Kaiser Daily Global Health Policy Report

ART Associated With Reduced Risk Of HIV Transmission To Sexual Partners, Study Shows

Thursday, May 27, 2010

Research published in the Lancet online Thursday "provides the strongest evidence to date" that antiretroviral therapy (ART) might also be used to prevent transmission of HIV, Agence France-Presse reports. The observational study found that treating HIV-positive patients with ART reduced the risk of HIV transmission to their sexual partners by 92 percent (5/26).

For the study, "more than 3,400 heterosexual HIV-discordant couples in which one member had HIV and the other did not were enrolled from seven African countries (Botswana, Kenya, Rwanda, South Africa, Tanzania, Uganda and Zambia)," according to a University of Washington press release. "At the beginning of the study, the HIV-infected members had high CD4 counts and were not on antiretroviral treatment. Couples were provided counseling and prevention services, followed for up to two years, with regular CD4 measurements and ART referrals made when they became eligible for ART" (5/26).

"During the study, 349 HIV-infected partners were started on HIV drugs. Of the 103 people who became infected during the study, only one caught the virus after the infected partner started taking the drugs," Reuters reports.

Deborah Donnell of the Vaccine and Infectious Disease Institute at the Fred Hutchinson Cancer Research Center in Seattle, who was lead author of the study, "said the drugs cut the concentration of HIV in the blood to very low levels, which may make people less infectious. In people who took the drugs, the virus was suppressed to very low levels in nearly 70 percent of cases. … A randomized trial is now underway to see if the effect is lasting," the news service writes.

"While awaiting those results, our study indicates that initiation of antiretroviral therapy may have a significant public health benefit as well as clinical advantages for the individuals being treated," Donnell said in a statement (Steenhuysen, 5/26).

The study supports other research "that suggested the spread of HIV in hard-hit African nations could be cut by 95 percent in a decade if all those infected started taking medicines immediately," Bloomberg reports. "That so-called test-and-treat theory has been disputed in other mathematical models that say those projections are based on flawed assumptions" (Bennett, 5/27).

"Although the 92% reduction in HIV-1 transmission that we report is highly encouraging, on an individual basis, counselling is needed to reinforce understanding that potential for HIV-1 transmission to partners remains after ART initiation," write the authors of the study, which was funded by the Bill & Melinda Gates Foundation and the National Institutes of Health. "This cohort received frequent counselling during 3-monthly follow-up, and we noted no evidence of behavioural risk disinhibition after ART initiation."

The authors conclude: "As countries strategise for optimum use of resources to expand ART provision beyond individuals with low CD4 cell counts, targeting of treatment to those with high plasma HIV-1 concentrations could be a cost-effective strategy to achieve maximum population-level reductions in HIV-1 transmission, as a step toward universal ART provision to all patients with HIV-1" (Donnell et al., 5/27).

"We should not wait for the results of further models, observational studies, or the ongoing couple-based prevention trial before engaging in population-based trials of test-and-treat," the authors of a related Lancet Comment write. "Prevention of new infections would be the main goal but individual-level benefits can also be expected; to be evaluated against initially increased costs to the health-care system. Indeed, today's results argue powerfully for a new generation of research on HIV prevention at the population level with the best possible scientific methodology, including cluster-randomised trials" (Dabis/Newell/Hirschel, 5/27).

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