

HIV pre-exposure prophylaxis works but needs regular testing

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HIV pre-exposure prophylaxis (PrEP) is a prevention strategy which includes the regular or event-driven use of antiretroviral medication to prevent HIV infection in adults. Several clinical trials demonstrated that

PrEP effectively reduced the risk of HIV transmission and in Europe, the European Centre for Disease Prevention and Control (ECDC) recommended integration of PrEP into national HIV prevention programs for those most at risk of HIV infection, particularly men who have sex with men (MSM), back in 2015. Since then, PrEP has been formally implemented in several European countries and is available informally in others.

According to existing guidelines for example in Germany, PrEP users should get tested for HIV, sexually transmitted infections (STI) and renal function periodically. Based on a cross-sectional online survey conducted in 2018 and 2019, the Koppe et al. investigated testing frequencies and factors associated with intermittent testing among self-funded PrEP users in Germany. Before late 2019, when Germany made PrEP available through the statutory health insurance, PrEP users had to fund testing out of pocket.

Self-funded PrEP associated with less frequent testing in Germany

Among the 4,848 survey participants, between one in five and one in four did not follow the recommended testing frequencies for HIV (26.3%), STI (20.9%) and renal function (29.2%) stipulated in the German guidelines for PrEP use.

Those respondents who frequently tested for STI, had higher proportions of self-reported STI diagnoses during PrEP use, overall and across strata of partner numbers and condom use. The authors found that the strongest factors associated with less frequent testing were that respondents did not test before they started taking PrEP, that they obtained PrEP from informal sources and that they used it on-demand or occasionally. Koppe et al. conclude that such infrequent testing during

PrEP use "can lead to missed diagnoses." Barriers to testing should be addressed to enable proper medical supervision."

Event-driven PrEP and transmission of resistant strains

Koole et al. advocate for frequent HIV testing among PrEP-users, "regardless of background prevalence of resistance in newly diagnosed HIV, reported adherence, and especially in case of symptoms related to acute HIV-infection." This call is based on their description of a primary HIV infection with a drug resistant strain in a MSM who reported excellent adherence to his event-driven PrEP regimen for over two years.

The authors suggest that the most likely mode of transmission was sex with a person on antiretroviral treatment who was not virally suppressed at the time of HIV transmission. In this context, the authors suggest further promotion of adherence to [antiretroviral therapy](#) among HIV-positive individuals as important pillar in preventing onward transmission.

High prevalence of STI in mostly asymptomatic MSM PrEP users

The importance of comprehensive screening for STI among PrEP users is also highlighted by Streeck et al. who screened 1,043 MSM between 2018 and 2019 as part of a cohort study across seven major German cities. Half of them (53.0%) were using PrEP at the time. At screening, 370 participants (35.5%) had an STI, however, only 14.6% (n = 54) had symptoms. The most common pathogen was *Mycoplasma genitalium* in 198 (19.0%) participants, followed by *Chlamydia trachomatis* (n = 133; 12.8%), *Neisseria gonorrhoeae* (n = 105; 10.1%) and *Treponema*

pallidum (n = 37; 3.5%).

Given that other studies found similar predominance of asymptomatic infections among MSM, the authors argue that "the high prevalence of STI in a mostly asymptomatic cohort of MSM suggests the importance of regular STI screening. Testing only symptomatic individuals would have missed 85% of infections in this population."

More information: Koole et al, HIV, STI and renal function testing frequency and STI history among current users of self-funded HIV pre-exposure prophylaxis, a cross-sectional study, Germany, 2018 and 2019, *Eurosurveillance* (2022). [DOI: 10.2807/1560-7917.ES.2022.27.14.2100503](https://doi.org/10.2807/1560-7917.ES.2022.27.14.2100503)

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