

IAS 2017: Study of Gay Men Shows No Transmissions from Undetectable HIV+ Partners

A study of 343 gay couples, where one partner had HIV and the other did not, has not found a single case of HIV transmission in 16,889 acts of condomless anal sex, according to a presentation at the 9th International AIDS Society Conference on HIV Science (IAS 2017) this week in Paris.

[Produced in collaboration with aidsmap.com]

The *Opposites Attract* study looked at whether HIV is transmitted between gay male couples of different HIV status when the HIV-positive partner is on antiretroviral treatment that fully suppresses the virus. The study recruited and followed-up gay couples at clinics in Australia, Bangkok, and Rio de Janeiro. The HIV-positive partners in *Opposites Attract* had an undetectable viral load 98% of the time.

The data from *Opposites Attract* adds to the evidence from the *PARTNER* study that HIV-positive people on effective treatment that fully suppresses their HIV cannot transmit the virus through sex. Taken together, the studies have not found a single case of HIV transmission in nearly 40,000 acts of condomless anal sex between gay men. This adds further strength to the "U=U" (Undetectable equals Untransmittable) tagline of the *Prevention Access Campaign*, whose consensus statement has been signed by the International AIDS Society, organizers of the conference, and many other organizations.

The studies also found that if the positive partner is on successful treatment, even having another sexually transmitted infection (STI) does not increase the risk of HIV being transmitted. In *Opposites Attract*, participants had an STI during 6% of anal sex acts and in *PARTNER*, 17.5% of participants had an STI at some point in the study.

Sexual position also made no difference, even though when viral load is *not* suppressed, transmission is 10 to 20 times more likely if the HIV-positive partner is the insertive one; in *Opposites Attract*, the HIV-positive partner was the "top" over a third of the time.

During the *Opposites Attract* study, 3 men became infected with HIV, but genetic analysis showed that these infections came from a partner outside the main relationship who was not virally suppressed.

Only 0.9% of the total proportion of condomless anal sex acts happened when the HIV-positive partner had a detectable viral load, and only 1.7% during their first 6 months on antiretroviral therapy. There were no transmissions from men in these groups either.

Presenter Andrew Grulich commented, "In our Thai site, 40% of the men who entered the study were not on antiretroviral therapy when they entered the study, but immediately started it and were rapidly virally suppressed. They were really good at using condoms and other strategies to avoid transmission while they were still

detectable, so the number of condomless anal sex acts with a detectable partner was very small."

In PARTNER, despite not many more episodes of condomless sex, there were 10 such "unlinked" infections among gay men. The difference may be due to 24% of the HIV-negative partners in Opposites Attract taking pre-exposure prophylaxis (PrEP). Researcher Benjamin Bavinton told aidsmap.com there was evidence that PrEP-takers in Opposites Attract were indeed mostly taking it to protect themselves from HIV infection from partners outside the main relationship.

At a IAS 2017 press conference on viral load and infectiousness, Anthony Fauci, director of the US National Institute for Allergies and Infectious Diseases, said, "Scientists never like to use the word 'never' of a possible risk. But I think in this case we can say that the risk of transmission from an HIV-positive person who takes treatment and has an undetectable viral load may be so low as to be unmeasurable, and that's equivalent to saying they are uninfected. It's an unusual situation when the overwhelming evidence base in science allows us to be confident that what we are saying is *fact*."

Luiz Loures, Deputy Executive Director of UNAIDS, said that in terms of the public impact of treatment as prevention, the agency was seeing more and more cities where HIV incidence was falling as they reached a tipping point in terms of the number of people who are on therapy and non-infectious, for example San Francisco, São Paulo, and Nairobi.

Bruce Richman, a Harvard-trained lawyer who is the prime mover behind the "U=U" campaign, said, "In 2003 when I was diagnosed, I was terrified of infecting someone I loved and was terrified of taking a pill that reminded me every day I was infectious. But in 2012 when I finally started therapy, my doctor told me that if I suppressed my viral load, I would become non-infectious. My initial elation at being told this turned to outrage, because every website I found was saying I was still a risk. The breakthrough science was not breaking through to communities that needed to know it. Doctors would tell people on a 1-to-1 basis while withholding the info from those they deemed irresponsible."

"So we collaborated with doctors to endorse the U=U consensus statement. This is demolishing HIV stigma and encouraging people to start treatment and bring an end to the epidemic," Richman continued. "We need people like UNAIDS, as they did today, to confirm it's true."

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Source

B Bavinton et al. HIV treatment prevents HIV transmission in male serodiscordant couples in Australia, Thailand and Brazil. 9th International AIDS Society Conference on HIV Science. Paris, July 23-26, 2017

