



Treatment as Prevention (TasP)

What is treatment as prevention (TasP)?

Treatment as prevention (TasP) is an HIV prevention intervention where treating an HIV-positive person with antiretroviral medication is used to reduce the risk of transmission of the virus to a negative partner.^{1,2,3,1} The primary purpose of antiretroviral treatment (ART) is to treat HIV disease in order to improve health and extend lifespan.¹ TasP is a secondary benefit of ART.

What is the biological argument behind TasP?

ART reduces viral load, and a lower concentration of HIV-1 virus in an individual's blood and genital secretions is linked with decreased likelihood of sexual transmission of the virus.⁴ Hence, ART medications that concentrate in the genital tract reduce HIV-1 viral load in those areas, which may result in decreased likelihood of transmitting the virus to a sexual partner.⁴

Why is TasP significant and what is the potential of this strategy?

In August 2011, the HIV Prevention Trials Network published results from its HPTN 052 study, which showed that early initiation of ART^{II} reduced sexual transmission of HIV among

^IPre-exposure prophylaxis (PrEP) and post-exposure prophylaxis (PEP) may be considered TasP. For the purpose of brevity, these interventions will not be covered in this brief. For more information on PrEP and PEP, please see the MSMGF's Technical Bulletins regarding these interventions.

^{II}The World Health Organization (WHO) recommends that people living with HIV/AIDS (PLHIV) begin ART when CD4 count falls to ≤ 350 cells/ μ L. Depending on each country's guidelines on ART treatment, "early treatment" may be defined by multiple cutoff points. For the purposes of this paper and adhering to WHO guidelines, "early treatment" is defined as the initiation of ART when CD4 count is >350 cells/ μ L.

serodiscordant heterosexual couples by up to 96%.⁵ Given that previous studies of serodiscordant heterosexual couples found similar results, the HPTN 052 study is widely viewed as "definitive proof" that ART prevents heterosexual transmission of HIV.⁶

The global HIV/AIDS community's excitement over TasP is underscored by new mathematical modeling studies that indicate early testing and treatment of all individuals offers the potential to virtually eliminate HIV transmission on a population level.^{7,8} However, these mathematical models are projections based on an ideal scenario where all individuals are universally tested and treated. The modeling studies do not take into account real-world conditions where current access to and uptake of ART are far from optimal across most low- and middle-income countries (LMICs).

What is known about TasP for men who have sex with men (MSM)?

The San Francisco Men's Health Study found the introduction of ART in 1996 was potentially linked to decreased incidence of new HIV infections within gay serodiscordant couples^{III} (ie, fewer HIV-negative men seemed to be contracting HIV from their HIV-positive partners). This was true even though not all of the men in the study consistently adhered to their treatment regimen.⁹ However, outside this study, there is very limited evidence that TasP provides the same prevention benefit to MSM (coupled or uncoupled) as it did to the monogamous serodiscordant heterosexual couples enrolled in HPTN 052.¹⁰ Thus more studies and data are necessary for us to better understand the potential of TasP to improve the health of gay men and other MSM worldwide.

^{III}The term "serodiscordant couple" refers to a relationship where one member is living with HIV/AIDS and the other is not

What are the risks and challenges behind scaling up TasP globally?

High cost of ART: Although antiretroviral medications are cheaper than ever, the overall cost of HIV/AIDS care and treatment^{IV} is still high. Given the global economic downturn and flat-line funding from donors, the feasibility of providing early treatment at scale and/or implementing a universal test and treat policy is low.

Increased drug resistance, adverse events, and toxicity: Initiating treatment earlier may potentially lead to more drug resistance and/or adverse events such as side effects from medication, including nausea, gastrointestinal distress, fatigue and rash.¹¹ These negative side effects are also likely to drive up service delivery costs within resource-constrained health care systems, especially in LMICs.

Dependence on knowledge of HIV status: Less than half of PLHIV globally know their HIV status.^{12,13} Knowledge of one's status is necessary to initiating treatment, which underscores a key challenge to realizing the potential of TasP. Moreover, studies show that most HIV transmissions occur during the acute HIV phase, a period soon after infection when many individuals may still receive negative results on standard HIV tests. This challenge highlights another serious limitation of TasP and its potential to impact the epidemic.¹¹

Dependence on access to and utilization of HIV services: In order to be implemented effectively, ART requires access to and optimal utilization of the following cascade of HIV services (for all of which access is limited and utilization sub-optimal, especially in LMICs)²:

- PLHIV tested and diagnosed
- PLHIV linked and provided access to care and treatment
- PLHIV retained in care and treatment
- PLHIV adhere to ART over the course of his/her lifetime

What challenges and risks does TasP pose to MSM?

The scale-up of TasP activities can be a good thing for gay

^{IV}Care and treatment refers to not only provision of ART, but may include monitoring of ART treatment outcomes (eg, viral load and CD4 counts), treatment of opportunistic infections such as pneumonia, as well as social and adherence support

men and other MSM, if in fact it results in increased access to and improved uptake of ART for MSM. However, rampant homophobia and HIV stigma in many settings make it unsafe for MSM to get tested and disclose their HIV status. Such barriers impede access to the necessary cascade of HIV services, which in turn can result in poor testing rates, lower linkages to care and ART, and low adherence to ART.¹⁴

An overly narrow promotion of TasP as a cure-all for the global HIV/AIDS epidemic may potentially threaten prevention efforts for MSM throughout the world in a number of ways:

- Donors, funders, and policymakers may prioritize TasP above and beyond other equally important evidence-based interventions such as:
 - Promotion and distribution of condoms and water-based lubricants¹⁵
 - HIV/AIDS testing and counseling¹⁵
 - Community-based outreach, education, and social marketing¹⁵
 - Individual-level and community-level behavioral intervention/mobilization¹⁵
 - Prevention and treatment of sexually transmitted infections¹⁵
 - Harm reduction for substance use and prevention of blood-borne infections (eg, needle exchange)¹⁵
 - Efforts to reduce stigma and discrimination based on sexual orientation and HIV status¹⁸
- The burden of the epidemic unfairly becomes the sole responsibility of PLHIV, potentially leading to further stigmatization and isolation.

To successfully halt HIV transmission, a multi-sectoral response that includes civil society will be required. In addition, HIV-negative partners need to assume shared responsibility for making informed sexual choices and implementing other effective prevention strategies to address the epidemic.

What do recent data on access to treatment tell us?

From June through August 2010, the Global Forum on MSM and HIV (MSMGF) conducted a global study of gay men, other MSM, and their providers regarding access to and knowledge of the existing spectrum of HIV prevention strategies.¹⁶ Data from this study indicated that less than 30% (29.9%) of MSM

believed that ART was easily accessible—particularly those who were residing outside of North America and Europe. More than half (53.9%) of MSM worldwide reported that ART was either hard to access or not accessible at all. Low MSM access to ART poses a serious challenge to implementation and scale-up of TasP, especially if increased funding for TasP results in the replacement and/or displacement of other evidence-based HIV prevention strategies for MSM. MSM must be integrally involved at all levels of TasP development and implementation if the intervention is to reach MSM and improve their health.

Conclusion

In order to ensure that global TasP implementation and scale-up incorporate the needs of MSM, the following priorities must be established and met:

- Respect and promotion of human rights: A human rights framework must support TasP implementation, whereby significant multi-stakeholder efforts must be made to eliminate homophobia and HIV stigma from HIV prevention and care services.¹⁵ This includes creation of an enabling environment of laws, regulations, and policies that support implementation and scale-up of quality HIV/AIDS services for gay men and other MSM.¹⁴
- Capacity-building and mobilization of local MSM advocates and community-based organizations (CBOs): Advocates and CBOs must play an integral role in the planning and implementation of HIV prevention, treatment,

and care efforts. The active participation of gay men and other MSM is crucial if scale-up is to be effective. To date, there has been very little research on engagement in care strategies for MSM.¹⁷ Thus, the identification of promising models to promote MSM engagement in care, as well as the mobilization of MSM communities will ensure increased access to, and optimal uptake of, the necessary cascade of HIV services by gay men and other MSM.

- Advocacy for TasP as part of a combination prevention package for MSM: Integrating TasP with other core elements of a comprehensive package of HIV-related services ensures a balanced prevention approach that addresses the needs of a wide range of gay men and other MSM.¹⁴
- Improving linkages to care and treatment adherence for MSM: In addition to an enabling environment that promotes human rights, there needs to be greater support for MSM throughout the cascade of HIV services. This includes, but is not limited to, interventions to support entry into testing, counseling, and care; provision of social support to improve adherence; and increased patient tracing to prevent loss to follow-up in care.
- Training and sensitization of health care workers: Making the cascade of HIV services welcoming for MSM entails training health care workers on cultural competency and creating a clinical and care setting that is free of homophobia and HIV stigma. Such strategies are key to improving access to and uptake of HIV services by gay men and other MSM.

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