

HIV rate in SF could be cut sharply with expanded treatment, study predicts

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If HIV-infected adults in San Francisco began taking antiretroviral treatments as soon as they were diagnosed, the rate of new HIV infections among men who have sex with men would be cut by almost 60 percent over five years, according to a new study by scientists at the University of California, San Francisco.

In San Francisco, men who have sex with men comprise more than three quarters of the population of people living with [HIV](#) and more than three quarters of new HIV infections occur in this group. The study looked specifically at the impact of treatment upon rates of new HIV infections in this population.

The finding is published in the April 15, 2011 issue of *Clinical Infections Diseases*

The decision of when to begin treatment with [antiretroviral drugs](#) is a subject of some debate, with the experts evenly split on whether to begin antiretroviral therapy immediately upon HIV diagnosis or waiting until a patient's CD4 cell count drops below 500 cells per microliter.

Early last year, the UCSF Division of HIV/AIDS at San Francisco General became the first clinical practice in the country to recommend treatment upon diagnosis to all of its HIV-infected patients. The San Francisco Department of Public Health followed suit shortly thereafter. The two programs combined treat about a third of the HIV-infected patient population in San Francisco.

"San Francisco has been successful in promoting HIV testing for individuals at risk and in getting infected persons into care and effective treatment" said study lead investigator, Edwin D. Charlebois, MPH, PhD, associate professor of medicine at the UCSF Center for AIDS Prevention Studies. "In this study, we sought to estimate what the outcomes of different strategies including immediate and universal treatment would be on the rate of new infections – the community level HIV prevention effect."

"Recent evidence suggests that, in addition to benefiting the individual, HIV treatment can reduce the likelihood of HIV transmission to other persons. We found that, just by changing the strategy of when to start treatment in individuals already in care, our model predicts significant reductions in new HIV infections among men who have sex with men in San Francisco."

In addition, the study found that adding annual HIV testing for men who have sex with men in the city to universal treatment could bring the reduction in new infections down by 75 percent, the researchers report in their paper. "Our findings show that we can obtain even greater reductions in new HIV infections if we do a better job of encouraging people to get tested, continue to improve our linkages to care and offer treatment to all HIV patients," said study co-author, Diane V. Havlir, MD, chief of the UCSF Division of HIV/AIDS at San Francisco General Hospital.

Researchers modeled three expanded antiretroviral treatment scenarios in San Francisco: one being the current standard of care where treatment is offered to HIV-infected patients with CD4 cell counts below 500, the second offering treatment to all HIV patients receiving care and the third strategy combining intensified annual HIV testing for men who have sex with men with treatment for all HIV-infected patients.

The model predicts that the implementation of the third strategy—a full "test and treat" approach—in San Francisco would cut in half the percentage of men who have sex with men living with HIV in the city from its current level of about one in four to one in eight in twenty years.

"Our clinicians recommended initiating antiretroviral therapy to all of our HIV positive patients based on our assessment that delaying treatment allows the virus to do damage to major organs systems and would lead to poorer outcomes for patients. It is too early to tell if this shift in treatment strategy last year by our clinic and the Department of Public Health has had any impact in preventing HIV infections," said Havlir.

"Notwithstanding the community benefit from reduced rates of new infections—which we view as an added gain—we strongly believe that the primary reason HIV patients should start antiretroviral therapy upon diagnosis is so that they will experience better health and will have a longer life span than if they had waited," she added.

Provided by University of California, San Francisco

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