

# PREVENTING TB TO END TB: THE ROLE OF TB PREVENTIVE TREATMENT IN DRIVING DOWN INCIDENCE AND MORTALITY

## OVERVIEW

A staggering 1.7 billion people – one-fourth of the world’s population – are infected with tuberculosis (TB). While those infected are not yet sick with TB, they are at risk of developing active TB disease, which can be transmitted to others. Ten million people develop active TB disease every year, and TB remains the leading cause of death from an infectious disease globally, and the top cause of death among people living with HIV (PLHIV). PLHIV, young children, and others with compromised immune systems are at greater risk of acquiring TB infection, developing TB disease, and dying from TB than their counterparts. These individuals benefit greatly from TB preventive treatment (TPT), a set of different treatment options that reduces the risk of developing TB disease.

The World Health Organization’s (WHO) END TB strategy outlines ambitious targets to reduce TB incidence by 90 percent and TB deaths by 95 percent by 2035. Ending the TB epidemic in our lifetime will require more than stepping up efforts to find and treat TB disease. It will also require substantial scale-up of TPT to prevent future cases and break the cycle of transmission. Not only is investing in TPT critical to achieving the ambitious End TB targets, it also makes financial sense: TPT saves money. Preventing a case of TB by treating with TPT is cheaper than the four-drug regimen required to treat a case of TB. Further, preventing one case of TB disease prevents up to 15 additional infections, ensuring an even greater return on investment. However, despite the endorsement of WHO and extensive scientific evidence that TPT is safe and effective, implementation of this intervention remains suboptimal. Fewer than 20 percent of those considered highest priority for receiving TPT – PLHIV and children – were treated in 2016.

Recognizing the slow implementation of this intervention, the United Nations Political Declaration on the Fight Against TB set ambitious targets for scaling-up TPT by 2022, aiming to provide preventive treatment to 30 million people, including six million PLHIV, four million young children, and 20 million other household contacts (adults or older children). Given the low levels of implementation in 2016, reaching these ambitious targets will require ambitious effort at all levels.

## CDC’S ROLE

CDC is home to the leading public health experts who rapidly respond to global health problems with proven solutions. TPT is one example of this response. CDC’s efforts to bring this life-saving intervention to scale have focused broadly on practical implementation guidance and technical support to scale-up tools we already know work, while also investing in operational research to identify better approaches to screening PLHIV and children for TB and ensuring they receive appropriate care, whether that is treatment for TB disease or access to preventive treatment.

CDC is co-leading technical implementation support across the PEPFAR platform to scale-up TPT among PLHIV. In 14 countries, CDC is working with local governments and partners to assess the current status of policies and practices around TPT for these priority populations and working to overcome barriers and challenges to bring this life-saving intervention rapidly to scale. This newly accelerated TPT initiative is just one component of CDC’s global work to align TB and HIV efforts and accelerate progress against both diseases. In more than 30 high burden countries, CDC is working hand-in-hand with government partners, community groups, and health organizations to bolster access to antiretroviral treatment (ART), expand HIV testing for TB patients, implement TB infection control and intensify routine TB screening among those living with HIV. CDC is developing better approaches to screening and diagnosis for children with TB, including piloting household

### Spotlight: TPT Screening Approaches/Eligibility

Determining who will benefit most from TPT requires first assessing whether someone has active TB disease already and should be started on treatment for TB disease.

- PLHIV should be screened for active TB disease at every HIV clinical visit with the standard screening approach. Those who screen positive should receive further diagnostic evaluation. If, however, they screen negative for TB symptoms, they should be considered for TPT to prevent development of disease.
- Household contact tracing is the best approach for identifying children with TB disease or with latent TB infection. Every person with active, pulmonary TB should receive a household contact evaluation that will identify children and other contacts that may have been infected with TB or may have developed active TB disease. Each person who screens positive should receive further evaluation for TB disease, and those who screen negative should be considered for TPT to prevent disease.

contact tracing in routine programmatic settings to identify children at risk of TB infection and TB disease, and developing a diagnostic algorithm for diagnosing TB and drug-resistant TB in children.

## ACCOMPLISHMENTS / RESULTS

- CDC is co-leading technical implementation support across the PEPFAR platform to scale-up TPT among PLHIV. In 2017, the Office of the Global AIDS Coordinator within the U.S. State Department announced that reporting on TB prevention would be a requirement for PEPFAR-supported countries. Later that year, CDC conducted a survey across 35 PEPFAR-supported countries to understand the current status of TPT implementation in these countries, barriers to progress, and technical assistance needs. Based on these responses, CDC has focused its efforts on 14 countries to provide proof of concept of scalable models of TPT delivery that can then be expanded broadly across PEPFAR-supported settings.
- In these 14 countries, CDC is helping to update national policies and guidelines for TPT, conducting facility visits to troubleshoot challenges related to screening algorithms, monitoring of adverse events, and recording and reporting of TPT uptake. CDC is working rapidly to overcome barriers to bring this life-saving intervention to scale for priority populations.
  - CDC has developed a 23-piece toolkit to assist countries in assessing TPT implementation in their country, from policy development and programmatic implementation to commodity forecasting. A companion operational guide is being used to assist countries with planning, implementing and monitoring TPT scale-up. These tools are currently available on the PEPFAR solutions website <https://www.pepfarsolutions.org/imtest/?rq=tpt> and are being developed into an implementation guide.
  - To complement these tools, CDC has introduced a series of webinars to country offices and partners to offer a forum for tackling operational aspects of TPT implementation. In addition, intensive in-person technical support will be provided to all priority countries to identify and overcome implementation barriers to reach the PEPFAR target to initiate five million PLHIVs on TPT by 2020.
- Progress at Country Level
  - In 2017, CDC-supported TB screenings for 4.7 million people with HIV, including 400,000 children and supported HIV treatment for 140,000 people living with both HIV and TB disease. PEPFAR also started nearly one million PLHIV on TPT in 2017.
  - Encouraging early uptake of TPT indicates Malawi is on track to reach targets by September 2018. In November 2017, CDC conducted an assessment of the TPT scale-up and found just over 70 percent of eligible PLHIV had initiated TPT at six facilities in Malawi, indicating rapid initial uptake of TPT only three months after implementation began. Furthermore, in the first three quarters of 2018, Malawi's five prioritized districts had already reached 251,119 PLHIV with TPT in less than a year, equivalent to 93 percent of their annual target.
  - From 2016 to 2018, CDC Nigeria and partners streamlined the supply chain logistics and delivery of isoniazid to match that of ART for PLHIV. Thereafter, the number of PLHIV at CDC-supported treatment sites starting TPT increased by 57 percent from fiscal year 2017 to the time period October 2017 to August 2018.
- CDC is piloting two approaches for contact tracing in homes of TB index cases, providing HIV testing, TB screening, and linkage to care for all in the household as needed. Both projects are incorporating the use of stool and nasopharyngeal aspirate for the diagnostic workup of symptomatic young child contacts, and both also entail use of an electronic tool to streamline contact management and monitoring and evaluation.

## FUTURE EFFORTS

- CDC is supporting the PEPFAR initiative to start five million PLHIV on TPT by 2020, meeting the U.N. global targets nearly two years early.
- CDC is working with the U.S. Agency for International Development and other partners to develop an interagency task force focused on improving data quality and strengthening systems to monitor TPT rollout across PEPFAR platform.
- CDC will continue to partner with WHO, the Stop TB Partnership, the International Union Against Tuberculosis and Lung Disease, the Global Fund to Fight AIDS, Tuberculosis, and Malaria, and others to provide implementation guidance and technical support while also developing an accountability framework for countries committing to scaling-up TPT among these priority population.