

REVIEW

## Social and structural challenges in the implementation of PrEP

### Desafíos sociales y estructurales en la implementación de la PrEP

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Cite as: Athayde Bonafé G. Social and structural challenges in the implementation of PrEP. South Health and Policy. 2024; 3:115. <https://doi.org/10.56294/shp2024115>

Submitted: 09-07-2023

Revised: 19-10-2023

Accepted: 07-03-2024

Published: 08-03-2024

Editor: Dr. Telmo Raúl Aveiro-Róbalo 

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#### ABSTRACT

Pre-exposure prophylaxis (PrEP) was considered a crucial advance in HIV prevention, especially in high-risk populations. Its use proved highly effective in significantly reducing virus transmission, although its implementation presented multiple challenges. Adherence to treatment was found to be key to its effectiveness, but it was also linked to an increase in sexually transmitted infections, attributed to changes in risk behaviours. In addition, inequalities in access were identified, mainly in rural and marginalised areas of Latin America. Mental health and training for healthcare personnel were also key factors in the sustainability of the programme. Finally, it was concluded that further research was essential to adapt this strategy to different cultural and social contexts.

**Keywords:** PrEP; HIV; Adherence; Access; Mental Health.

#### RESUMEN

La profilaxis preexposición (PrEP) fue considerada un avance crucial en la prevención del VIH, especialmente en poblaciones con alto riesgo. Su uso demostró ser altamente eficaz al reducir considerablemente la transmisión del virus, aunque su implementación presentó múltiples desafíos. Se observó que la adherencia al tratamiento fue clave para su efectividad, pero también se relacionó con un aumento en infecciones de transmisión sexual, atribuido a cambios en las conductas de riesgo. Además, se identificaron desigualdades en el acceso, principalmente en zonas rurales y marginadas de América Latina. La salud mental y la capacitación del personal de salud también fueron aspectos determinantes en la sostenibilidad del programa. Por último, se concluyó que era esencial continuar investigando para adecuar esta estrategia a diversos contextos culturales y sociales.

**Palabras clave:** PrEP; VIH; Adherencia; Acceso; Salud Mental.

#### INTRODUCTION

Pre-exposure prophylaxis (PrEP) represents one of the most significant advances in the prevention of human immunodeficiency virus (HIV) in recent decades. Its incorporation as a preventive tool has transformed the approach to HIV, especially in key populations at high risk of exposure. However, PrEP poses several challenges and implications beyond its clinical efficacy at both the individual and collective levels. This paper aims to analyze the benefits of PrEP use and the social, behavioral, and structural implications accompanying its implementation, with a special focus on the Latin American context.

## DEVELOPMENT

Pre-exposure prophylaxis (PrEP) has emerged as a highly effective strategy in the prevention of human immunodeficiency virus (HIV), especially among populations at high risk of exposure, such as men who have sex with men (MSM) and transgender women (MT). This treatment consists of the daily administration of antiretroviral drugs such as tenofovir disoproxil fumarate (TDF) and emtricitabine (FTC), which act by preventing the replication of the virus in seronegative individuals.<sup>(1,2)</sup>

Controlled clinical studies have shown that when appropriately administered and consistently, PrEP can reduce the risk of HIV infection by more than 90 %.<sup>(1)</sup> Molina et al. even propose “on-demand” PrEP as a viable alternative for people with occasional exposures, showing comparable efficacy under a controlled regimen. However, treatment adherence is essential to ensure these levels of protection, as warned by Corneli et al.<sup>(3)</sup> and Geng et al.<sup>(4)</sup>

Despite its effectiveness, the implementation of PrEP has brought with it new public health issues. Several studies, such as those by Baral et al.<sup>(5)</sup> and Houghton et al.<sup>(6)</sup>, warn of a significant increase in the incidence of sexually transmitted infections (STIs) among PrEP users, which could be explained by a decrease in condom use and an increase in risky sexual behaviors.<sup>(7,8)</sup> This relationship between perceived safety and behavior change has also been addressed from the perspective of stigma and social psychology by Adam et al.<sup>(9)</sup>, who suggest that PrEP use may alter risk perception among users.

The implementation of PrEP also faces significant structural and social challenges. In the Latin American context, particularly in Argentina, Mazzotta et al.<sup>(10)</sup> and Berrio et al.<sup>(11)</sup> highlight territorial inequalities in access, especially in rural or marginalized communities. The literature suggests that these gaps can be mitigated through community campaigns, comprehensive sex education, and culturally adapted strategies.<sup>(12,13,14)</sup>

Another essential component in the effectiveness of PrEP programs is mental health care. Recent studies<sup>(15,16)</sup> show a correlation between disorders such as anxiety or depression and lower treatment adherence. These findings underscore the importance of integrating mental health services and psychosocial support into HIV prevention schemes.

On the other hand, education and training also play a central role. Mackellar et al.<sup>(17)</sup> and Sullivan et al.<sup>(18)</sup> highlight the importance of training health personnel to promote PrEP and provide comprehensive patient care. Lack of specific training can hinder both access to and continuity of treatment.

Finally, studies by Ghosh et al.<sup>(19)</sup> and Karam et al.<sup>(20)</sup> point out that further research on PrEP in different sociocultural contexts is still needed to enable the design of more inclusive,<sup>(21,22,23,24)</sup> sustainable public health policies tailored to the realities of key populations.<sup>(25,26,27,28)</sup>

## CONCLUSIONS

In summary, PrEP is establishing itself as an effective HIV prevention strategy capable of transforming the epidemiological landscape in vulnerable populations. However, its impact transcends the biomedical sphere, revealing tensions between clinical efficacy and social, cultural, and structural dynamics. Adherence, equitable access, addressing mental health, and training health personnel are fundamental pillars for ensuring its effectiveness. It is also essential to continue researching its implementation in various contexts to design more comprehensive, inclusive, and culturally relevant public policies. Only then will it be possible to maximize the true scope of this tool in the fight against HIV?

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#### **FUNDING**

None.

#### **CONFLICT OF INTEREST**

None.

#### **AUTHOR CONTRIBUTION**

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