Transgender persons are disproportionately affected by HIV infection. Because data for this population are not uniformly collected, information is lacking on how many transgender persons in the United States are infected with HIV. However, data from some jurisdictions suggest that HIV diagnosis rates among transgender persons are substantially greater than the overall HIV diagnosis rate in the United States.

Worldwide, the odds of HIV infection among transgender women are estimated to be 49 times as great as the odds for the general population.\(^1\) A review of available data in the United States estimates that 28% of transgender women are HIV-infected and up to 73% of transgender women testing positive for HIV are unaware of their HIV status. This analysis also showed that HIV disproportionately affected black or African American transgender women; 56% of black or African American transgender women had positive HIV test results compared to 17% of white and 16% of Hispanic/Latina transgender women.\(^2\)

Transgender men may also be at risk for HIV infection, although additional research is needed to assess HIV infection risk and the impact of PrEP in transgender men.\(^3,4\) A detailed sexual history is important to identify transgender men at risk of HIV and in need of PrEP.\(^5\)

The PrEP clinical practice guidelines recommend PrEP for anyone who may be at risk of sexual acquisition of HIV, including transgender persons who meet criteria for PrEP (e.g., vaginal or rectal condomless sex with men of unknown or positive HIV status).\(^5\) Transgender persons should be evaluated for behaviors that may put them at risk of HIV acquisition; persons at high risk should be offered PrEP.

### Adherence to PrEP:

While concerns have been raised that PrEP efficacy appears to be lower in transgender women, data suggest that discrepancies in efficacy may be due, in part, to low medication adherence.\(^6,7\) In a sub-analysis of transgender women who participated in the iPrEx study, no efficacy was seen comparing transgender women provided Truvada for PrEP compared to those provide placebo (no PrEP medication). However, none of the transgender women who became HIV infected during follow-up had detectable drug levels at first evidence of HIV infection, whereas no infections were observed in transgender women whose blood concentrations of Truvada\(^\text{®}\) suggested they used four or more tablets per week. Compared to gay, bisexual, and other men who have sex with men (MSM), the transgender women in the iPrEx study showed less consistent PrEP use over time, suggesting that strategies to improve adherence will be especially important to optimize the benefits of PrEP for transgender women.\(^7\)

### PrEP and Gender-Affirming Hormones:

Low adherence to PrEP may be due in part to concerns of drug interactions with gender-affirming hormones. Recent data shows that while emtricitabine and tenofovir disoproxil fumarate, the active drugs in PrEP, do not affect estradiol blood levels, the high levels of estradiol used in feminizing hormone therapy cause a decrease in levels of tenofovir in the blood and rectum.\(^8,9\) While
hormonal contraceptives are not known to interact with Truvada®, hormones are used in higher doses for feminizing therapy. More data are needed to understand the clinical significance of this finding but it confirms the need for high medication adherence in transgender women taking PrEP to maximize its effectiveness for HIV prevention.

**PrEP Acceptability and Accessibility among Transgender Women:**

Transgender persons have not been included in PrEP studies in large number. A CDC-supported demonstration project is underway in 12 public health jurisdictions across the United States to identify promising strategies to expand PrEP use among MSM of color and transgender women, and the California HIV/AIDS Research Program has funded the first transgender-specific PrEP demonstration project in three sites throughout California.

Approaches that integrate PrEP delivery with transgender-specific health and psychosocial services may help to expand uptake. Furthermore, efforts to address social determinants such as concomitant substance use, mental health, stigma and discrimination, violence, limited health care access, and healthcare provider sensitivity may be needed to address factors that place transgender women at substantial risk for HIV and are barriers to PrEP use for this population.

**References:**


