

# Very low transmission of HIV within couples receiving both ART and PrEP

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Providing HIV medication to both members of a couple may substantially reduce the risk of transmission within that couple, according to a study in *PLOS Medicine*.

Jared Baeten of the University of Washington and colleagues conducted a prospective implementation study to test the feasibility and acceptability of a program to initially offer antiretroviral medications to both members of couples in which one member was HIV-positive and the other was HIV-negative (HIV-serodiscordant couples). The researchers enrolled 1013 heterosexual HIV-serodiscordant couples in Kenya and Uganda who were at high risk of transmission based on behavioral and biological characteristics.

Antiretroviral therapy (ART), which by suppressing HIV replication both controls progression of HIV and reduces infectiousness, was provided to the HIV-infected partner. To reduce susceptibility to infection prior to viral suppression in the HIV-infected partner, the HIV-uninfected partners were offered [antiretroviral drugs](#) for pre-exposure prophylaxis (PrEP) prior to and during the first 6 months of ART. The researchers followed the couples for an average of about one year per couple. The primary goals of the study were to evaluate implementation of this delivery model, however, part-way through the anticipated delivery period, it became clear that HIV transmission rates were considerably lower than would have been anticipated. In addition to high acceptability and adherence, the dual treatment regimen showed rates of HIV transmission 96% lower than estimated rates of transmission in a

simulated cohort of serodiscordant couples.

The researchers note that conclusions are limited because this study does not include a concurrent comparison population for HIV transmission, as it would not have been ethical to enroll a control population and not offer access to ART and PrEP. Nevertheless, the findings suggest this may be a promising strategy for in the fight to reverse the HIV epidemic. The authors say: "The results of this project demonstrate that an integrated strategy of ART and PrEP can be delivered feasibly to a high-risk African population and result in almost complete protection from HIV-1 transmission."

**More information:** Baeten JM, Heffron R, Kidoguchi L, Mugo NR, Katabira E, Bukusi EA, et al. (2016) Integrated Delivery of Antiretroviral Treatment and Pre-exposure Prophylaxis to HIV-1-Serodiscordant Couples: A Prospective Implementation Study in Kenya and Uganda. *PLoS Med* 13(8): e1002099. [DOI: 10.1371/journal.pmed.1002099](https://doi.org/10.1371/journal.pmed.1002099)

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