

Public health and HIV viral load suppression



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The primary purpose of antiretroviral therapy is to keep people living with HIV in good health. In the large majority of people living with HIV, antiretroviral medication can be chosen that reduce the amount of HIV in the blood to levels that are undetectable by standard laboratory tests. It can take some months to reduce viral levels to undetectable levels and allow the immune system to begin to recover. Antiretroviral therapy is transformative for people living with HIV. It enables people to regain their quality of life, return to work, enjoy their families and enjoy a future filled with hope.

In addition to the positive impact upon the health of people living with HIV, there is increasing consensus among scientists that people with undetectable HIV in their blood do not transmit HIV sexually. This knowledge can be empowering for people living with HIV. The awareness that they are no longer transmitting HIV sexually can provide people living with HIV with a stronger sense of being agents of prevention in their approach to new or existing relationships.

The consensus is very encouraging for the reduction of sexual transmission of HIV among people who are virally suppressed. Recent analyses of major studies of couples— couples of heterosexual men and women and of men who have sex with men—in which the members have a different HIV status from one another have not identified a single case of transmission from a person with an undetectable viral load.^{1,2,3}

Approximately 1.7 million adults were newly infected with HIV in 2016.⁴ Many of those new infections happened in situations where people did not know their HIV status, were not on treatment or who had started antiretroviral treatment but had not yet become virally suppressed.^{5,6,7} For people in this context, HIV testing, access to antiretroviral therapy and primary prevention with condoms, voluntary medical male circumcision, harm reduction for people who use drugs and antiretroviral therapy-based prevention with pre-exposure prophylaxis (PrEP) and post-exposure prophylaxis (PEP) is essential to reducing HIV transmission.

Therefore, condom use continues to be extremely important in most contexts. Reduction in overall condom use among people living with HIV who are not virally suppressed would have a negative impact upon primary HIV prevention efforts. Equally, reduced condom use will give rise to an increase in sexually transmitted infections and unwanted pregnancies.

As important as treatment and primary prevention, systemic changes are required to scale-up essential health services for all and to retain people in care for life. Approximately one million people died of AIDS-related illnesses in 2016.⁸ Many of those deaths occurred among people who did not seek medical attention until they became very ill, and, when they did, the health system may have been unable to respond due to staffing shortages, poor laboratory services or lack of medicines. Despite the remarkable scale-up of antiretroviral treatment, as many as one third of people living with HIV do not start treatment until they are so ill that they have a CD4 count of less than 200 cells/mm³ and are considered to have AIDS.⁹

UNAIDS works to support the scale-up of comprehensive responses, including testing, access to quality treatment and retention in care. Stronger efforts are required to ensure that accessible, affordable and stigma-free testing and treatment, including better access to viral load testing, is available to all people living with HIV. These efforts should address stigma, discrimination and unjust criminalisation that violate human rights and deter people living from HIV from accessing HIV prevention, treatment and care services.

In addition to its primary goal of keeping people living with HIV in good health, treatment and maintaining an undetectable viral load is an important prevention tool within the combination prevention framework. This includes male and female condoms, voluntary male medical circumcision, PrEP and PEP and harm reduction services for people who inject drugs, along with behaviour and structural changes. Strong condom programming is essential to ensure sexual and reproductive health and to empower all people to be responsible for prevention, irrespective of their HIV status.

Key messages

1. There is growing scientific consensus that people living with HIV who are taking effective antiretroviral therapy and whose virus is suppressed to undetectable levels will not transmit HIV sexually.
2. Treatment is first and foremost about enabling the person living with HIV to regain and maintain good health. Globally, there needs to be better access to viral load assays at affordable prices, combined with effective laboratory systems and robust health services. Stronger efforts should be in place to ensure that all people living with HIV have access to treatment as soon as they are diagnosed.
3. The Positive Health, Dignity and Prevention¹⁰ framework of the Global Network of People Living with HIV (GNP+) and UNAIDS lays out important principles for involving people living with HIV and ensuring that everyone is responsible for prevention, irrespective of their HIV status. The framework calls for ending stigma, discrimination and unjust criminalisation that violate human rights and deter people living from HIV from accessing HIV prevention, treatment and care services.
4. The UNAIDS Fast-Track approach and the 2016 United Nations Political Declaration on Ending AIDS lay out recommendations that address the primary prevention and structural changes required to reach everyone affected and to provide accessible and affordable treatment for all people living with HIV.
5. Male and female condoms and other combination prevention strategies remain a key part of the HIV response as primary prevention tools. Stronger condom programming is essential to ensure sexual and reproductive health in general, not just HIV.

References

1. Cohen MS, Chen YQ, McCauley M, et al. Prevention of HIV-1 infection with early antiretroviral therapy. *N. Engl. J. Med* 2011; 365: 493–505
2. Rodger AJ, Cambiano V, Bruun T, et al. (2106). Sexual activity without condoms and risk of HIV transmission in serodifferent couples when the HIV-positive partner is using suppressive antiretroviral therapy. *JAMA*; 316: 171-181.
3. Grulich A, et al. HIV transmission in male serodiscordant couples in Australia, Thailand and Brazil. 2015 Conference on Retroviruses and Opportunistic Infections (CROI), Seattle, USA, 2015.
4. Ending AIDS: progress towards the 90–90–90 targets. Geneva: UNAIDS; 2016.
5. Bluma G, Brenner MR, Routy J-P, Moisi D, Michel Ntemgwa C M, et al. (2007). High rates of forward transmission events after acute/early HIV-1 infection. *J. Infect. Dis.* 195 (7): 951–959.
6. Robineau O, Frange P, Barin F, Cazein F, Girard P-M, Chaix M-L, et al. (2015). Combining the estimated date of HIV infection with a phylogenetic cluster study to better understand HIV spread: application in a Paris neighbourhood. *PLoS ONE* 10(8): e0135367.
7. Tulio et al Transmission networks and risk of HIV infection in KwaZulu-Natal, South Africa: a community-wide phylogenetic study de Oliveira. *The Lancet HIV*, Volume 4, Issue 1, e41–e50.
8. Ending AIDS: progress towards the 90–90–90 targets. Geneva: UNAIDS; 2016.
9. Andrew F, Auld RW, Shiraishi IO, et al. (2017). Trends in prevalence of advanced HIV disease at antiretroviral therapy enrollment—10 countries, 2004–2015. *MMWR* June 2, 66 (21):558–563.
10. <https://www.gnpplus.net/resources/positive-health-dignity-and-prevention-operational-guidelines/>

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