UNAIDS | 2024 updated version

UNDETECTABLE = UNTRANSMITTABLE

PUBLIC HEALTH AND HIV VIRAL LOAD SUPPRESSION

UNAIDS Explainer

UNDETECTABLE = UNTRANSMITTABLE

VIRAL LOAD FACTS

- **HIV treatment is highly effective in improving the health of people living with HIV and reducing transmission of the virus.**
- **For most people living with HIV, antiretroviral medicines reduce the amount of HIV in the blood (viral load[1]) to levels that are undetectable by any World Health Organization (WHO) prequalified combination of sample and testing platform or suppressed below 1000 copies/mL.**
- **A person living with HIV who is on antiretroviral therapy and has an undetectable viral load cannot pass HIV sexually to their partners. This is often referred to as Undetectable = Untransmittable (U = U).**
- **For a person with a suppressed viral load, the risk of transmitting HIV to a sexual partner is almost zero or negligible *(1)*.**
- **Pregnant or breastfeeding women with an undetectable viral load have minimal risk of transmitting HIV vertically to their children.**

UNDETECTABLE VIRAL LOAD—VIRAL LOAD NOT DETECTED BY TEST USED

When antiretroviral medicines are taken as prescribed, an undetectable viral load can usually be achieved within 6 months of starting treatment. Antiretroviral therapy enables people living with HIV to stay healthy and have a lifespan similar to that of people not living with HIV *(2)*. Antiretroviral therapy provides an opportunity for people living with HIV who achieve and maintain an undetectable viral load to have penetrative penile-vaginal or penile-anal sex without a condom with no risk of passing HIV on to their partners, and with minimal risk of mother-to-child transmission.

It is essential to stress that condoms remain an important HIV prevention tool for people who do not know the HIV status of their sexual partners, for people who do not know their viral load, for people concerned about transmitting or acquiring other sexually transmitted infections, and for people who want to prevent pregnancy.

SUPPRESSED VIRAL LOAD—VIRAL LOAD DETECTED BELOW 1000 COPIES/ML

There is almost zero or negligible risk of sexual HIV transmission when the index partner has a suppressed viral load *(1)*.

Globally, 93% [79–100%] of people living with HIV who are on antiretroviral therapy were virally suppressed in 2022 *(3)*. One study found that among people with a suppressed viral load, 95% had an undetectable viral load *(4)*. Evidence from a number of large studies among thousands of serodiscordant couples was consolidated in a systematic review published in the Lancet. The review found no evidence of HIV transmission between adult couples where the partner living with HIV had a viral load below 200 copies/mL *(5)*.

More evidence and data are needed to understand the transmissibility of HIV when a person with a suppressed viral load shares drug injection equipment.

UNSUPPRESSED VIRAL LOAD—VIRAL LOAD OVER 1000 COPIES/ML

People with an unsuppressed viral load have an increased risk of becoming ill and of passing HIV on to their sexual partners and children.

1 HIV viral load is the amount of HIV in a person's blood. The higher the viral load, the quicker the person's immune system will be damaged. This increases their chances of catching infections that the body would normally fight off easily. Viral load levels are monitored regularly to ensure treatment is working.

WHAT DOES THIS MEAN?

For many people living with HIV, the news that they have zero or almost zero risk of transmitting HIV sexually is life-changing. Access to effective antiretroviral therapy and the resulting viral suppression, with support from the community and the health system, can be transformative for people living with HIV, who are enabled to regain their quality of life, return to work, enjoy a healthy sexual life, have healthy children, and enjoy a future with hope.

The awareness that a person cannot sexually transmit HIV if they have an undetectable or suppressed viral load gives them a strong sense of being an agent of prevention in their approach to existing or new relationships.

The evidence supporting U = U addresses the drivers of criminalization of HIV transmission by challenging the outdated norms that HIV infection is a death sentence and that HIV is easily transmitted to sexual partners *(6)*. HIV stigma and criminalization remain key barriers in many countries to reaching the targets in the 2021 Political Declaration on HIV and AIDS *(7)* and the Global AIDS Strategy 2021–2026 *(8)*.

It is worth noting that an undetectable viral load impacts women living with HIV in multiple ways. U = U promotes sexual autonomy and intimacy, and reduces the fear often experienced by women living with HIV during pregnancy, delivery and breastfeeding. Taking antiretroviral medicines and having an undetectable viral load before and throughout pregnancy and delivery minimizes the risk of transmitting HIV to the infant during pregnancy. WHO guidance indicates that a pregnant woman living with HIV whose viral load is suppressed within 4 weeks of delivery is at low risk of transmitting HIV to her infant and recommends breastfeeding for women on antiretroviral therapy *(9)*.

For some people living with HIV, an undetectable or suppressed viral load can be difficult to achieve. This is often the case for people who acquired HIV perinatally (before or during birth) or as an infant or young child; long-term survivors who received earlier, less effective treatment regimens; and people who were not diagnosed as living with HIV until many years after HIV acquisition. It can also be challenging to maintain HIV treatment regimens for people who do not have access to stable housing or adequate nutrition, and for people in difficult life situations that require their full attention to manage their safety and survival.

Viral suppression can be elusive when there are treatment stockouts or when less effective regimens are prescribed. In no case should the higher viral load levels of a person living with HIV be used to stigmatize, discriminate or criminalize, and nor should lower viral load levels be used to privilege a person. Viral load is not a marker of human worth or of quality of character.

HOW COMMUNITIES CAN BENEFIT FROM U = U

Community members, people from key populations,[2] adolescent girls and young women, men and boys, migrants and refugees, people in prisons and other closed settings, indigenous people and the general public need to know the benefits of antiretroviral therapy. All people living with HIV should be encouraged and supported to stay on treatment to achieve an undetectable viral load.

Not all factors are within the control of people living with HIV. It is important that community members are empowered and informed to demand good-quality services and an environment that enables uninterrupted treatment and other services, including access to viral load testing and receiving the results. A necessary step is to inform community members of the scientific evidence and WHO guidelines so people can claim their rights and demand services as needed, including through updated HIV literacy.

Community members continue to advocate for removal of HIV-related stigma and discrimination. This includes stigma and discrimination towards people living with HIV, people from key populations, people who have dropped out of treatment for a variety of reasons, and people who have not achieved viral load suppression or undetectable load.

HOW PROGRAMMES AND MANAGEMENT CAN SUPPORT U = U

Programme support is essential to help people living with HIV to achieve and maintain an undetectable viral load. This includes the following:

- Lead with clear messages that an undetectable viral load is a priority for ensuring the health and well-being of the person living with HIV, whose dignity and privacy must be preserved.
- Take particular precautions not to further stigmatize people who have not been able to achieve an undetectable viral load, and support them to achieve the best health outcomes possible and not to be excluded from support services, including peer support.
- Build and maintain robust, resilient health systems to support treatment initiation and adherence, including ensuring adequate stocks of medicines and test kits. Programmes should also provide routine viral load testing meeting WHO guidelines to monitor how well antiretroviral therapy is working *(9)*.
- Health systems should be well planned and managed so that correct treatment regimens are prescribed, and supplies of antiretroviral medicines and other commodities are uninterrupted, including routine CD4 and viral load testing for all people on treatment.
- Scale up differentiated, comprehensive and community-led responses, including prevention, testing for HIV and testing for monitoring treatment, access to good-quality treatment, and retention in care with effective psychosocial support. These efforts should be in line with national policies for people-centred differentiated service delivery approaches on HIV.

2 The Global AIDS Strategy defines key populations, or key populations at higher risk, as groups of people who are more likely to be exposed to or to transmit HIV, and whose engagement is critical to a successful HIV response. In all countries, key populations include people living with HIV. In most settings, gay men and other men who have sex with men, transgender people, people who inject drugs, and sex workers and their clients are at higher risk of exposure to HIV than other groups of people. Each country, however, should define the specific populations that are key to its epidemic and response based on the epidemiological and social context *(8)*.

- Consider the renewed evidence base of U = U to ensure the environment in which people receive HIV services is free from HIV-related stigma and discrimination, so they can take medicines as prescribed freely and consistently.
- Design testing services with communities at the centre and including various modalities, so that all people are facilitated to identify their HIV status in time, start antiretroviral therapy as soon as possible, and be supported to stay on treatment.
- Embed U = U in national and subnational health and HIV strategy plans and operations towards reaching health equity. Raise awareness and promote knowledge of U = U among health-care providers and workers, being mindful of the needs of different groups of clients.
- Train medical staff on how to handle cases with complicated treatment histories for people who have been living with HIV for an extended time, such as adolescents and young people who have lived with HIV since birth or early childhood.
- For pregnant and breastfeeding women, use same-day point-of-care viral load testing whenever possible to expedite the return of results and clinical decision-making. If this is not available, viral load specimens and results should be given priority throughout the laboratory referral process (including specimen collection, testing and return of results), with adherence counselling provided at all antenatal and postnatal visits to ensure viral suppression is maintained throughout pregnancy and breastfeeding.
- Support efforts to improve HIV literacy among people living with or affected by HIV regarding the benefits of treatment to motivate them to stay on treatment. Communicate the U = U message as part of standard care guidelines to improve health-related outcomes of people living with HIV and public health *(10)*.
- Engage communities and support the establishment and functioning of peer support networks such as adherence clubs, and address barriers for people from key and vulnerable populations, including migrants and refugees, to access affordable HIV services.
- Support community-led U = U initiatives, message creation and peer support to improve awareness and demand, uptake of HIV testing and adherence to antiretroviral therapy.
- Encourage people living with HIV to agree with their health-care workers and providers on a plan that reinforces and supports adherence to antiretroviral therapy, including clinic visits as needed. Make routine visits as opportunities for health-care workers and providers to advise on sexual and reproductive health and rights, including on sexually transmitted infections, contraception, and noncommunicable diseases such as hypertension and diabetes.

IMPLICATIONS FOR PROGRESS TOWARDS ENDING AIDS AS A PUBLIC HEALTH THREAT BY 2030

Approximately 1.3 million adults were newly infected with HIV in 2022 *(5)*. The new infections were transmitted by people who did not know their HIV-positive status, and by people who knew their HIV-positive status but were not on treatment or had started antiretroviral therapy but did not attain or maintain viral suppression for various reasons *(11–14)*. Approximately 630 000 people died from AIDS-related illnesses in 2022 *(5)*.

The COVID-19 pandemic has had major negative impacts on social and health services, including HIV services. It has also, however, brought in innovations and opportunities, such as the accelerated move towards multi-month dispensing for antiretroviral medicines, spacing of clinic visits for people who are stable on antiretroviral therapy, and virtual health services. The emphasis on improving equitable and resilient systems for health, particularly community health systems and ways of communication, including through social media and virtual communication groups, could be further mobilized to promote U = U for the health and well-being of people living with HIV and their partners.

KEY MESSAGES

1. UNAIDS endorses the concept of U = U. There is a strong scientific consensus that people living with HIV who are adhering to effective antiretroviral therapy and whose level of HIV remains undetectable cannot transmit HIV to their sexual partners. Ensuring access to treatment and support to stay virally suppressed and ultimately achieve an undetectable level for all people living with HIV is essential to ensure good health, save lives and prevent new transmissions, accelerating progress towards ending AIDS as a public health threat. U = U is a gamechanger for ending AIDS and is a win–win for all.

2. The 2021 Political Declaration on Ending AIDS *(7)* and the Global AIDS Strategy 2021–2026 *(8)* acknowledge and recognize U = U as a justification to end HIV-related stigma. There should be zero stigma and discrimination towards people living with HIV, regardless of their viral load level. Evidence shows that criminalization of HIV is unjustifiable and harms efforts to end AIDS as a public health threat.

3. U = U underscores the call to end inequalities and remove barriers to access good-quality sustained treatment and care. U = U will not be achieved where health services are not accessible to all, including people from key and vulnerable populations. Globally, there needs to be better access to HIV testing through effective diagnostic systems, with rapid linkages to antiretroviral therapy encouraging U = U messaging and scaled-up routine viral load testing. Robust differentiated health services should support retention and adherence. Stronger efforts should be made to ensure all people living with HIV have access to treatment as soon as they are diagnosed.

4. All efforts must be made to ensure health-care providers and communities of people living with HIV are aware of U = U and make it part of the routine dialogue between service providers and clients.

5. Choice among available biomedical HIV prevention interventions, as part of combination prevention, which also includes behavioural prevention strategies, remains necessary for a holistic HIV response. For sexually active people who are unaware of their HIV status, who have an unsuppressed viral load or who have multiple partners, strong condom programming and voluntary medical male circumcision are essential for ensuring primary prevention of HIV. Condoms are part of HIV combination prevention and are an essential tool for sexual and reproductive health overall. Antiretroviral pre-exposure prophylaxis (PrEP) assures protection for serodiscordant couples and sexual partners where viral load suppression has not been achieved. Harm reduction interventions remain essential for prevention of HIV transmission between people who inject drugs.

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