POZ

States With Greater PrEP Use See Fewer New HIV Diagnoses

Rising use of pre-exposure prophylaxis is associated with declining HIV incidence, underscoring the urgency of increasing PrEP coverage for those who need it most.

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U.S. states that had the highest levels of pre-exposure prophylaxis (PrEP) coverage also saw the largest declines in new HIV diagnoses from 2012 to 2021, even after controlling for differences in viral suppression, according study results presented at the Conference on Retroviruses and Opportunistic Infections (CROI 2024).

Oral and injectable PrEP are highly effective, reducing HIV acquisition by 99% or more if used consistently. PrEP use has risen steadily since the approval of Truvada (tenofovir disoproxil fumarate/emtricitabine) for HIV prevention in 2012, with around 364,000 users in 2022. Yet PrEP still hasn't reached its full potential. While uptake has been high among urban white gay and bisexual men, PrEP coverage is lagging for Black men who have sex with men and for women of all racial and ethnic groups.

Patrick Sullivan, MD, a professor at Emory University and principal scientist for AIDSVu, reported findings from an analysis of the population-level impact of PrEP on trends in new HIV diagnoses, which depends on overall PrEP coverage, the extent to which it is used by people most at risk for HIV, consistent adherence and the level of viral suppression among people living with HIV in the same community.

Sullivan's team previously did a similar analysis of data from 2012 through 2016, but that included only the first few years after Truvada became available for PrEP and preceded the approval of Descovy (tenofovir alafenamide/emtricitabine) and injectable Apretude (long-acting cabotegravir) for HIV prevention. He has also previously reported on racial disparities in PrEP use.

Using publicly available data on PrEP prescriptions, Sullivan's team calculated coverage per 100 people with a PrEP indication in all 50 states and Washington, DC, from 2012 through 2021. The states were divided into five quintiles according to their level of PrEP coverage. For each quintile, the researchers calculated the estimated annual percent change in HIV diagnosis rates. Estimates were adjusted for differences in viral suppression, which also reduces HIV acquisition because HIV-positive people with an undetectable viral load do not transmit the virus.

Average PrEP coverage during 2012–2021 ranged from 5.8% in the 10 states with the lowest coverage to 15.7% in the 10 jurisdictions in the highest quintile. Looking at specific states, PrEP coverage ranged from 3.8% in West Virginia to 22.2% in New York.

There was a clear relationship between higher PrEP coverage and lower HIV diagnosis rates. Over the same period, the HIV diagnosis rate increased by 1.7% in states in the lowest quintile of PrEP coverage while declining by 8.0% in jurisdictions with the highest level of coverage, after controlling for viral suppression. Changes in diagnoses rates ranged from a 10.5% increase in West Virginia to a 11.9% decrease in Washington, DC.

“A dose-response relationship exists between PrEP coverage and magnitude of declines in HIV diagnoses,” the researchers concluded. “Combined approaches to HIV prevention— including timely diagnosis and availability of effective treatments—play an additive role in realizing reductions in new HIV transmissions.”

Sullivan suggested that HIV testing could be used as an entry point to link people who test positive to treatment and those who test negative to PrEP. In addition to testing and PrEP referral programs, he noted that Medicaid expansion and PrEP Drug Assistance Programs have been associated with greater equity in PrEP use, “which is important to maximize the prevention benefits of PrEP.”

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