

U=U: IS IT A SLOGAN OR IS IT SCIENCE?

By Robert Striker, MD, PhD

U=U (undetectable equals untransmittable) seems to be everywhere: on social media, in magazine ads, at subway stops... except perhaps in your hometown. But what does U=U mean? Why is it being promoted? And how can you study something that is “not” happening (the transmission of HIV by someone taking their medication and maintaining undetectable HIV) be studied?

Way back in 2002, when “Hot in Herre” by Nelly was a hit song, there was already evidence to suggest that a PLWH (Person Living with HIV) who was taking their medication was very unlikely to pass the virus to a partner through sex (vaginal, oral or anal). This was called “Treatment as Prevention” or TasP. TasP is the foundation for U=U. At that time, it was unclear exactly how unlikely HIV transmission could be. Since then, there have been four different studies of serodiscordant sexual partners (one partner is living with HIV and the other is not), and each of these studies has built confidence in U=U, the concept that complete viral suppression prevents HIV being transmitted (passed on) through sex. A group called the Prevention Access Campaign developed the U=U message to help the general public understand the science behind this.

The Science

Collectively these 4 studies followed approximately 2,500 couples over more than 150,000 episodes of sex and showed *no* cases of a person who was consistently undetectable on therapy having passed the virus to their partner. A small number of people in these studies did acquire HIV, but careful analysis showed that the virus came from a different partner or occurred during a period of time when the partner living with HIV did not have a suppressed viral load. In some cases, couples were using condoms and/or the HIV negative partner was taking Pre-Exposure Prophylaxis (PrEP). There were some couples (Male-Female and Male-Male) who had an average of 42 sex acts per year without a condom and there were no documented HIV transmissions from the partner with undetectable HIV to the partner without HIV.

Condoms

While getting and keeping an undetectable viral load prevents HIV transmission during sex, there are reasons why a PLWH and their partners may consider adding other prevention options like condoms and PrEP. Condoms can prevent other sexually transmitted infections and/or pregnancy, but now people have options.

There **is not** the same amount of evidence that having an undetectable viral load means sharing needles is safe. Likewise, there is not enough scientific evidence to say with certainty that an undetectable viral load prevents vertical transmission of HIV during pregnancy or breastfeeding. What is certain is that maintaining an undetectable HIV viral load by taking medication is not only life saving for PLWH, but also protects the community and is key for ending the HIV epidemic. (*Con't p. 2*)

U=U: IS IT A SLOGAN OR IS IT SCIENCE? (CON'T)

What does U=U mean for PLWH?

While this is great news, what does it mean for a PLWH? Is viral suppression “good enough” or do my test results really need to be undetectable? Will someone believe me if I tell them about U=U?

A PLWH can have viral suppression from antiretroviral medication, but still have a detectable HIV viral load. The term “viral suppression” means having a very low viral load (less than 200 copies of HIV per milliliter of blood). In fact, in the studies mentioned, there were times when virus was detectable up to 200 copies, so even very small amounts of detectable virus in the blood may not be enough to transmit the virus through sex. The key factor is that the virus remains undetectable or very low throughout the period that sex is happening. Small amounts of virus could suggest the virus is breaking through, so in this case it might be important to have the viral load measured more frequently. Running out of HIV medication for as little as 2 weeks can allow rebound of the virus. Getting labs done when your provider suggests can increase your confidence that the virus is consistently undetectable or at least very low (virally suppressed).

How can I help people without HIV understand this information?

There are many public health departments that provide information about U=U, including the Wisconsin Department of Health Services HIV Program. There is a British website called i-base that has the information in multiple languages. The authoritative Centers for Disease Control (CDC in the US) has a lot of general and detailed information on their website, as well as a short YouTube video. If you would like to see information presented in other ways, please let us know what would be helpful, and hopefully this short piece has helped you feel more confident in the science behind preventing HIV through medication and fights stigma.

FOR REFERENCE

Wisconsin Department of Health Services HIV Program Website:

<https://www.dhs.wisconsin.gov/hiv/index.htm>

i-base

<https://i-base.info/u-equals-u/>

CDC YouTube Video

<https://www.youtube.com/watch?v=QCudOrlw5BA>

COVERING THE COSTS OF HIV CARE: ADAP

By Rachel Welsh, MSW, APSW

ADAP stands for the AIDS Drug Assistance Program. ADAP is part of the federal Ryan White HIV/AIDS Program and each state manages its own ADAP program. The Wisconsin ADAP program is administered by the Department of Health Services HIV Program. ADAP is an important program as it can help eligible people living with HIV (PLWH) pay for certain medications and health insurance premiums and reduce the financial burden of HIV care.

What does ADAP Cover?

- Full cost of HIV medications and other related medications if you are uninsured
- Co-pays for HIV medications and other related medications if you have insurance
 - This means that if your health insurance does not cover 100% of the costs of a prescription, ADAP can pay the portion not covered by your insurance
- Your health insurance premium for a plan bought on the Health Insurance Market Place
- Your health insurance premium for a plan through your employer
 - ADAP can reimburse the costs of health insurance deducted from your paycheck
- Your health insurance premium for a Medicare Part D plan
- Your health insurance premium for a basic Medicare supplement plan

In order for a medication to be covered by ADAP, it must be on a list called a “drug formulary”. The list changes from time to time as new medications are added or removed. You can view a copy of the WI ADAP Formulary at this website – <https://www.dhs.wisconsin.gov/hiv/adap-formulary.pdf>.

You may be eligible for ADAP if you:

- Live in Wisconsin
- Have a family income up to 300% of the federal poverty guideline for the current year
 - In 2020: \$38,280 per year for a 1-person household; \$51,720 for a 2-person household, etc.
- Are a PLWH, confirmed by a healthcare provider

One thing to keep in mind is that PLWH who have Medicaid or Badger Care are not eligible for ADAP. Medicaid and Badger Care already offer benefits similar to the ADAP Program.

How to Apply for ADAP

A UW Health HIV Clinic Social Worker can assist people with applying for ADAP. Once you apply for ADAP, there is a recertification process every six months to verify that you are still eligible for the program.

All application materials can be found at <https://www.dhs.wisconsin.gov/hiv/adap.htm>

If you have questions about ADAP or would like assistance applying, contact your UW Health HIV Clinic Social Worker. If you are not sure who that is, call the clinic at (608) 263-0946 and ask to speak the Social Worker on your care team.

[Learn more at uwhealth.org/hiv](https://uwhealth.org/hiv)

HIV CLINIC PHARMACIST – HELPING MAKE SENSE OF COMPLEX MEDICATIONS

The pharmacists in the HIV clinic have a detailed understanding of the medications used for the treatment of HIV, as well as medications for other conditions such as heart disease, diabetes, or mental health therapy. We meet with patients while they are at clinic visits with their provider to make sure that the medications they are taking are accurate. In addition, we review for medication interactions, side effects a patient might be having, and how often they are taking medications. We work together with patients to come up with strategies for remembering to take their medications, and help identify tools to help with this, such as medications boxes, medication packaging, and enrolling in services through the UW Health Specialty Pharmacy. We also provide recommendations about vaccines, smoking cessation (quitting smoking), controlling blood pressure, and help patients learn about medication-related devices such as glucose meters or home injections. The pharmacists work closely with the providers, nurses, and social workers to ensure that the best choices are being made for treatment and that the costs of medications are covered by insurance or other available assistance programs.

The pharmacists are available to discuss medications with a patient's other Health Care Providers, such as a Primary Care Provider or Mental Health Provider. The HIV pharmacists can help if these providers have questions related to medications and side effects before a patient starts a new medication.

We are happy to meet with patients outside of clinic visits if they have additional questions or concerns about medications. Call the clinic at (608) 263-0946 and ask to speak to an HIV pharmacist.

Learn more at uwhealth.org/hiv