PrEP Scale-Up Alone Could Take a Bite Out of the HIV Rate

A new analysis predicts how various measures to prevent HIV transmission may affect men who have sex with men.

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While the effort to reduce the HIV transmission rate among men who have sex with men (MSM) will likely rely on a combination of measures, scale-up of Truvada (tenofovir disoproxil fumarate/emtricitabine) as pre-exposure prophylaxis (PrEP) on its own could prevent a substantial proportion of new cases.

Publishing their findings in the Journal of Acquired Immune Deficiency Syndromes, researchers developed a mathematical model based on a real-world population of 10,000 nonmonogamous urban MSM compiled from data derived from Centers for Disease Control and Prevention surveys of MSM in 21 U.S. cities. The researchers configured the model such that 19 percent of the men were HIV positive and 44 percent of them were not aware of their HIV status. They also made it so that 36 percent of the HIV-negative men had not been tested for the virus within a year.

The study authors estimated that, in a one-year period, 103.2 out of 10,000 MSM would contract the virus under this model. If no other preventive measures were scaled up and if 1 percent of the HIV-negative individuals took PrEP, an estimated 1.6 percent of these infections would be prevented. If a quarter of the men were to take PrEP, an estimated 30.7 percent of the new infections would be averted.

The model also predicted that if each were implemented in isolation, the scale-up of condom use would prevent 48.8 percent of new infections; increased seroadaptive behaviors (such as the practice of taking different sexual positions to modify risk) would prevent 37.7 percent of new infections; and the scale-up of HIV treatment (which prevents infection) among people living with the virus would prevent an estimated 27.1 percent of new infections.

Combining the aforementioned three preventive measures in the absence of PrEP would prevent an estimated 72.2 percent of new infections. In this case, if used by a quarter of the HIV-negative men, PrEP would prevent an additional 5 percent of the infections expected with no change in prevention efforts.

The researchers concluded that to reduce future HIV transmission among MSM, “HIV prevention

efforts should focus on significantly scaling up access to PrEP in addition to HIV testing, access to antiretroviral therapy and promoting condom use."

To read a press release about the study, click here.

To read the study abstract, click here.

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