

CD Summary

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UNDETECTABLE EQUALS UNTRANSMITTABLE: GETTING TO KNOW U=U

The science is clear: individuals living with HIV who take antiretroviral therapy (ART) and achieve and maintain an undetectable viral load (defined as <200 copies/mL and also known as viral suppression) for at least six months **do not** transmit HIV to their sexual partners.

In 2016, the Prevention Access Campaign, a health equity initiative with the goal of ending the global HIV pandemic and HIV-related stigma, launched the [Undetectable = Untransmittable \(U=U\) initiative](#).¹ More than 800 organizations from over 100 countries have now overwhelmingly endorsed the U=U initiative. The Oregon Health Authority (OHA) is proud to be part of this group.

WHAT IS THE EVIDENCE THAT U=U ?

Four large studies provide sound, consistent, reproducible evidence that U=U .

- 1. HPTN 052 (2016).**² This trial found that immediate ART reduced HIV transmission by 93% among 1763 sero-different heterosexual couples from nine countries. A total of 78 partners acquired HIV and 46 infections were phylogenetically-linked, meaning the genetic sequence of the virus was very similar between members of the couple. (Unlinked infections, in contrast, originated outside the relationship). In the immediate treatment arm, there were only three phylogenetically-linked transmissions, but there were 43 in the delayed treatment arm. There were **zero** linked transmissions, however, in both groups when the HIV-positive partner was virally suppressed.
- 2. PARTNER1 (2016).**³ In an observational study of 1166 sero-different couples (62% heterosexual), there were **zero** phylogenetically-linked HIV transmissions after 55,193

acts of condomless sex among 888 couples where the HIV-positive partner was undetectable.

- 3. PARTNER2 (2018)**⁴ In an extension of PARTNER1 to more accurately define the effect of an undetectable viral load on HIV transmission between male couples, there were **zero** linked transmissions after 76,991 acts of condomless anal sex among 783 sero-different couples where the HIV-positive partner was undetectable.
- 4. Opposites Attract (2018).**⁵ There were **zero** linked transmissions among 358 sero-different male couples after 12,447 acts of condomless sex when the HIV-positive partner was virally suppressed, and the HIV-negative partner was not on PrEP.

DOES U=U APPLY TO BREAST-FEEDING AND INJECTING DRUGS?

Studies demonstrate that ART greatly reduces the risk of transmission from individuals who breastfeed or share equipment while injecting drugs. More research is needed, however, to establish that these individuals do not transmit HIV. Right now, the U=U message is limited to sexual transmission.

WHY IS U=U SO IMPORTANT?

In the past, prevention messaging has considered the sexual partners of people living with HIV to be at very high risk of HIV infection. This messaging stigmatized people living with HIV and discouraged disclosure, HIV testing and treatment. The data behind U=U , pre-exposure prophylaxis (PrEP) and post-exposure prophylaxis (PEP) have redefined the prevention strategies that comprise safe sex.



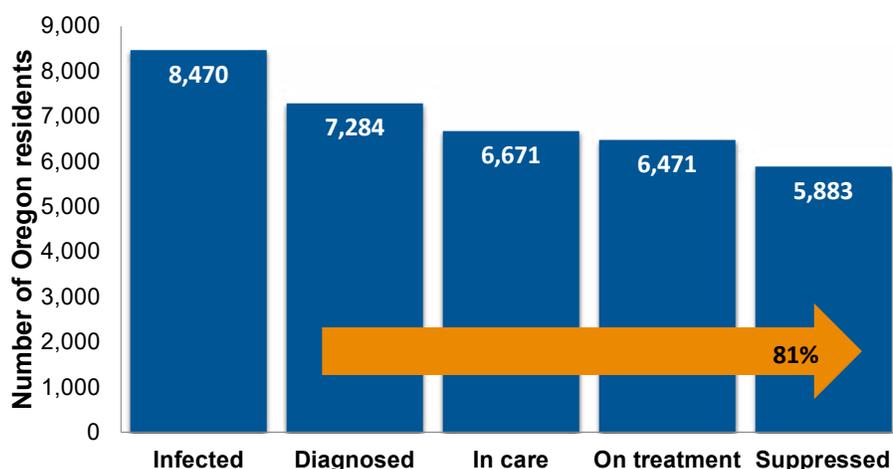
For people living with HIV, knowing that U=U can be transformative.⁶ Awareness of U=U may incentivize attaining and maintaining an undetectable viral load, aligning a patient's motivation to achieve viral suppression with the goals of effective HIV treatment. Education about U=U offers psychosocial benefits to people living with HIV: it allows greater focus on relationships and personal connections, improves self-image, alleviates anxiety and guilt around potential transmission, and enables a worry-free sex life. Increased awareness of U=U may also reduce broader HIV-related stigma, motivate people to test for HIV, and decrease anxiety around HIV acquisition. Moreover, U=U may incite changes to legal policies punitive to people living with HIV.

As knowledge of U=U spreads, motivating more and more people living with HIV to achieve viral suppression, the community viral load may decrease, reducing HIV incidence and preventing new HIV transmissions.

DOES EVERYONE KNOW ABOUT U=U ?

Unfortunately, not everyone knows what U=U means. Among men who have sex with men recruited through the 2017 National HIV Behavioral Surveillance project (locally known as Chime In) in Portland, 50% of HIV-negative men and 56% of men living with HIV knew that an undetectable viral load means that a person still has HIV but cannot transmit it to a sex partner.

Figure. Oregon HIV care continuum, 2018, excludes cases without a CD4 or viral load, result, 2014–2018



Among people living with HIV in Oregon participating in the Medical Monitoring Project in 2018, 64% knew what U=U means. In 2018, 81% of people diagnosed with HIV in Oregon were virally suppressed (Figure). In other words, 81% of those diagnosed with HIV in Oregon cannot transmit HIV. While viral suppression is robust in Oregon, we remain short of our goal of 90% viral suppression.

A recent international survey of more than 1000 providers found that only 77% of infectious disease specialists and 42% of primary care physicians communicated that U=U when informing patients of an undetectable viral load.⁷ Reasons for withholding this information included disbelief, perception that U=U negates personal responsibility, and concerns about patients' behavior and understanding of the U=U message.

Everyone should have access to this knowledge. Selective messaging around U=U will only serve to exacerbate existing HIV disparities, particularly among people of color and people who use drugs.

WHAT CAN PROVIDERS DO?

- **Tell ALL your patients living with HIV about U=U.** Counsel patients that daily ART and an undetectable viral load will keep them healthy and prevent transmission to sexual partners.
- **For patients newly diagnosed with HIV, provide effective HIV treatment as early as possible.** At this time, integrase strand transfer inhibitor (INSTI) resistance is very rare in people who have

not started HIV treatment.⁸ Strongly consider same-day ART with an INSTI-based regimen to shorten the time to an undetectable viral load.

- **Everyone should have access to care and treatment to become undetectable.** Know that OHA's [CAREAssist](#) program can help eligible individuals with out-of-pocket medical expenses, including insurance premiums, medications, and medical services. HIV [case management](#) is available throughout the state to link individuals to HIV care and to help them achieve and maintain a suppressed viral load.
- **Counsel people living with HIV and their partners on strategies to maintain a healthy, fulfilling, worry-free sex life,** including condoms, HIV treatment, STI testing and treatment, pre-exposure prophylaxis (PrEP) and post-exposure prophylaxis (PEP).
- **Encourage people living with HIV to talk to their current and potential partners about what an undetectable viral load is and that people with a suppressed viral load do not transmit HIV.** Couples may decide that ART for the HIV-positive partner is sufficient protection against HIV transmission. HIV-negative partners may choose to take PrEP, particularly if they have other partners; are unsure of their partner's viral load or partner's ability to stay suppressed; or, feel more secure with the added protection of PrEP.
- **Routinely test your patients for HIV, gonorrhea, chlamydia, and syphilis** and emphasize that

condoms still play an important role in preventing HIV and other STIs, and unintended pregnancy.

FOR MORE INFORMATION

- Find out more about Oregon's plan to end new HIV transmissions at <https://endhivoregon.org>
- Visit the Prevention Access Campaign website at www.preventionaccess.org/
- Visit the CDC's website on U=U at www.cdc.gov/hiv/risk/art/index.html

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