

The Node *... where a leaf arises from a stem*



The Node is a bilingual publication dedicated to global HIV/AIDS issues by Red Ribbon Centre, the UNAIDS Collaborating Centre for Technical Support

PRESS RELEASE

UNAIDS warns that after significant reductions, declines in new HIV infections among adults have stalled and are rising in some regions

Globally, new HIV infections among adults and children were reduced by 40% since the peak in 1997. However, new analysis from UNAIDS shows that new HIV infections among adults have stalled, failing to decline for at least five years. The report outlines what is needed to step up prevention efforts

GENEVA, 12 July 2016 — A new report by UNAIDS reveals concerning trends in new HIV infections among adults. The *Prevention gap report* shows that while significant progress is being made in stopping new HIV infections among children (new HIV infections have declined by more than 70% among children since 2001 and are continuing to decline), the decline in new HIV infections among adults has stalled. The report shows that HIV prevention urgently needs to be scaled up among this age group.

HIV prevention gap among adults

The *Prevention gap report* shows that an estimated 1.9 million adults have become infected with HIV every year for at least the past five years and that new HIV infections among adults are rising in some regions. The *Prevention gap report* gives the clear message that HIV prevention efforts need to be increased in order to stay on the Fast-Track to ending AIDS by 2030.

- Eastern Europe and central Asia saw a 57% increase in annual new HIV infections between 2010 and 2015.
- After years of steady decline, the Caribbean saw an 9% rise in annual new HIV infections among adults between 2010 and 2015.
- In the Middle East and North Africa, annual new HIV infections increased by 4% between 2010 and 2015.

- There have been no significant declines in any other regions of the world.
 - In Latin America the annual number of new adult HIV infections increased by 2% since 2010; New HIV infections declined marginally in western and central Europe and North America and in western and central Africa since 2010; New HIV infections among adults declined by 4% in eastern and southern Africa since 2010, and by 3% in Asia and the Pacific since 2010.

“We are sounding the alarm,” said Michel Sidibé, Executive Director of UNAIDS. “The power of prevention is not being realized. If there is a resurgence in new HIV infections now, the epidemic will become impossible to control. The world needs to take urgent and immediate action to close the prevention gap.”

The AIDS epidemic has had a huge impact over the past 35 years. Since the start of the epidemic, 35 million people have died from AIDS-related illnesses and an estimated 78 million people have become infected with HIV.

Equity and access for key populations

In 2014, key populations, including gay men and other men who have sex with men, sex workers and their clients, transgender people, people who inject drugs and prisoners, accounted for 35% of new HIV infections globally. It is estimated that men who have sex with men are 24 times

more likely to become infected with HIV than the general population, while sex workers are 10 times more likely and people who inject drugs are 24 times more likely to become infected than the general population. In addition, transgender people are 49 times more likely to be living with HIV and prisoners are five times more likely to be living with HIV than adults in the general population

It is essential for key populations to have access to the full range of HIV prevention options in order to protect themselves and their sexual partners from HIV. “Today, we have multiple prevention options,” said Mr Sidibé. “The issue is access—if people do not feel safe or have the means to access combination HIV prevention services we will not end this epidemic.”

Prevention dividend from HIV treatment still to be realized

The report highlights that the major hopes for antiretroviral therapy to have an impact on preventing new HIV infections are starting to be realized, although the full benefits may not be seen for some years.

The *Prevention gap report* estimates that over half of all people living with HIV, 57%, now know their HIV status, that 46% of all people living with HIV have access to antiretroviral treatment and that 38% of all people living with HIV have viral suppression, keeping them healthy and preventing onward transmission of the virus. This underscores the urgent need for the UNAIDS 90–90–90 targets to be met to realize the full potential of antiretroviral therapy. The 90–90–90 targets are 90% of people knowing their HIV status, 90% of people who know their status accessing antiretroviral treatment and 90% of people on treatment having suppressed viral loads.

HIV prevention funding gap

The reports of rising numbers of new HIV infections are coming as data reveal donor funding has declined to its lowest levels since 2010. International donor contributions dropped from a peak of US\$ 9.7 billion in 2013 to US\$ 8.1 billion in 2015. Low- and middle-income countries are stepping up to fill the gap, with domestic resources accounting for 57% of the US\$ 19.2 billion total funding in 2015.

The report notes that although international funding, the main source of funding for HIV prevention for people at higher risk of HIV, has reduced, some major donors are making bold commitments to ensure that funding reaches the people most affected by HIV. In June 2016, the United States of America announced the launch of a new US\$ 100 million Key Populations Investment Fund to increase access to HIV services for key populations.

The current allocation of resources for HIV prevention is falling far short of what is needed. Currently, 20% of global resources for HIV are being spent on HIV prevention. The

report indicates that to have maximum impact funding should focus on the location and population approach in order to reach people at higher risk with combination prevention options where they live and work.

Regional HIV prevention gaps

The report details the trajectory of new HIV infections and looks at which populations and which locations are most affected. It also outlines where countries need to make more tailored HIV prevention investments.

In eastern and southern Africa, for example, three quarters of all new HIV infections among adolescents aged 10–19 years are among adolescent girls. Adolescent girls are often prevented from accessing HIV services owing to gender inequality, a lack of age-appropriate HIV services, stigma, a lack of decision-making power and gender-based violence. In 2014, only 57% of countries globally (of 104 countries reporting) had an HIV strategy that included a specific budget for women. It is estimated that worldwide only three in 10 adolescent girls and young women between the ages of 15 and 24 years have comprehensive and correct knowledge about HIV. Reaching adolescent girls and young women, especially in sub-Saharan Africa, will be a key factor in ending the AIDS epidemic.

In eastern Europe and central Asia, 51% of new HIV infections occur among people who inject drugs. More than 80% of the region’s new HIV infections in 2015 were in the Russian Federation. The epidemic is concentrated predominantly among key populations and their sexual partners, in particular people who inject drugs, who accounted for more than half of new HIV infections in 2015. However there is very low coverage of prevention programmes, in particular harm-reduction interventions among people who inject drugs.

In the Middle East and North Africa, 96% of new HIV infections occur among key populations, predominantly among people who inject drugs, men who have sex with men and female sex workers and their sexual partners. However, prevention programmes for men who have sex with men and sex workers rarely receive support from domestic resources or through public services.

In western and central Europe and North America, around half of all new HIV infections occur among gay men and other men who have sex with men and while a significant proportion of resources are being invested for this key population group, prevention efforts are failing to have an impact. Between 2010 and 2014, new HIV diagnoses among men who have sex with men increased by 17% in western and central Europe, and by 8% in North America.

The report shows the complexity of the AIDS epidemic and how the populations and locations most affected change dramatically across each country and region. It also shows that investments need to be made in effective HIV programmes that are proven to make a significant difference in reducing the number of new HIV infections.

Combination HIV prevention, gaps and opportunities

Compared to 20 years ago when HIV prevention options were limited, there is now a range of options available to suit people's needs throughout their lives to ensure that they can protect themselves from HIV.

UNAIDS urges countries to take a location and population approach to HIV programming efforts following five prevention pillars, to be delivered comprehensively and in combination:

- Programmes for young women and adolescent girls and their male partners in high-prevalence locations.
- Key population services in all countries.
- Strengthened national condom programmes.
- Voluntary medical male circumcision in priority countries.
- PrEP for population groups at higher risk of HIV infection.

Closing the HIV prevention gap

“Science, innovation and research have provided new and effective HIV prevention options, rapid diagnostics and improved treatment for HIV,” said Mr Sidibé. “Investing in innovation is the only way to secure the next big breakthrough—a cure or a vaccine.”

The data in the report, collected from more than 160 countries, demonstrate that enormous gains can be achieved when concerted efforts are made. It outlines that by 2015 some 17 million people had access to antiretroviral therapy, double the number in 2010 and 22 times the number in 2000.

UNAIDS will be calling on implementers, innovators, communities, scientists, donors and others at the 2016 International AIDS Conference, taking place from 18 to 22 July, in Durban, South Africa, to close the prevention gap.



Global summary of the AIDS epidemic in 2015

Number of people living with HIV	Total	36.7 million [34.0 million–39.8 million]
	Adults	34.9 million [32.4 million–37.9 million]
	Women	17.8 million [16.4 million–19.4 million]
	Children (<15 years)	1.8 million [1.5 million–2.0 million]
Number of people newly infected with HIV	Total	2.1 million [1.8 million–2.4 million]
	Adults	1.9 million [1.7 million–2.2 million]
	Children (<15 years)	150 000 [110 000–190 000]
AIDS-related deaths	Total	1.1 million [940 000–1.3 million]
	Adults	1.0 million [840 000–1.2 million]
	Children (<15 years)	110 000 [84 000–130 000]
Number of people on HIV treatment	Total	17 million

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UNAIDS

The Joint United Nations Programme on HIV/AIDS (UNAIDS) leads and inspires the world to achieve its shared vision of zero new HIV infections, zero discrimination and zero AIDS-related deaths. UNAIDS unites the efforts of 11 UN organizations—UNHCR, UNICEF, WFP, UNDP, UNFPA, UNODC, UN Women, ILO, UNESCO, WHO and the World Bank—and works closely with global and national partners towards ending the AIDS epidemic by 2030 as part of the Sustainable Development Goals. Learn more at unaids.org and connect with us on Facebook, Twitter, Instagram and YouTube.

Publication of HPTN 052 Final Results: HIV Treatment Offers Durable Prevention of HIV Transmission in Serodiscordant Couples Jul 18, 2016

DURHAM, N.C. — The HIV Prevention Trials Network (HPTN) announced today that the final results of the HPTN 052 study were published in the *New England Journal of Medicine* (NEJM). This pivotal study demonstrated that antiretroviral therapy (ART) for HIV infection provides durable and reliable protection against the sexual transmission of the virus from infected men and women to their HIV-uninfected sexual partners.

The final results showed a 93 percent reduction of HIV transmission when the HIV-infected person started ART when their immune system was relatively healthy. HIV transmission from HIV-infected study participants to their partners was not observed when viral replication in the treated individual was stably suppressed by ART.

“The HPTN 052 study confirms the urgent need to treat people for HIV infection as soon as it is diagnosed to protect their health and for public health,” said Myron S. Cohen, M.D., principal investigator for HPTN 052 and director of the Institute for Global Health and Infectious Diseases at the University of North Carolina at Chapel Hill. “This study represents more than a decade of effort by a worldwide team of investigators, and the tremendous courage and generosity of more than 3,500 clinical trial participants.”

HPTN 052 began in 2005 and enrolled 1,763 HIV-serodiscordant couples – where one person was HIV infected and the other was not – at 13 sites in nine countries (Botswana, Brazil, India, Kenya, Malawi, South Africa, Thailand, the United States, and Zimbabwe). The majority of the couples were heterosexual (97 percent). HIV-infected participants were assigned at random to start ART at the beginning of the study when their immune system was relatively healthy (called the “early” arm), or later in the study when they had immune system decline (called the “delayed” arm).

In 2011, interim study results demonstrated significant benefit of early ART, with a 96 percent reduction in HIV transmission from early ART compared to delayed ART. This finding was reported based on the recommendation of the study’s data safety and monitoring board; presented at the 6th International AIDS Society (IAS) Conference on HIV Pathogenesis, Treatment and Prevention in Rome, Italy; and published in NEJM.

All HIV-infected participants in the study were then offered ART and the study was continued until May 2015 to

understand the magnitude and durability of “treatment as prevention”; 87 percent of the HIV-infected participants remained in the study for its 10-year duration.

The HPTN 052 results have helped to galvanize a worldwide commitment to a universal “treatment as prevention” strategy for combatting the HIV/AIDS epidemic, with ART offered to all HIV-infected people, regardless of CD4 cell count.

About HPTN 052

HPTN 052 was a randomized, controlled trial designed to evaluate the effectiveness of antiretroviral therapy (ART) to prevent the sexual transmission of HIV in serodiscordant couples. The trial was conducted by the HIV Prevention Trials Network (HPTN) and funded by the U.S., National Institute of Allergy and Infectious Diseases (NIAID), part of the U.S. National Institutes of Health (NIH). Additional support was provided by the NIAID-funded AIDS Clinical Trials Group. The antiretroviral drugs used in the study were made available by Abbott Laboratories; Boehringer Ingelheim Pharmaceuticals, Inc.; Bristol-Myers Squibb; Gilead Sciences; GlaxoSmithKline; and Merck & Co., Inc.

About the HPTN

The HIV Prevention Trials Network (HPTN) is a worldwide collaborative clinical trials network that brings together investigators, ethicists, community and other partners to develop and test the safety and efficacy of interventions designed to prevent the acquisition and transmission of HIV. HPTN studies evaluate new HIV prevention interventions and strategies in populations and geographical regions that bear a disproportionate burden of infection. The HPTN research agenda is focused primarily on the use of integrated strategies: use of antiretroviral drugs (antiretroviral therapy and pre-exposure prophylaxis); interventions for substance abuse, particularly injection drug use; behavioral risk reduction interventions and structural interventions. NIH funds HPTN. For more information, visit www.hptn.org.

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Report back on the 21th International AIDS Conference (AIDS 2016)

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The 21th International AIDS Conference (AIDS 2016) was held this year in Durban, South Africa from 18 to 22 July. It brought together around 18,000 participants of all sorts across the world. It is one of the largest platform to gather leading scientists, public health experts, policy makers and HIV-affected communities to translate recent scientific advances into actions that will address ways to combat the epidemic. A total of eight Hong Kong participants from the government, academic institutions, and non-governmental organizations (NGOs) attended the conference.

Theme of AIDS 2016

The theme of AIDS 2016 is **Access Equity Rights Now**, which echoes the theme of WHO's Global health sector strategy on HIV, 2016-2021. It calls to action to reach the people who still lack access to comprehensive treatment, prevention, care and support services, to strengthen the commitment to HIV research on evidence-based interventions, and to overcome injustice caused by violence and exclusion of some populations based on gender, class, race, nationality, age, geographic location, sexual orientation and HIV status.



Where are we now?

According to UNAIDS information, there are 36.7 million of people living with HIV in 2015. Among them, 17.0 million (46%) are receiving anti-retroviral therapy, which is 2 million more than the target that was set for 2015. The number of AIDS-related deaths has decreased by 43.0% since 2003. However, there was still 1.9 million of new HIV infections in 2015 alone.

Men who have sex with men accounted for the majority of new infections in many countries. Young MSM are especially affected. In US, the trends are relatively flat for middle aged MSM, but the number of diagnosed infections are much higher and continue to rise among younger MSM, especially those 13-24 and 25-44, with the latter experiencing a 27% increase.

Although the number of infections among people who inject drugs (PWID) remained stable in many countries, HIV epidemics among them can happen quickly. Indeed, outbreaks have occurred in Greece and Romania in 2011-2012, and another one in Indiana of US in 2015.

Regarding mother-to-child transmission (MTCT), at least 85 countries have virtually eliminated MTCT, but only 31% of HIV positive children are receiving ART compared to 66% in pregnant women.

Highlights

Unlike two years ago when the focus was on HIV treatment, stigma and discrimination, the conference this year put much emphasis on HIV prevention. Discussion on pre-exposure prophylaxis (PrEP) and related topics including HIV-self testing, access to HIV prevention in different populations, and price policy of anti-retroviral therapy were actively discussed. Treatment for HIV and co-infection, vaccine and discrimination issues were also covered but to a lesser extent.

Pre-exposure prophylaxis (PrEP)

During the conference, USA, France, Australia, Kenya, Brazil, and South Africa presented their most updated studies and demonstration projects of public PrEP programmes. In summary, Truvada was very effective in preventing HIV no matter it is taken daily or on-demand. Its effectiveness ranged from 63% to 95%, but at the same



time, risk compensation and sexually transmitted infections increased. The drug adherence of young MSM aged 15-17 was poor, resulting in suboptimal effectiveness of HIV prevention and hence an HIV incidence of 6.41%. Truvada for PrEP was found to be safe in general, with only 1-2% suffered from severe deterioration of renal function.

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Regarding cost effectiveness, US found that PrEP programme was only cost effective if it was delivered to the top 20% of high risk MSM, yet reaching this high risk group is the main problem. France estimated that PrEP programme is not cost-effective at the present drug prices. During the conference, many organisations called for changes to the international drug patent policies and decrease of drug prices.

For delivery of PrEP, the National Agency for Drug Safety (ANSM) of France has granted Truvada for temporary use as PrEP for 3 years since November 2015. It will only be prescribed to adults aged 18 or above who are at high risk of sexual HIV acquisition. Drug cost, consultation and testing fees were covered by the national health insurance system. In Australia, with the support of the pharmaceutical company, the government is providing PrEP for 3,700 eligible high risk MSM for 2 years for free under the name of implementation trial starting from March 2016.

HIV self-testing

Reaching the UNAIDS' first target of "90% of infected people being diagnosed" is a challenging task. An increasing number of studies showing that HIV self-testing can complement the conventional and rapid test services to increase the overall testing rate in a community. HIV self-testing service can be delivered by different formats.

In Thailand, a real time on-line supervised HIV self-testing service is now available. Comparing to the conventional

HIV testing service, it can reach more first-time testers (35.5% vs 27.8%) and subpopulations with a higher HIV prevalence (41.7% vs 5.1%). Vietnam used face-to-face tutorial and pictorial instructions. It will launch a fee based service next year. In Kenya, oral self-test kits were distributed to pregnant woman for further distribution to their male partners.

Safe Conception

With the successful prevention of MTCT in the past decade, safe conception and the health of the uninfected babies born to infected mothers have become new concerns in recent years.

In the Partners Demonstration Project, ART was prescribed to the infected partners and 6 months of PrEP to the uninfected partners. Results showed a conception rate of 19% per year among 1,013 sero-discordant couples. None of them got HIV infection during peri-conception period. In addition, two studies showed that newborns of infected mothers were more likely to suffer from low birth weight and small for gestational age. More researches are needed to find out the underlying reasons.

Conclusion

Hong Kong is facing similar situation as other developed countries, with MSM dominating the epidemic, and the traditional prevention measures and HIV testing rates reaching a plateau. The encouraging study results of PrEP and self-testing and their potential applications have shed lights on the possible ways of HIV prevention in the future. All in all, the sharing of evidence and practice by experts and community organisations have provided a comprehensive view on the most update HIV prevention and control measures.