

# REACHING THE FIRST 90: CDC SUPPORT FOR HIV TESTING SERVICES

## OVERVIEW

Despite significant scale-up of HIV testing services (HTS), 30 percent of people living with HIV (PLHIV) in resource-limited countries remain unaware of their infection.<sup>1</sup> Global targets set forth by UNAIDS to be met by 2020 (known as “90-90-90”), which are aimed at ending the HIV epidemic, call for 90 percent of all PLHIV to know their HIV status, 90 percent of all individuals diagnosed with HIV to receive sustained antiretroviral treatment (ART) to treat their infection and reduce their risk of transmitting HIV, and 90 percent of those on ART to have a suppressed viral load.<sup>2</sup> Accomplishing the first “90” in the face of dwindling resources will require countries to: 1) implement a strategic mix of facility- and community-based HIV testing approaches to diagnose new HIV cases and link those with HIV to treatment services; 2) identify innovative approaches to find remaining undiagnosed PLHIV, especially among the hardest-to-reach populations (i.e., key populations, older men, and adolescents); and 3) implement a quality-improvement approach by continuously analyzing program, expenditure, and epidemiologic data to identify programmatic gaps and utilizing results to improve the quality and effectiveness of HTS.

## CDC'S ROLE

The U.S. Centers for Disease Control and Prevention (CDC) provides technical assistance to ministries of health (MOHs), and implementing partners in 31 countries and across four regional programs to reach the first 90 target by: evaluating innovative approaches to HIV case finding and linkage to HIV treatment services, expanding evidence-based interventions, and using data for strategic program planning purposes.

Examples of CDC-supported activities include:

- **Developing and disseminating standard operating procedures (SOPs) for innovative HIV case-finding approaches:** Several recent evaluations and innovative program models have demonstrated the effectiveness of partner notification services (PNS), social network testing, and self-testing in increasing the uptake of HTS and identifying sexual and drug-use partners with undiagnosed infection. In order to help countries operationalize these new approaches, CDC has developed SOPs to facilitate implementation of these effective case-finding approaches in resource-limited countries.
- **Evaluating innovative HIV-testing interventions:** There is a high proportion of undiagnosed HIV-infected adult men in sub-Saharan Africa. Further evidence is needed to know what approaches are most effective at accessing this hard-to-reach population for HIV diagnosis and treatment. The “Increasing HIV Testing Among Men: Evaluation of a Strengthened Partner Notification Services Program and a Mobile Workplace Wellness Program” is an evaluation that aims to enhance current facility-based PNS with the distribution of HIV self-test kits and existing mobile HTS activities to include screening for non-communicable diseases (NCDs). This assessment aims to increase the number of men tested for HIV and to ensure that all newly diagnosed men are linked to clinical care.
- **Strengthening the use of HTS data to maximize HIV case-finding:** CDC supported the development of Excel-based tools known as the Country HTS Planning Support (CHIPS) Tool (Figure 1) and the HTS Site Level Tool (HITS) (Figure 2).

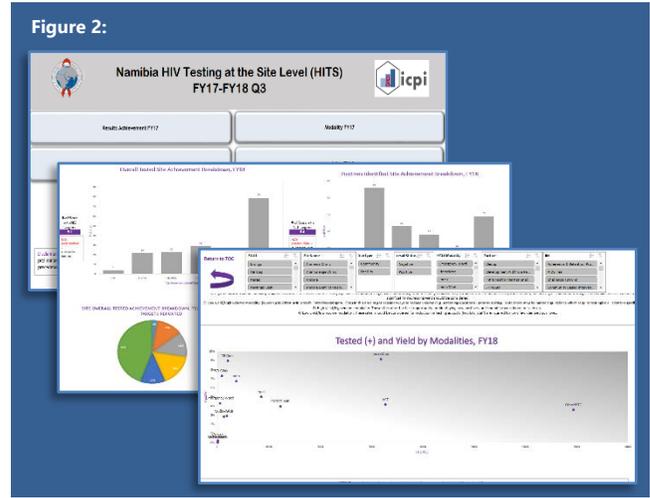
<sup>1</sup> UNAIDS Global AIDS Update. Geneva: Joint United Nations Programme on HIV/AIDS, 2017. Available at: [http://www.unaids.org/sites/default/files/media\\_asset/Global\\_AIDS\\_update\\_2017\\_en.pdf](http://www.unaids.org/sites/default/files/media_asset/Global_AIDS_update_2017_en.pdf)

<sup>2</sup> UNAIDS. 90-90-90: An ambitious treatment target to help end the AIDS epidemic. Geneva: Joint United Nations Programme on HIV/AIDS, 2014. Available at: [http://www.unaids.org/sites/default/files/media\\_asset/90-90-90\\_en\\_0.pdf](http://www.unaids.org/sites/default/files/media_asset/90-90-90_en_0.pdf).

Figure 1:



Figure 2:

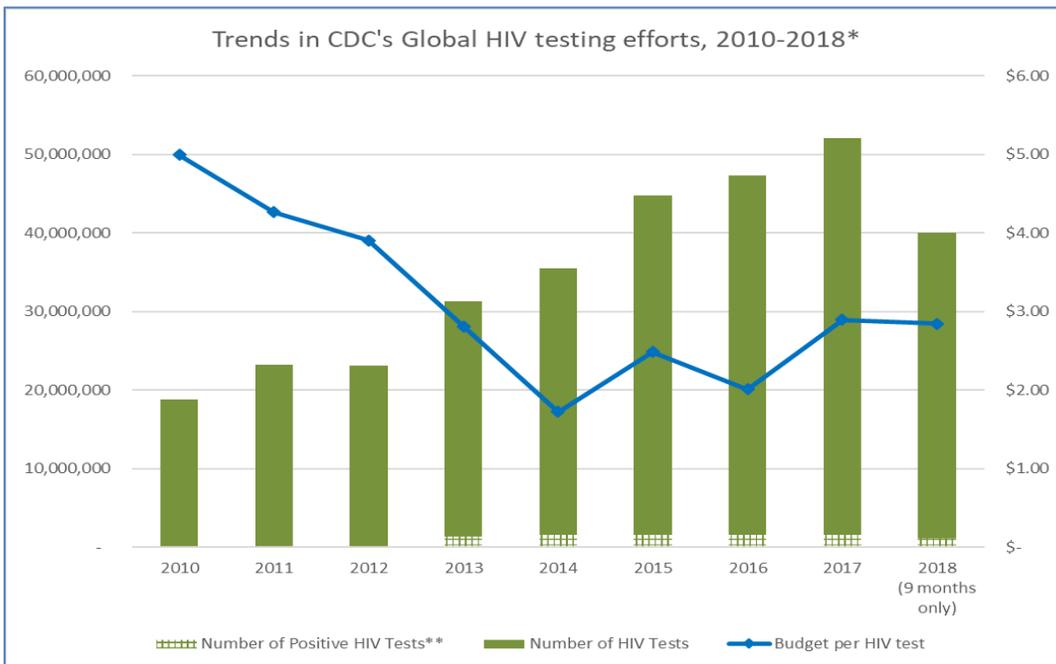


These tools facilitate rapid analyses of PEPFAR-supported HIV-testing services to determine if countries, partners, and sites are: 1) identifying HIV-infected individuals; 2) testing in the right places and targeting the right populations based on the disease burden; and 3) using an appropriate combination of HTS efficiently and effectively. U.S. Government teams use this tool to routinely monitor program performance and to assist implementing partners and country teams in formulating evidence-based strategic plans for achieving the first “90”.

**ACCOMPLISHMENTS/RESULTS**

Since 2004, CDC has supported nearly 350 million HIV tests through the U.S. President’s Emergency Plan for AIDS Relief (PEPFAR) (see Figure 3). 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.

Figure 3:



\* Testing may include repeat testing of HIV negative or positive persons. HIV tests for 2010-2011 were estimated based on the average proportion of CDC to PEPFAR HIV tests conducted from 2012 to 2018.

\*\* HIV test result data only available from 2013.

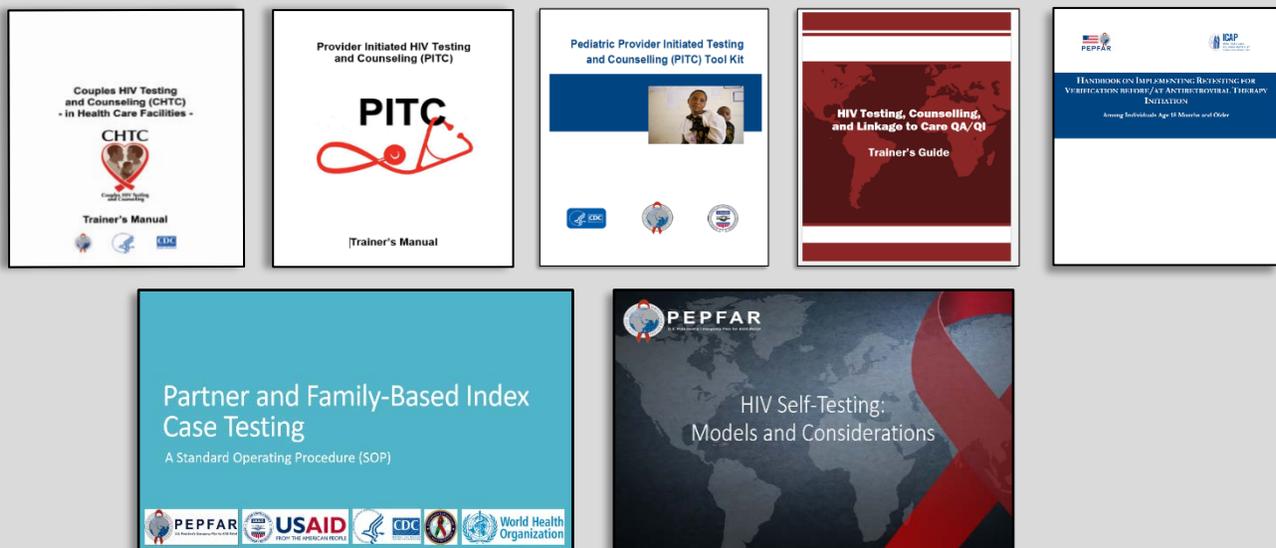
In 2010, CDC determined that few HTS programs were using their monitoring and evaluation data to strategically plan their programs. To address this gap, CDC, with support from the University of California at San Francisco (UCSF), developed an Excel-based analytics tool to assist country teams in analyzing their routine program data. CDC and UCSF then conducted 10 HIV-testing data-use workshops in five countries to build staff capacity at U.S. Government agencies, MOHs, and implementing partners to use program and surveillance data in strategic planning for HIV testing programs.<sup>3</sup> Each workshop culminated with the development of an action plan to improve program alignment to populations and geographic areas with a disproportionate burden of undiagnosed HIV.

Building on these past achievements, CDC continues to help countries analyze their HTS program data – including information from required PEPFAR indicators, expenditure analysis, quality assurance monitoring, population-based surveys, and other sources – to target PEPFAR resources most effectively, improve the quality of PEPFAR-supported HTS, and maximize PEPFAR’s impact. Strategies for providing this assistance include quarterly monitoring calls with all CDC-supported countries and regional programs, as well as developing and disseminating partner management tools.

As countries reach a plateau in the efficiency of their current HTS programs, CDC has supported the adoption of innovative HTS, including partner and family index-case testing services, to help countries reach PLHIV who do not know their status. Since 2017, CDC has provided in-country and virtual technical support on index testing services in 21 regional and country specific programs. This technical assistance has resulted in the significant scale-up of this effective approach to HIV case finding.

In 2012, CDC completed Project STATUS, a randomized trial conducted in South Africa, Tanzania, and Uganda that identified the most effective model for increasing uptake of HIV testing and identifying previously undiagnosed PLHIV within health facilities’ outpatient departments (OPDs). Findings from this multi-country evaluation have been used to help scale up and improve service-delivery models for provider-initiated testing and counseling (PITC) in OPDs in other countries. CDC is currently developing screening tools to improve the targeting of testing in facility-based settings and an SOP to further help countries to scale-up targeted testing within OPD settings.

In 2017, CDC completed the Optimizing Prevention and Referrals in the Antenatal Clinic Platform study in South Africa. This evaluation aimed to increase the number of male partners tested during a woman’s pregnancy through the promotion of facility and home-based HIV testing and distribution of HIV self-test kits. HIV self-testing was extremely popular among pregnant women as a method for partner testing, but even with incentives, only 60 percent of men received post-test counseling. The costs of HIV self-testing were similar to facility testing. Findings from this study are being used to inform the combination of HIV testing approaches needed to ensure more men know their status.



Finally, CDC has developed a number of curricula and operational guidance to help strengthen HTS and quality assurance approaches in PEPFAR-supported countries. These include PITC for adults, pediatrics, and key populations; testing for couples, retesting for verification; partner and family-based index case testing; self-testing; and quality assurance and quality improvement for HTS.

<sup>3</sup> HTC Data Use and Strategic Information workshop materials and tools  
<http://globalhealthsciences.ucsf.edu/prevention-public-health-group/global-strategic-information-gsi/monitoring-and-evaluation/hiv-testing>

## FUTURE EFFORTS

CDC will continue to collaborate with PEPFAR programs to develop, evaluate, and disseminate best practices for improving HIV case finding and linking all HIV-positive individuals to HIV treatment services. CDC will also assist country teams in adapting these approaches and SOPs to their local context and in continuing to use their data for quality improvement purposes.

In addition to having CDC testing and counseling experts from the headquarters' office provide in-person technical assistance to country and regional programs, CDC will facilitate quarterly calls with the 31 country and four regional programs to disseminate evidence-based approaches and to provide a forum for countries to share lessons learned about operationalizing innovative case-finding strategies. Lastly, CDC will continue to work with MOHs to update their policies and guidelines to align with international normative guidance and ensure national scale-up of effective case-finding strategies.

## BENEFITS OF OUR WORK

While the United States is close to reaching the first "90," 15 percent of PLHIV in the United States are unaware of their infection.<sup>4,5</sup> Continued efforts by domestic and international programs to share lessons learned about effective case-finding strategies will help ensure success in reaching the first "90" target in both domestic and global settings.

<sup>4</sup> CDC. HIV Surveillance Report, Diagnoses of HIV Infection in the United States and Dependent Areas, 2016, Vol. 28; November 2017. HIV diagnosis data are estimates from 50 states, the District of Columbia, and 6 U.S. dependent areas.

<sup>5</sup> CDC. Monitoring selected national HIV prevention and care objectives by using HIV surveillance data—United States and 6 dependent areas, 2015. Vol. 22, No. 2; July 2017.