Study: ARV Treatment Reduces HIV Transmission 96 Percent

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A study funded by the National Institutes of Health (NIH) has confirmed that treating HIV-positive people with antiretroviral (ARV) drugs reduces the risk of transmitting the virus to HIV-negative sexual partners by 96 percent—at least among heterosexual couples—according to an announcement by the NIH.

The study, called HPTN 052, enrolled nearly 1,800 HIV-serodiscordant couples, in which one parter is HIV positive and the other is HIV negative. All but one of the study couples were heterosexual male and female couples. Based on the study design, all of the HIV-positive participants had to have a CD4 count between 350 and 550 upon entering the study. After the study began, the HIV-positive participants were randomized to either start ARV therapy right away (the early treatment group) or to wait until their CD4s dropped below 250 or they developed an AIDS-related illness (the delayed treatment group). All of the people in the study, which took place in multiple sites around the globe, received HIV care, access to condoms and thorough prevention counseling.

HPTN 052 was originally scheduled to continue until 2015. An early look at the data by the data safety monitoring board (DSMB), however, found that those in the early treatment group were much less likely than those in the delayed treatment group to transmit HIV to their partners and, thus, it would be unnecessary to continue to the trial.

In the data that the DSMB reviewed, there were 39 new HIV-infections among the HIV-negative participants—28 of which could be traced directly between the HIV-positive study participants and their HIV-negative partner. Of the 28 new infections, 27 occurred in the delayed treatment group, compared with just one in the early treatment group—a 96 percent reduction in new infections.

It should be noted, however, that the results can't necessarily be extrapolated to couples where both partners are male. Nevertheless, the results do add to a recent string of prevention success stories, and advocates are expressing enthusiasm.

"These results allow us to imagine a world in which men and women seek HIV testing with the knowledge and confidence that they will receive a range of highly effective options for staying healthy and protecting themselves and their partners—whatever the test result," said Mitchell Warren, executive director of the AIDS Vaccine Advocacy Coalition.

Investigators from the recently completed iPrEx study—which found that ARV treatment in HIV-negative people (PrEP) could protect them from infection—also lauded the results.

“iPrEx congratulates the participants and researchers involved in HPTN 052,” they said. “This important study proves that providing early antiretroviral treatment significantly improves health among people living with HIV and dramatically reduces new HIV infections in their partners.”

Despite the significant advances in HIV prevention options of late—ranging from PrEP to vaginal gels to treatment of HIV-positive people as prevention—scientists and advocates are concerned that more funding needs to become available in order to realize the potential of these options. This will be particularly true in resource-poor countries where the majority of people with HIV still don’t have access to ARVs for their own health, and where those who do often have to wait to access treatment until their CD4s drop below 200.

“Never before have so many effective HIV prevention tools and strategies been available,” the iPrEx researchers stated. “The challenge before funders and policy makers now is to increase investments to make new HIV treatment and prevention tools available to everyone who needs them.”

Warren agreed. “We need to start critical discussions and come to quick decisions about where and how to deploy treatment as prevention in the short-term,” he said. “Government and international normative agencies now have a critical mass of data to publish guidelines for appropriate implementation of treatment as prevention in concert with other prevention methods.”

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