEP uptake among US women. *J. AIDS Clin. Res.* 2017, 8, 730.
7. Varghese, B.; Maher, J.E.; Peterman, T.A.; Branson, B.M.; Steketee, R.W. Reducing the risk of sexual HIV transmission: Quantifying the per-act risk for HIV on the basis of choice of partner, sex act, and condom use. *Sex. Transm. Dis.* 2002, 29, 38–43.

8. Choi, K.-H.; Coates, T.J. Prevention of HIV infection. *AIDS* 1994, 8, 1371–1389.
9. Baeten, J.M.; Donnell, D.; Ndase, P.; Mugo, N.R.; Campbell, J.D.; Wangisi, J.; Tappero, J.W.; Bukusi, E.A.; Cohen, C.R.; Katabira, E. Antiretroviral prophylaxis for HIV prevention in heterosexual men and women. *N. Engl. J. Med.* 2012, 367, 399–410.
10. Van Damme, L.; Corneli, A.; Ahmed, K.; Agot, K.; Lombaard, J.; Kapiga, S.; Malahleha, M.; Owino, F.; Manongi, R.; Onyango, J. Preexposure prophylaxis for HIV infection among African women. *N. Engl. J. Med.* 2012, 367, 411–422.
11. Grant, R.M.; Lama, J.R.; Anderson, P.L.; McMahan, V.; Liu, A.Y.; Vargas, L.; Goicochea, P.; Casapía, M.; Guanira-Carranza, J.V.; Ramirez-Cardich, M.E. Preexposure chemoprophylaxis for HIV prevention in men who have sex with men. *N. Engl. J. Med.* 2010, 363, 2587–2599.
12. Amico, R.; Liu, A.; McMahan, V.; Anderson, P.; Lama, J.; Guanira, J. Adherence indicators and PrEP drug levels in the iPrEx study. Abstract 95LB. In Proceedings of the 18th Conference on Retroviruses and Opportunistic Infections, Boston, MA, USA, 27 February–3 March 2011.
13. Marrazzo, J.M.; Ramjee, G.; Richardson, B.A.; Gomez, K.; Mgodli, N.; Nair, G.; Palanee, T.; Nakabiito, C.; Van Der Straten, A.; Noguchi, L. Tenofovir-based preexposure prophylaxis for HIV infection among African women. *N. Engl. J. Med.* 2015, 372, 509–518.
14. Baeten, J.M.; Heffron, R. Pre-exposure prophylaxis to intensify the fight against HIV. *Lancet Infect. Dis.* 2014, 14, 443–445.
15. Centers for Disease Control and Prevention. HIV and Men. 2020. Available online: (accessed on 1 March 2021).
16. Centers for Disease Control and Prevention. HIV and Transgender People. 2019. Available online: (accessed on 1 March 2021).
17. Centers for Disease Control and Prevention. HIV and Women: HIV Diagnoses. 2021. Available online: (accessed on 1 March 2021).
18. Centers for Disease Control and Prevention. HIV and Women: PrEP Coverage. 2021. Available online: (accessed on 1 March 2021).
19. ASPE 2021 Poverty Guidelines. 2021. Available online: (accessed on 3 February 2021).
20. Doblecki-Lewis, S.; Liu, A.; Feaster, D.; Cohen, S.E.; Cardenas, G.; Bacon, O.; Andrew, E.; Kolber, M.A. Healthcare Access and PrEP Continuation in San Francisco and Miami After the US PrEP Demo Project. *J. Acquir. Immune Defic. Syndr.* 2017, 74, 531–538.
21. Kaiser Family Foundation. Women’s Health Insurance Coverage. Available online: (accessed on 1 March 2021).

22. Smedley, B.D.; Stith, A.Y.; Nelson, A.R. (Eds.) *Unequal Treatment: Confronting Racial and Ethnic Disparities in Health Care*; National Academies Press: Washington, DC, USA, 2003.
23. Van Ryn, M.; Fu, S.S. Paved with good intentions: Do public health and human service providers contribute to racial/ethnic disparities in health? *Am. J. Public Health* 2003, 93, 248–255.
24. White, A.A., III. *Seeing Patients: Unconscious Bias in Health Care*; Harvard University Press: Cambridge, MA, USA, 2011; p. 352.
25. Chandler, R.; Hull, S.; Ross, H.; Guillaume, D.; Paul, S.; Dera, N.; Hernandez, N. The pre-exposure prophylaxis (PrEP) consciousness of black college women and the perceived hesitancy of public health institutions to curtail HIV in black women. *BMC Public Health* 2020, 20, 1–11.
26. Hirschhorn, L.R.; Brown, R.N.; Friedman, E.E.; Greene, G.J.; Bender, A.; Christeller, C.; Bouris, A.; Johnson, A.K.; Pickett, J.; Modali, L.; et al. Black Cisgender Women's PrEP Knowledge, Attitudes, Preferences, and Experience in Chicago. *J. Acquir. Immune. Defic. Syndr.* 2020, 84, 497–507.
27. National Center for HIV/AIDS, V.H., STD, TB Prevention,. *Women and HIV Preexposure Prophylaxis (PrEP)*. Available online: (accessed on 29 March 2021).
28. Collier, K.L.; Colarossi, L.G.; Sanders, K. Raising Awareness of Pre-Exposure Prophylaxis (PrEP) among Women in New York City: Community and Provider Perspectives. *J. Health Commun.* 2017, 22, 183–189.
29. Auerbach, J.D.; Kinsky, S.; Brown, G.; Charles, V. Knowledge, attitudes, and likelihood of pre-exposure prophylaxis (PrEP) use among US women at risk of acquiring HIV. *AIDS Patient Care STDs* 2015, 29, 102–110.
30. Brisson, J. Ethical public health issues for the use of informal PrEP. *Glob. Public Health* 2018, 13, 1382–1387.
31. Van Dijk, M.; De Wit, J.B.; Kamps, R.; Guadamuz, T.E.; Martinez, J.E.; Jonas, K.J. Socio-Sexual Experiences and Access to Healthcare Among Informal PrEP Users in the Netherlands. *AIDS Behav.* 2021, 25, 1236–1246.
32. Charpentier, N.; Brancourt, M.; Sordet, F.; Laforgerie, J. Nouvelle prévention: Sommes-nous PrEP. *Remaides* 2014, 90, 39–42.
33. Zablotska, I.B.; Prestage, G.; De Wit, J.; Grulich, A.E.; Mao, L.; Holt, M. The informal use of antiretrovirals for preexposure prophylaxis of HIV infection among gay men in Australia. *JAIDS J. Acquir. Immune. Defic. Syndr.* 2013, 62, 334–338.
34. Castro, D.R.; Quatremere, G.; Sagaon-Teyssier, L.; Le Gall, J.-M.; Preau, M.; Suzan-Monti, M.; Spire, B. Informal pre-exposure prophylaxis use in France: Results from the Flash PrEP survey (2014). *Hiv. Med.* 2017, 18, 308–310.

35. Rivierez, I.; Quatremere, G.; Spire, B.; Ghosn, J.; Rojas Castro, D. Lessons learned from the experiences of informal PrEP users in France: Results from the ANRS-PrEPAGE study. *AIDS Care* 2018, 30, 48–53.
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