Upping Ongoing PrEP Use May Be as Vital as Getting Men to Start

A modeling study projected the impact of various strategies for improving PrEP use among young Black gay and bi men in Illinois.

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Increasing the average time that men who have sex with men (MSM) spend on pre-exposure prophylaxis (PrEP) may have as great an impact on HIV transmission rates as getting more of those at risk to take it in the first place. That is a key finding of a mathematical modeling study that projected the effects of different strategies for targeting PrEP use among young Black men who have sex with men in Illinois

Publishing their findings in the journal AIDS, Aditya S. Khanna, PhD, of the Chicago Center for HIV Elimination at the University of Chicago, and colleagues used data on young Black MSM in Illinois to compare various PrEP initiation and retention interventions on HIV transmission rates over a 10-year period.

In 2016, Illinois produced a so-called Getting to Zero (GTZ) plan through which the state aimed to increase PrEP use and the initiation of antiretroviral (ARV) treatment among people with HIV by 20% each. Doing so, initial modeling suggested, would help the state achieve a “functional zero” by 2030, or fewer than 200 new infections annually.

The data included in the new study’s model came from various sources, including the uConnect and the Young Men’s Affiliation Project studies, as well as the 2014 cycle of the National HIV Behavioral Surveillance survey.

The model considered HIV transmissions among 18- to 34-year-old Black MSM in a theoretical population of 10,000 people over a 10-year period. At baseline, 13% of Black MSM 26 years old or younger and 15% of those older than 26 had started PrEP.

According to the model’s projections, increasing the rate of PrEP initiation to 20% among all young Black MSM “modestly decreased HIV incidence and is unlikely to have a major impact on GTZ goals.”

Increasing the rate of initiation of PrEP had an effect on the rate of new HIV cases that was similar to increasing the length of time people took PrEP, also known as improving retention. Specifically,

increasing time spent on PrEP from a baseline of 12 months to 36 months yielded an average decline in the HIV transmission rate after 10 years similar to that of increasing the rate of PrEP initiation among young Black MSM approximately threefold, to 40%. Additionally, the model indicated that increasing both PrEP initiation and retention would yield outcomes comparable to increasing either one exclusively; in other words, there was no apparent synergistic effect between these two factors.

Prioritizing the initiation of PrEP among HIV-negative young Black MSM in relationships with an HIV-positive partner would be “highly effective in decreasing HIV incidence,” the study authors found.

When it came to prioritizing PrEP initiation based on young Black men’s position in so-called sexual networks, the model projected that it was more effective to target PrEP among those with a higher number of sex partners rather than targeting individuals whose position in a sexual network made them influential in terms of their potential to spread HIV to others (or to keep from doing so with the benefit of PrEP).

“Simulation results,” the study authors concluded, “indicate that expanded PrEP interventions alone may not accomplish Getting to Zero goals within a decade, and integrated scale-up of PrEP, [ARV treatment] and other interventions might be necessary.”

To read the study abstract, click here.

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