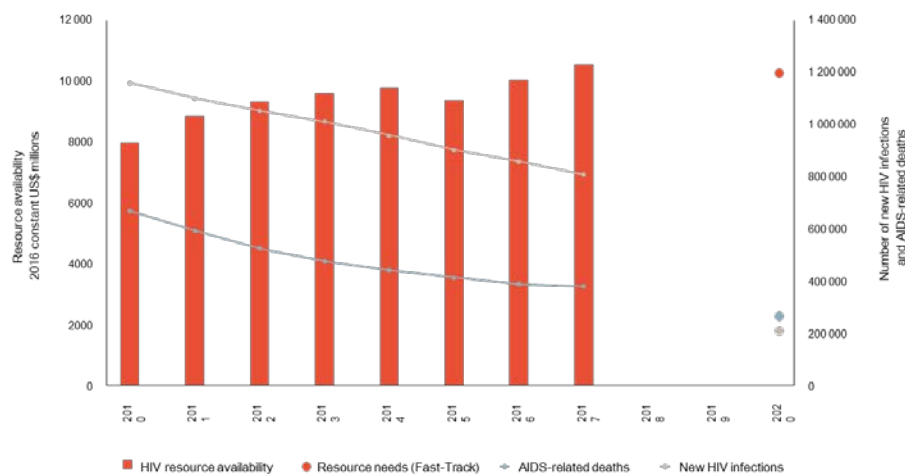


CDC'S GLOBAL HIV PREVENTION EFFORTS: KEY STRATEGIES, INNOVATIONS, AND ACHIEVEMENTS TO DATE

OVERVIEW

The global AIDS update, "Miles to Go," released by UNAIDS in July 2018, acknowledges global achievements and progress made towards reaching the organization's "90-90-90" targets, which call for 90 percent of people living with HIV (PLHIV) to be identified, 90 percent of identified PLHIV to be placed on antiretroviral therapy (ART), and 90 percent of PLHIV on ART to be virally suppressed by 2020. The report highlights that three quarters of PLHIV globally knew their status by the end of 2017. Among PLHIV who knew their status, 79 percent were accessing ART, and 81 percent of people accessing ART had suppressed viral loads. In Eastern and Southern Africa, the regions that are home to more than half (53 percent) of the world's 36.9 million PLHIV have observed a 30 percent reduction in new HIV infections between 2010 and 2017.¹ Innovative strategies that support the accelerated scale-up of evidence-based prevention interventions to achieve population-level declines in new HIV infections are a key part of the HIV response.

Annual new HIV infections, AIDS-related deaths, resource availability and 2020 resource needs and impact targets for eastern and southern Africa, constant 2016 US dollars, 2010–2017 and 2020 targets



*Resource availability and resource needs in constant 2016 US dollars.

Source: UNAIDS 2018 estimates; GAM/GARPR reports 2005–2016; UNAIDS–Kaiser Family Foundation collaborative project on international assistance disbursements from donor governments in 2017; Fast-Track update on investments needed in the AIDS response, 2016–2030. Geneva: UNAIDS; 2016.

CDC'S ROLE

Through the U.S. President's Emergency Plan for AIDS Relief (PEPFAR), the U.S. Centers for Disease Control and Prevention (CDC) is supporting HIV prevention globally in:

- Strengthening and expanding evidence-based primary HIV prevention interventions such as voluntary medical male circumcision (VMMC);
- Rapidly scaling interventions that reach PLHIV who do not yet know their status with HIV testing services (HTS) such as index testing, partner notification services, HIV self-testing and social network testing, and linking newly diagnosed patients to life-saving immediate or early ART;
- Reaching key populations (KP), including people who inject drugs, men who have sex with men (MSM), sex workers (SW), transgender persons, prisoners and people in closed settings with comprehensive HIV prevention, and care and treatment services;
- Reducing HIV incidence among adolescent girls and young women (AGYW), particularly in sub-Saharan Africa (SSA) through the implementation and roll-out of a core package of interventions designed under PEPFAR's DREAMS (Determined, Resilient, Empowered, AIDS-free, Mentored, and Safe girls and women) Initiative;

¹ Miles to go - Global AIDS update 2018. UNAIDS. Geneva, 18 July 2018
http://www.unaids.org/en/20180718_GR2018

- Strengthening systematic and continuous community engagement to successfully address service gaps, accelerate HIV prevention efforts, and reduce stigma and discrimination towards PLHIV, KP, and other vulnerable populations;
- Introducing and accelerating expansion of innovative interventions, such as pre-exposure prophylaxis (PrEP), HIV self-testing and recency testing; and
- Strengthening data availability and use to inform prevention program improvements, including routine monitoring and evaluation, and prevention research and evaluation.

ACCOMPLISHMENTS / RESULTS

- CDC has supported over 9.4 million VMMCs through 2018. Mathematical modeling suggests that VMMCs done to date have already averted an estimated 230,000 new HIV infections through 2017 and are projected to prevent more than 1 million HIV infections by 2030².
- Since 2004, CDC has supported nearly 350 million HIV tests. Data from HIV test results collected since 2013 indicate a steady increase in the number of HIV positive tests, reaching nearly 1.8 million positive tests in 2017. The efficiency – defined as the number of new HIV cases identified – of those tests has steadily increased, while the cost per test has steadily decreased as HTS programs have begun to use their data to improve program performance.
- To improve access to KP-friendly HIV and health services, CDC developed a KP sensitivity training curriculum for health care workers that was translated into French, Spanish, Portuguese, and Russian, implemented in 14 country and regional programs, and has since trained over 500 health care worker attendees.
- Innovative CDC supported KP program efforts in the past two years included the introduction of community-based, same-day ART initiation for KP in the FIKIA Project in Tanzania, increasing ART enrollment among HIV-positive KP from 40 to 84 percent. Brazil's KP Implementation Science project showed that, among MSM supported by peer navigators, 83 percent were successfully linked to ART within 90 days compared to only 40 percent among those without peer navigator support. In Thailand, among a cohort of MSM testing at health facilities, 84 percent (245 out of 292) of those diagnosed as HIV-positive initiated ART in the immediate Test and Treat model. In Kenya's Makongeni "integrated" health facility model, 99 percent of HIV-positive female SW initiated ART, compared with 53 percent nationally.
- Under PEPFAR's DREAMS Initiative, CDC is supporting programs for AGYW in 14 African countries and Haiti. Services that are part of the initiative include HIV testing, post-violence care, access to condoms, contraception, PrEP, linkage to ART, as well as building social assets and safe spaces. In 2017, 62,468 HIV-positive tests among AGYW were reported and 27,650 AGYW who are survivors of violence have received specialized care through CDC-supported partners.
- For over 15 years, the Families Matter! Program (FMP) has been delivered in 15 countries and has reached more than 950,000 families. The program includes interventions to strengthen families as part of the DREAMS initiative. In addition, recent enhancements to the curriculum have included material covering child sexual abuse, gender-based violence, and helping adolescents living with HIV address disclosure issues, and manage stigma and discrimination in their community.
- To inform innovations in HIV testing, linkage, and ART delivery, CDC conducted research and evaluations of combination prevention interventions in four African countries with the following results:
 - The Botswana Combination Prevention Project found at least a 30 percent decline in new HIV infections in 15 communities receiving enhanced HIV prevention services compared to 15 communities receiving standard care.³
 - Among all PLHIV participating in the Mozambique Combination Prevention Evaluation (CPE) between 2014 and 2017, HIV diagnostic coverage increased from 60 to 93 percent, and ART coverage from 49 to 85 percent.⁴
 - In eSwatini, combination prevention efforts in the first phase (2015-2017) resulted in 635 of 651 program participants (98 percent) being enrolled in care and 541 (83 percent) initiated on ART within a median of six days. In the second phase, starting in 2016 after ART eligibility was expanded to all PLHIV, 96 percent of 225 clients initiated ART.⁵ In this second



² World Health Organization. Voluntary Medical Male Circumcision For HIV Prevention. WHO Progress Brief. July 2018. WHO/HIV/2018.

³ Makhema J, Wirth K, Pretorius Holme M, et al. Impact of Prevention and Treatment Interventions on Population HIV Incidence: Primary Results of the Community-Randomized Botswana Ya Tsie Prevention Project (WEAX0105LB). Presented at the 22nd International AIDS Conference, Amsterdam, Netherlands; July 23-27, 2018.

⁴ De Louvado A, Pathmanathan I, Thompson R, et al. Achieving >80% ART coverage in a high burden district with annual home-based HIV testing: findings from the Chókwe Health Demographic Surveillance System (CHDSS), Mozambique, 2014-2017 (THPEC226). Presented at the 22nd International AIDS Conference, Amsterdam, Netherlands; July 23-27, 2018.

⁵ MacKellar D, Williams D, Bhembe B, et al. Peer-delivered linkage case management and same-day ART initiation for men and young persons with HIV infection — Eswatini, 2015–2017. MMWR 2018;67(23):663-667.

phase, a highly successful partner notification component was introduced with an additional 209 partners, family members or associates tested, of whom 128 (61 percent) were HIV-positive.⁶

- The Tanzania Combination Prevention Project (2014-2017) demonstrated considerable success in HIV testing, linkage to care, and defaulter tracing. During the intervention, 133,695 HIV tests were conducted and 4,143 (3.1 percent) clients were newly HIV diagnosed.⁷ Linkage to care and enrollment in ART resulted in an increase of viral load suppression prevalence among PLHIV from 28.6 to 64.9 percent.⁸

FUTURE EFFORTS

In addition to ongoing technical assistance to scale-up the programs described above, highlights for future CDC global HIV prevention efforts include:



- Continue support for VMMC scale-up in SSA priority countries, test interventions to drive demand among adult men, introduce new circumcision devices, and create sustainable models for VMMC.
- Refine and expand strategies to optimize HIV case-finding, including:
 - Strengthen targeted testing: index partner, peer/social network, and geo location testing to focus on areas where new diagnoses are occurring;
 - Identify opportunities for maximizing facility-based testing efforts; and
 - Expand HIV self-testing to reach key and priority populations, such as men and adolescents
- With new funding from PEPFAR through the Key Population Investment Fund, CDC will be working with local implementing partners in nine countries to accelerate innovative and effective program models for KPs, aimed at improving HIV cascade outcomes. Models include HIV case-finding, PrEP delivery, rapid ART initiation, and sustained viral load suppression among KP.
- CDC gender and youth experts will support introduction of important new interventions such as:
 - The IMpower course for both girls and boys that has been shown to reduce incidence of rape by half;
 - Roll-out of a CDC-developed gender-based violence quality assurance tool that will assist health care providers in providing highest quality post-violence care across at least six countries in 2019; and
 - Support for cervical cancer screening and treatment in eight countries in Africa.
- CDC's community engagement team will expand interventions and tools developed to assist systematic, continuous and strong community engagement across CDC-funded programs, including community engagement components, to address and reduce stigma and discrimination towards PLHIV, KP and other vulnerable populations. This will include support for the Undetectable=Untransmissible (U=U) campaign as an important tool to empower PLHIV and KP. Additionally, it will help expand messaging regarding the importance of HIV treatment, and, in turn, influence public opinion to support PLHIV and KP.
- Findings from the CPE are now informing the national roll-out of a community and facility-based linkage program, and peer-delivered linkage case management in eSwatini. Similarly, successful CPE HIV testing and linkage to care models are being rolled out in 208 health facilities in 11 regions in Tanzania. Trends in population viral load suppression prevalence and HIV incidence from the Mozambique CPE will be disseminated in 2019.
- Lastly, CDC has developed a training curriculum to increase capacity among prevention program staff in the field to analyze and use data to identify gaps and inform program improvements. Following the first trainings conducted in four African countries, the training will be rolled out to other CDC-supported HIV programs globally over the coming year.

⁶Williams D, MacKellar D, Dlamini M, et al. Rapid ART initiation and index client testing outcomes of *CommLink*, a community-based, HIV testing, mobile HIV care, and peer-delivered, linkage case management program - Swaziland, 2017 (THAC0401). Presented at the 22nd International AIDS Conference, Amsterdam, Netherlands; July 23-27, 2018.

⁷Msumi O, Cham HJ, MacKellar D, et al. Reaching men and young adults: methods and outcomes of a 2.5 year comprehensive facility- and community-based HIV testing intervention in Bukoba Municipal Council, Tanzania, 2014-2017 (THPEC290). Presented at the 22nd International AIDS Conference, Amsterdam, Netherlands; July 23-27, 2018.

⁸Steiner C, MacKellar D, Cham H, et al. Three-fold increases in population-level HIV viral-load suppression among men and young adults in a mixed urban-rural Tanzania lake-zone community: intervention outcomes of the Bukoba Combination Prevention Evaluation (BCPE) (LBPEC038). Presented at the 22nd International AIDS Conference, Amsterdam, Netherlands; July 23-27, 2018.

BENEFITS OF OUR WORK

Sharing lessons learned between global and domestic HIV prevention programs has been instrumental to progress in both settings. Such examples include:

- Effective case finding strategies from the U.S. were adapted to reach greater numbers of previously undiagnosed people living with HIV in global settings.
- Strategies to reach men from VMMC programs in Africa informed similar programs for men in other regions of the world.
- U.S.-based youth programs such as the Families Matter! Program were adapted for implementation in Africa. The scale-up of these programs in resource-limited African settings, in turn, informs domestic programs for adolescents living in poverty.
- Combination prevention evaluations have helped identify optimal HIV intervention models that could be adapted in the U.S. to increase testing up-take and early enrollment in HIV treatment.