

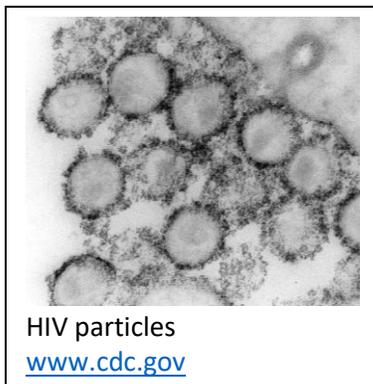
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Pre-exposure Prophylaxis to Reduce HIV Risk

At the end of 2018, Centers for Disease Control and Prevention (CDC) estimated that there were 1.2 million people over the age of 13 years living with HIV in the United States. An estimated 14,500 people are living with HIV in Washington; and each year 450-500 are newly diagnosed. Scientific advances that have made HIV a treatable and manageable condition; however in the absence of a cure or vaccine for HIV the costs to the healthcare system are significant. Recent focus has shifted towards new approaches to HIV prevention. Pre-exposure prophylaxis is a promising prevention tool that is currently significantly underutilized.



Background

Pre-exposure prophylaxis, or PrEP, is the use of antiretroviral medications to prevent HIV acquisition in individuals at elevated risk of getting HIV. Currently, two medications are approved by the FDA for use as PrEP, emtricitabine in combination with tenofovir disoproxil fumarate (F/TDF, available as generic formulation or brand name Truvada®) and emtricitabine in combination with tenofovir alafenamide (F/TAF, brand name Descovy®). Either combination is taken daily as a single tablet. In Washington, PrEP must be prescribed by a licensed health care provider.

Over the last 10 years, a number of studies have demonstrated the effectiveness of PrEP in several populations, including men who have sex with men, people who inject drugs, heterosexual men and women, transgender women, and serodiscordant couples (couples in which one individual is HIV+ and the other is not).



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PrEP Effectiveness Estimates

Transmission Route	Effectiveness Estimate	Interpretation
Sexual	~99%	Very high levels of adherence to PrEP ensures maximum effectiveness.
Injection drug use	74% - 84%	These estimates are based on tenofovir alone and not necessarily when taken daily. The effectiveness may be greater for the two-drug oral therapy and if used daily.

<https://www.cdc.gov/hiv/clinicians/prevention/prep.html>

Daily adherence to the medication is important in reducing the risk of acquiring HIV. The initial iPrEx trial evaluating PrEP efficacy in men who have sex with men found 92% risk reduction compared to placebo in those who were taking the drug regularly based on blood levels, but only a 42% risk reduction in the overall study population (1). Subsequent real-world studies found challenges with adherence as well but did find increased adherence to PrEP among those at higher risk of acquiring HIV (2,3). Adherence increased with regular counseling and support for individuals on PrEP.

Populations Eligible for PrEP

In 2015, CDC estimated that over 1 million adults were at a significant risk of acquiring HIV and could potentially benefit from starting PrEP. United States Preventative Services Task Force (USPSTF) recommends that insurers cover PrEP at 100% and the following individuals should be considered for receiving PrEP (4):

- Men who have sex with men or transgender persons who have sex with men, are sexually active, and have one of the following risks:
 - a. In a sexual relationship with a partner living with HIV who is not virally suppressed, or their viral suppression status is unknown
 - b. Inconsistent use of condoms during either receptive or insertive anal sex
 - c. A sexually transmitted infection with syphilis, gonorrhea or chlamydia within the last 6 months
 - d. History of exchanging sex for money or drugs
- Heterosexual sexually active women and men who have one of the following risks
 - a. In a sexual relationship with a partner living with HIV who is not virally suppressed, or their viral suppression status is unknown
 - b. Inconsistent use of condoms during sex with a partner whose HIV status is unknown and who is at high risk (i.e. a person who injects drugs or a man or transgender person who has sex with men and women)
 - c. A sexually transmitted infection with syphilis or gonorrhea within the last 6 months
 - d. A history of exchanging sex for money or drugs
- People who inject drugs who have one of the following risks:
 - a. Shared use of drug injection equipment
 - b. Risk of sexual acquisition of HIV as above
 - c. A history of exchanging sex for money or drugs

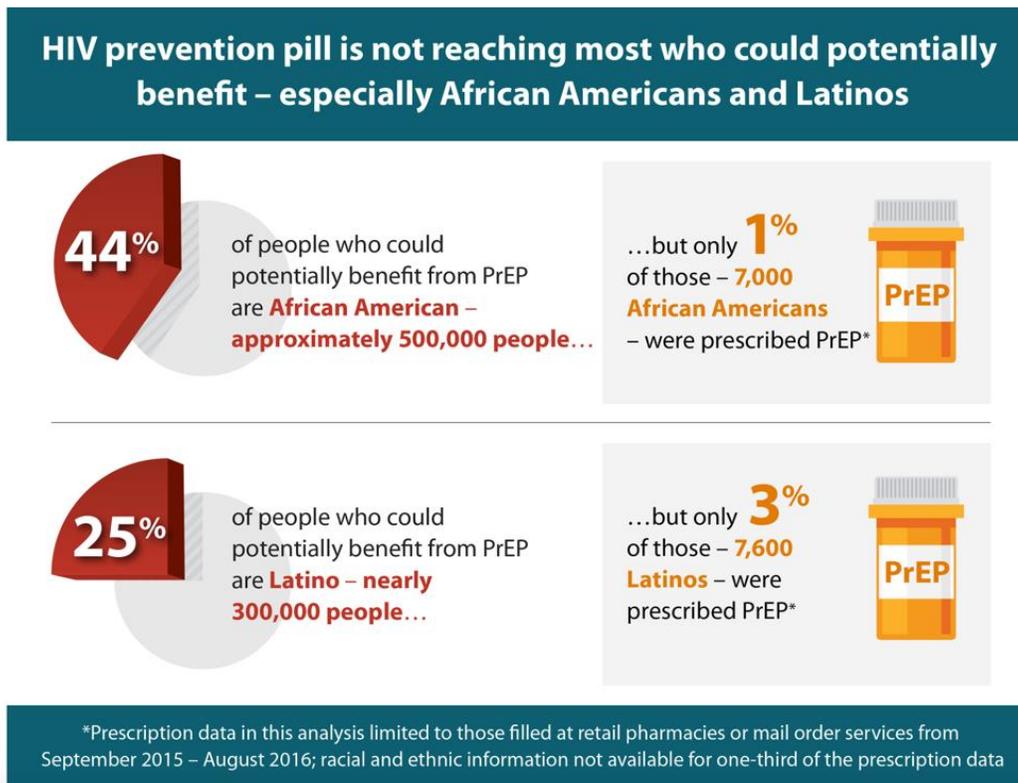
PrEP Initiation and Follow-up

Prior to starting PrEP, all individuals should be screened for HIV. It is very important to ensure that individuals test negative for HIV prior to starting PrEP, as putting HIV+ individuals on PrEP increases the risk of developing medication-resistant HIV. PrEP alone is not an effective treatment for individuals with diagnosed HIV. Kidney function should also be checked prior to starting PrEP.

After a person is started on PrEP, it is important that they continued to be followed by a medical provider to have routine HIV and other sexually transmitted infection (STI) screenings. Current recommendations involve HIV testing, STI screening, and measurement of kidney function every 3-6 months while on PrEP (5). In addition, it is important to continue to provide counseling on medication adherence and support for behavioral risk reduction strategies, such as condom use for those who are sexually active and access to clean needles and supplies for those who inject drugs.

Access to PrEP and PrEP Delivery Models

Although many individuals could potentially benefit from starting PrEP, it is currently significantly underutilized in this country. Underutilization has been attributed to high costs and lack of access due to lack health care provider knowledge about PrEP and limited prescribing activity. A 2018 CDC analysis demonstrated that only a small proportion of those who could benefit from PrEP have been prescribed it (6). In addition, PrEP is prescribed proportionately less frequently for African American or Latino individuals.



<https://www.cdc.gov/nchhstp/newsroom/2018/croi-2018.html#Graphics>

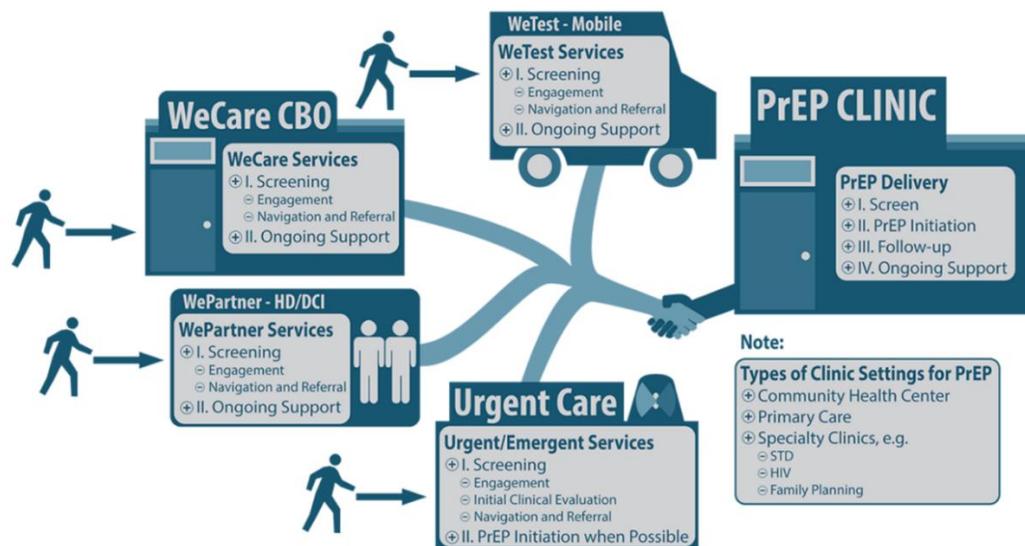
Difficulties accessing PrEP have likely only increased during the COVID-19 pandemic. A recent study on men using PrEP found 1 in 5 of the cohort discontinued PrEP because of COVID-19 and another 1 in 4 of the cohort experienced difficulty accessing PrEP or STI testing (7).

State and local public health jurisdictions, community-based organizations (CBOs) and healthcare organizations can all partner together with the goal of improving access to and uptake of PrEP,. This can be achieved through state-led or community-led efforts. An emphasis should be placed on engaging communities least represented in PrEP uptake including African American and Hispanic gay and bisexual men and transgender individuals.

The Department of Health administers a prescription drug assistance program, called [PrEP DAP](#), that pays the enrollee’s portion of out-of-pocket costs for generic or brand Truvada® and most PrEP-related medical and laboratory services. PrEP DAP maintains a [network](#) of health care providers and laboratories to provide PrEP services and uses Ramsell Corps.’ pharmacy network to provide pharmacy services. HIV PrEP Navigation Services, sometimes referred to as “PrEP Navigators,” are a resource for health care providers and clinics that do not have capacity or resources to assist patients with identifying and reducing barriers to PrEP and PrEP-related care. These services have demonstrated success in increasing PrEP uptake and adherence but have been largely underused. Promotional information about PrEP for providers is available: <https://www.prepsaveslives.org/>; for PrEP users or individuals interested in PrEP see: <http://hivchillpill.org/>.

 PrEP Navigation Identify and engage HIV-negative individuals who would benefit most from PrEP, assist in navigating the health and human services systems to access PrEP services and maintain their HIV-negative status.	 PrEP Navigators Provides one-on-one “hands on” guidance and support to individuals to access and be fully engage in PrEP navigation and create self-sufficiency.
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The example model below for public health agencies to provide PrEP includes mobile testing, screening and support offered by both a community organization and the health department, and urgent care screening, all of which lead to direct PrEP delivery at a PrEP clinic (8). Other PrEP models, such as pharmacy-driven delivery of PrEP, have also demonstrated success at increasing PrEP uptake (including [One-Step PrEP](#) at a pharmacy in Seattle) (9). PrEP is a integral component of current HIV prevention efforts and is a key element in the US Department of Health & Human Services’ plan to [end the HIV epidemic in America](#). Efforts to scale-up PrEP access that address communities’ unique needs, particularly among populations disproportionately impacted by HIV, will be integral in preventing HIV transmission and in ending the HIV epidemic.



<https://www.cdc.gov/hiv/effective-interventions/prevent/prep/index.html#PrEP-and-Health-Departments>

Resources

1. Grant, Robert M., et al. "Preexposure chemoprophylaxis for HIV prevention in men who have sex with men." *New England Journal of Medicine* 363.27 (2010): 2587-2599.
2. Grant, Robert M., et al. "An observational study of preexposure prophylaxis uptake, sexual practices, and HIV incidence among men and transgender women who have sex with men." *The Lancet. Infectious diseases* 14.9 (2014): 820.
3. Koss, Catherine A., et al. "Differences in cumulative exposure and adherence to tenofovir in the VOICE, iPrEx OLE, and PrEP demo studies as determined via hair concentrations." *AIDS research and human retroviruses* 33.8 (2017): 778-783.
4. Owens, Douglas K., et al. "Preexposure prophylaxis for the prevention of HIV infection: US Preventive Services Task Force recommendation statement." *JAMA* 321.22 (2019): 2203-2213.
5. Centers for Disease Control and Prevention. "Preexposure prophylaxis for the prevention of HIV in the United States – a 2017 update. A clinical practice guideline." 2017.
<https://www.cdc.gov/hiv/pdf/risk/prep/cdc-hiv-prep-guidelines-2017.pdf>
6. Centers for Disease Control and Prevention. "HIV prevention pill not reaching most Americans who could benefit—especially people of color. Press release." *National center for HIV/AIDS, viral Hepatitis, STD, and TB prevention. Atlanta, GA: Centers for Disease Control and Prevention* (2018).
7. Pampati, Sanjana, et al. "Changes in sexual behavior, PrEP adherence, and access to sexual health services due to the COVID-19 pandemic among a cohort of PrEP-using MSM in the South." *medRxiv* (2020).
8. Centers for Disease Control and Prevention. "CDC PrEP care system information." 2020.
<https://www.cdc.gov/hiv/effective-interventions/prevent/prep/index.html#PrEP-and-Health-Departments>
9. Farmer, Eric K., et al. "The pharmacist's expanding role in HIV pre-exposure prophylaxis." *AIDS patient care and STDs* 33.5 (2019): 207-213.