Americans Adhered Well to PrEP in Global iPrEx Study

September 22, 2014 By Benjamin Ryan

A new analysis of rates of adherence to Truvada (tenofovir/emtricitabine) in the iPrEx study, which proved the drug's efficacy as pre-exposure prophylaxis (PrEP) among men who have sex with men (MSM) and transgender women in 2010, found that while average adherence to the drug was quite poor, American participants in the global study tended to adhere well. Publishing their findings in the Journal of Acquired Immune Deficiency Syndromes, researchers evaluated both the rates of adherence and the various correlates of drug detection among a random sample of 470 participants in the active arm of the placebo-controlled study at week eight, as well as among a longitudinal cohort of 303 participants through 72 weeks of follow-up.

The study sites were spread around the globe, with sites in Peru, Ecuador, Brazil, the United States, Thailand and South Africa. Sixty-eight percent of the 1,251 participants in the active arm of iPrEx were in the Andes region, in Peru or Ecuador, and 44 percent of those in the week eight cohort and 56 percent of those in the longitudinal cohort were from those two countries, so the behavior of these participants had outsized pull when compared with those from the other countries. The United States was represented by just 9 percent of the active arm participants, 17 percent of those in the week eight cohort and 11 percent of those in the longitudinal cohort.

On average, 55 percent of the participants tested at week eight had at least some detectable drug in their systems. In the longitudinal analysis, 31 percent never had any detectable drug in their systems, 30 percent always did and 39 percent sometimes did. Adherence rates declined over time.

Older participants tended to adhere better, with those over 30 years of age 5.13 times more likely than those 20 or younger to either sometimes or always have detectable drug, rather than never having detectable drug. Greater detection of drug was also linked to greater sexual risk-taking, including having receptive anal intercourse without a condom, as well as responding "I don't know" to whether PrEP worked or not. (Neither the participants nor the researchers yet knew that PrEP could prevent HIV transmission.)

The collection of participants in the Andes area tended to have poorer adherence when compared with those from other sites around the world. At week eight, those in Lima and Iquitos, Peru, had respective drug detection rates of 35 percent and 55 percent, and those in Guayaquil, Ecuador, had a detection rate of 60 percent. Those in Boston and San Francisco, meanwhile, had respective

detection rates of 72 percent and 90 percent.

In the longitudinal analysis, those in Lima had a 37 percent rate of inconsistent drug detection and a 17 percent rate of always having drug detection; those in Iquitos had a 63 percent rate of inconsistent drug detection and a 19 percent rate of always having drug detection; those in Guayaquil had a 64 percent rate of inconsistent detection and a 21 percent rate of always have drug detection. In San Francisco, on the other hand, such figures were basically flipped: The participants there had a 27 percent rate of inconsistent detection and 67 percent rate of always having drug detection.

These findings are in line with preliminary results from an ongoing demonstration project of PrEP's use (meaning it examines Truvada's use in real-world settings) among MSM and trans women in San Francisco, Washington, DC, and Miami. A month into the study, the participants adhered four or more days a week at rates of 92 percent, 90 percent and 73 percent, by respective city. A total of 66 percent, 45 percent and 19 percent adhered to the drug daily. The new analysis of iPrEx, however, did not provide information on how often the participants were taking Truvada, just that they had detectable drug in their systems.

This analysis suggests that, had iPrEx been conducted solely among Americans, not only would the average adherence rates likely have been higher, but the overall efficacy would have been as well, since efficacy is tied to adherence. Such a finding challenges the thrust of a recent advertising campaign launched by the AIDS Healthcare Foundation that seeks to highlight the poor adherence and overall efficacy rates in the various major PrEP trials in order to discourage the public and the medical and public health communities from embracing Truvada as PrEP. As increasing numbers of HIV-negative MSM in the United States seek out the antiretrovirals, AHF president Michael Weinstein has sought to characterize PrEP as a "public health disaster in the making."

To read a conference report of the study, click here.

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http://beta.docker.poz.com/article/PrEP-adherence-Americans-26197-6543