

WISCONSIN AIDS/HIV PROGRAM NOTES

November 2017

Studies Confirm People Living with HIV who have Undetectable Viral Loads Do Not Transmit HIV to Partners Sexually

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In July 2016, [Prevention Access Campaign](#), a health equity initiative to end the dual epidemics of HIV and HIV-related stigma, released a consensus statement based on several groundbreaking studies indicating that people living with HIV who achieve and maintain an undetectable viral load do not transmit HIV to partners sexually. The full text of the consensus statement reads:

People living with HIV on Anti-Retroviral Therapy (ART) with an undetectable viral load in their blood have a negligible risk of sexual transmission of HIV. Depending on the drugs employed, it may take as long as six months for the viral load to become undetectable. Continued and reliable HIV suppression requires selection of appropriate agents and excellent adherence to treatment. HIV viral suppression should be monitored to assure both personal health and public health benefits.¹

The campaign goes on to define “negligible” as “so small or unimportant as to be not worth considering; insignificant.”²

Since the consensus statement was released, over 360 HIV/AIDS service organizations in 49 countries as well as many leading infectious disease physicians have officially endorsed the statement.³ Additionally, in September 2017, the Centers for Disease Control and Prevention (CDC) released a “Dear Colleague” letter stating, “People who take ART daily as prescribed and achieve and maintain an undetectable viral load have effectively no risk of sexually transmitting the virus to an HIV-negative partner.”⁴ Numerous scientists, doctors, state health departments, federal agencies, and community members affected by HIV have now publicly recognized this significant scientific achievement and advancement in the quality of life for people living with HIV.

Background: Viral Suppression and Undetectable Viral Load

HIV treatment involves taking medicines that greatly lower the amount of the virus in a person’s body, keeping a person’s immune system healthier. Drugs used to treat HIV are referred to as antiretrovirals (ARVs) and the combination of ARVs used to treat HIV are referred to as antiretroviral therapy (ART). ART has directly contributed to the drop in HIV-related deaths over the last two decades. ART reduces the amount of virus (or viral load) in a person’s blood and bodily fluids, including semen, vaginal fluid, breast milk, and rectal fluid. ART is

¹ Prevention Access Campaign, “Risk of Sexual Transmission of HIV from a Person Living with HIV Who Has an Undetectable Viral Load Consensus Statement.” Accessed from <http://www.preventionaccess.org/consensus>

² Prevention Access Campaign

³ Prevention Access Campaign

⁴ McCray, Eugene and Jonathan Mermin. CDC Dear Colleague Letter. Accessed from <https://www.cdc.gov/hiv/library/dcl/dcl/092717.html>

WISCONSIN AIDS/HIV PROGRAM NOTES

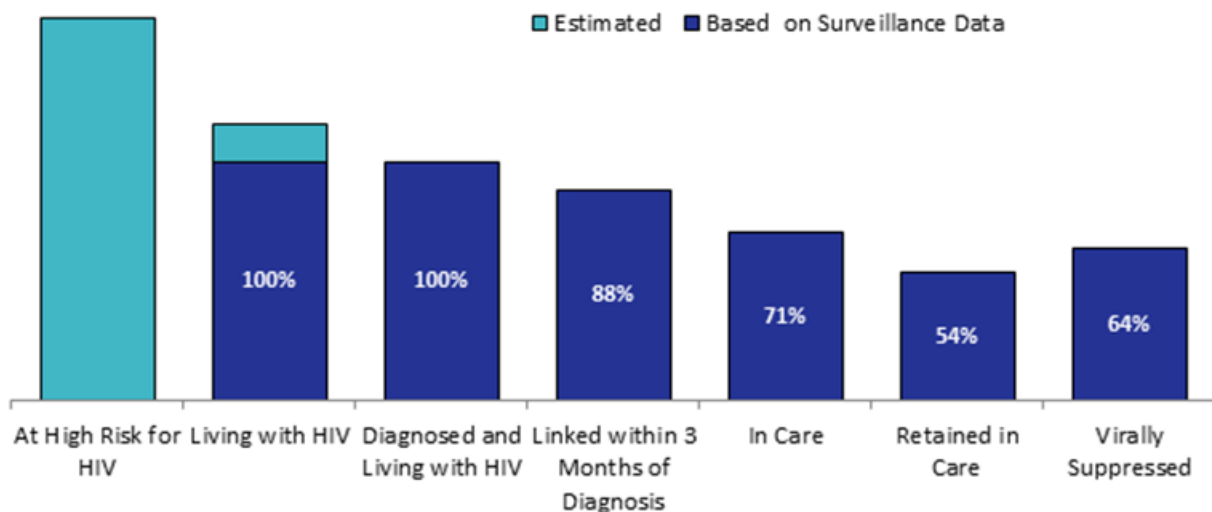
November 2017

recommended for everyone living with HIV, and people living with HIV should start ART as soon as possible.⁵

Viral suppression refers to ART suppressing the HIV viral load, or the amount of HIV virus in a person's blood, to 200 copies of the virus/ml or less on standard laboratory tests. Undetectable refers to ART suppressing the amount of HIV in the blood to the level that it is no longer detectable by laboratory tests, usually less than 40 copies of the virus/ml.⁶ Once ART is initiated, it can take up to six months for the medication to lower the amount of virus in the body to an undetectable level. Often "virally suppressed" and "undetectable" are used interchangeably, as they both refer to lowering the amount of virus in a person's blood to levels that improve a person's health and ultimately eliminate risk of transmission.

The HIV care continuum, sometimes referred to as the HIV treatment cascade, is a model that outlines the steps in HIV medical care from initial diagnosis to viral suppression and shows the proportion of individuals living with HIV at each stage.⁷ The most recent update to the National HIV/AIDS Strategy calls for efforts to reduce the drop-off in rates at each step of the continuum. Figure 1 shows the 2016 HIV continuum of care in Wisconsin.

Figure 1. HIV Continuum of Care in Wisconsin



Based on 2016 surveillance data, 64% of people living with HIV in Wisconsin have achieved viral suppression. This includes individuals who we know to be living with HIV whose last viral load test was prior to 2016 or who did not have a viral load test. However, of individuals who had a viral load test during 2016, 91% were suppressed at their last viral load test. This suggests

⁵ Public Health and HIV Viral Load Suppression. UNAIDS 2017 Explainer. Accessed from

http://www.unaids.org/sites/default/files/media_asset/20170724_viral_load_suppression_brochure.pdf

⁶ Prevention Access Campaign. Frequently Asked Questions: What is an "undetectable viral load" and what is "viral load suppression"? Accessed from <https://www.preventionaccess.org/faq>

⁷ CDC. "What is the HIV Care Continuum?" Accessed from <https://www.hiv.gov/federal-response/policies-issues/hiv-aids-care-continuum>

WISCONSIN AIDS/HIV PROGRAM NOTES

November 2017

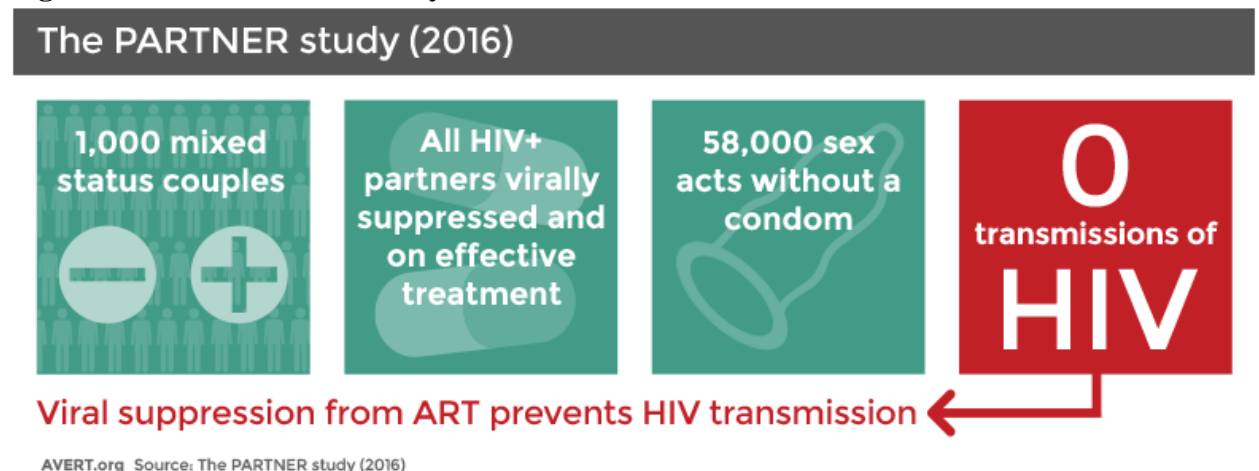
that most individuals receiving some medical care are achieving viral suppression.⁸ This also stresses the importance of linking newly diagnosed individuals into care and getting those individuals started on ART as quickly as possible to achieve viral suppression.

Evidence

The conclusion that sustained viral suppression and an undetectable viral load prevent sexual transmission of HIV from a person living with HIV to a partner who is HIV negative is based on several real world studies.

- The **HPTN 052** study was a randomized trial to compare the effectiveness of ART plus HIV primary care versus HIV primary care alone to prevent the sexual transmission of HIV-1 in serodiscordant couples—couples where one partner had HIV and the other partner did not. The study enrolled 1,763 serodiscordant couples at 13 sites in nine countries. The majority of the couples were heterosexual. The results of the study, released in 2011, showed that HIV transmission from HIV-infected study participants to their partners was not observed when the person living with HIV was stably suppressed by ART.⁹
- In 2014, the **PARTNER Study**, in which more than 1,000 couples were enrolled, found no sexual transmissions of HIV within serodiscordant couples when the viral load of the HIV-positive partner was undetectable. The four-year study was conducted across 14 European countries and included both heterosexual and gay serodiscordant couples engaging in 58,000 acts of condomless sex.¹⁰

Figure 2. The PARTNER Study



- The **Opposites Attract** study included 343 gay serodiscordant couples from Australia, Thailand, and Brazil. The couples engaged in 16,889 acts of condomless sex that did not result in a single sexual transmission of HIV. Findings of Opposites Attract were presented in July 2017 at the International AIDS Society’s annual meeting in Paris, France.¹¹

⁸ Wisconsin HIV Surveillance Annual Review 2016. Accessed from <https://www.dhs.wisconsin.gov/publications/p0/p00484.pdf>

⁹ HIV Prevention Trials Network HPTN 052. Accessed from <https://hptn.org/research/studies/hptn052>

¹⁰ Rodger, A.J. et al (2016) ‘Sexual Activity Without Condoms and the Risk of HIV Transmission in Serodifferent Couples When the HIV-Positive Partner Is Using Suppressive Antiretroviral Therapy,’ The Journal of the American Medical Association, Vol 316, No. 2

¹¹ Cairns, Gus. “International Study of Gay Couples Reports No Transmissions from an HIV-Positive Partner on Treatment” Accessed from <http://www.aidsmap.com/International-study-of-gay-couples-reports-no-transmissions-from-an-HIV-positive-partner-on-treatment/page/3159177/>

WISCONSIN AIDS/HIV PROGRAM NOTES

November 2017

These three studies included similar characteristics—thousands of serodiscordant gay and heterosexual couples engaging in thousands of condomless sex acts, and each had the same conclusion: when the HIV-positive partner was virally suppressed and on effective ART, there were no sexual transmissions of HIV to the HIV-negative partner. The studies did not address HIV transmission through sharing injection drug equipment.

Taking Action

Since the Prevention Access Campaign's groundbreaking consensus statement and their "Undetectable = Untransmittable (U=U)" messaging campaign was released in July 2016, the Wisconsin AIDS/HIV Program has presented the message and the related evidence to several key stakeholder groups, including community-based organizations, the Statewide Action Planning Group (SAPG), and HIV prevention and care workers.

Two key goals of the Wisconsin Integrated Prevention and Care Plan 2017-2021 are reducing new infections and improving health outcomes for people living with HIV.¹² The message that achieving an undetectable viral load prevents sexual transmission of HIV helps support these major goals.

The AIDS/HIV Program also supports linkage to care efforts through the linkage to care specialists working at agencies in Milwaukee and Madison who assist in linking newly diagnosed individuals to medical care and helping them navigate barriers to achieving viral suppression. Since viral suppression has not been demonstrated to prevent the transmission of other sexually transmitted infections (STIs), the program promotes comprehensive STI testing for people at risk for HIV and other STIs and continues to engage in condom distribution efforts throughout the state.

This message has special significance for people living with HIV and their partners:

- It reduces the shame and fear of sexual transmission for people living with HIV and opens up possibilities for conceiving children without alternative means of insemination.
- It dismantles HIV stigma on the community, clinical, and personal level.
- It encourages people living with HIV to start and stay on treatment to help keep them and their partners healthy and it strengthens advocacy efforts for universal access to testing, treatment, and care.¹³

The AIDS/HIV Program acknowledges this significant scientific finding and encourages wide dissemination of the message that people living with HIV who have undetectable HIV viral loads do not transmit HIV to their partners sexually.



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¹² Wisconsin Integrated Prevention and Care Plan 2017-2021. Accessed from <https://www.dhs.wisconsin.gov/publications/p01582.pdf>

¹³ Prevention Access Campaign. Accessed from <https://www.preventionaccess.org/undetectable>