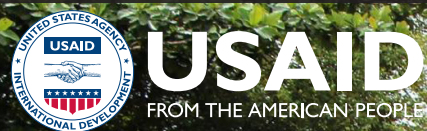


CHALLENGE TB



This summary report documents Challenge TB's contributions to USAID targets across 21 countries and six core projects, as well as the key results achieved in the second year of the project.



CHALLENGE TB



Above - Patient receiving DOT, Bangladesh (Photo: Md. Kaykuzzaman)
Below - Presumptive TB patients transported for screening, Cambodia (Photo: Chry Monyrath)

ANNUAL REPORT HIGHLIGHTS YEAR 2

CHALLENGE TB

Challenge TB (CTB) is USAID's flagship global mechanism for implementing the United States Government (USG) TB strategy as well as contributing to TB/HIV activities under the U.S. President's Emergency Plan for AIDS Relief (PEPFAR). Launched on October 1, 2014, this five-year cooperative agreement (2014-2019) builds and expands upon previous USAID global programs, namely TB CARE I (2010-2015), TB CAP (2005-2010), and TBCTA (2000-2005).

Challenge TB has three main objectives each with several focus areas for interventions:

- Improved access to high-quality patient-centered TB, drug-resistant TB (DR-TB) & TB/HIV services
- Prevent transmission and disease progression
- Strengthen TB service delivery platforms.



INTRODUCTION



Despite the TB epidemic being much larger than previously estimated, both the number of deaths and the incidence rate continue to fall. However, the rate of decline in TB incidence from 2014 to 2015 was only 1.5%, showing that significant efforts and innovations are needed to reach the End TB Strategy's target of a 20% reduction in incidence by 2025 compared to 2015.

In 2015, there were an estimated 10.4 million new TB cases worldwide, of which 1 million were among children. People living with HIV accounted for 1.2 million of all new TB cases, and there were estimated 480,000 new cases of multi-drug resistant TB (MDR-TB) and an additional 100,000 people with rifampicin-resistant TB (RR-TB). CTB works in countries which account for approximately 60% of the global estimated number of incident TB cases (around 50% among HIV-positive people) in 2015.

TB/HIV

Of the estimated 1.4 million deaths from TB in 2015, 400,000 resulted from TB disease among people living with HIV. About 76% of TB deaths among HIV-negative people occurred in the 22 CTB countries with a 1% average rate of decline. Although CTB works in some of the most HIV prevalent countries, 64% of CTB countries saw an 8% decrease in TB mortality in persons living with HIV, due in part to increased testing and documenting of notified TB patients and an emphasis upon initiating or maintaining anti-retroviral therapy (ART) for those infected with HIV.

In 2015, the global number of HIV-positive TB patients on ART was 33% of the estimated global number of incident HIV-positive TB cases, indicative of the fraction of estimated "missing" cases who are HIV positive.

Global coverage of ART for notified TB patients who were known to be co-infected with HIV reached 78%. Twelve (55%) CTB countries were above the global average for coverage of ART for notified TB patients co-infected with HIV and the average ART coverage increased from 77% in 2014 to 80% in 2015.



CHALLENGE TB COUNTRY HIGHLIGHTS

South Sudan

1,654 index TB cases were registered out of which 333 households were visited and contacts screened. 17% of those screened were referred for TB microscopy, 8% of which were bacteriologically confirmed with TB through smear microscopy.

Ukraine

A draft algorithm for contact investigation was developed and tested. During the three months of implementation, the average number of contacts screened increased by 40-50% and reached 2.8-3.2 contacts per MDR-TB case.

Nigeria

TB diagnosis times have been reduced. Now 85% (19% at baseline), 80% (48%), and 67% (50%) of patients are diagnosed in under two days in Lagos, Benue and Akwa Ibom states, respectively.

DR Congo (DRC)

Four local partner NGOs were engaged to improve TB case-finding. As a result, case notification more than tripled in supported provinces from 1,250 TB cases in Year 1 to 3,853 in Year 2.

Botswana

GeneXpert has been rolled out to 34 health facilities, with each district having at least one machine. GeneXpert MTB/RIF has been adopted as the 'initial' diagnostic test for all presumptive TB cases.

Namibia

ART for stable patients has been decentralized to TB DOT containers. In Engela district, a total of 2,721 stable PLHIV originally receiving their ART at Engela District Hospital are now receiving it from six TB DOTS points.

Zimbabwe

HIV testing became routine for patients undergoing TB screening. A total of 6,854 patients who did not know their status were tested for HIV and 254 (4%) tested positive.

Mozambique

CB-DOTS implementation was strengthened and 18,204 presumptive TB cases were referred for TB screening; 17% of the successful referrals (2,825/16,538) were diagnosed with TB (all forms), with 54% (1,530/2,825) having bacteriologically positive TB.

Tanzania

Out of 24,515 notified TB cases during the year, 24,173 (99%) were tested for HIV compared to the national target of 100%, with a TB/HIV co-infection rate of 32%.



Large Investment



Medium Investment



Small Investment

Ethiopia

From a total of 1,038 children who were identified as household contacts, 13 were diagnosed with TB and put on treatment. Another 941 screened negative, of which 425 were started on IPT.

Uzbekistan

Development of the implementation plan for the introduction of new drugs and shorter regimens for DR-TB treatment was completed.

Kyrgyzstan

An implementation plan for the introduction of new drugs and shorter regimens for DR-TB treatment was developed and approved by the Ministry of Health in April 2016.

Tajikistan

The National Plan on the 'Introduction of New Drugs and Shorter Regimens for DR-TB Treatment' was approved in April 2016.

Afghanistan

Urban DOTS facilities identified 59,374 presumptive TB patients and diagnosed 11,458 TB cases, contributing 30% of all TB cases notified in Year 2.

Indonesia

There was an increase in private and non-NTP public provider contributions to case notification in the ten supported districts between 2014 and 2015. As a result, 3,420 more cases were notified by non-NTP facilities in 2015 than in 2014.

India

A total of 30,963 presumptive pediatric TB cases were tested using GeneXpert, double the number in Year 1. A total of 2,146 pediatric TB cases were detected, of whom 185 were resistant to rifampicin.

Cambodia

A total of 7,283 children were screened, of which 186 were diagnosed with TB and initiated on treatment. A total of 1,552 child contacts were enrolled on IPT.

Vietnam

TB diagnosis, treatment and IPT are now covered by health insurance. As TB patients are now being referred directly from the commune level to district or provincial TB care and prevention facilities they also have shorter waiting times for diagnosis.

Burma

A 'Cover Your Cough' campaign was conducted with school children in 20 schools in four townships in the Yangon Region. The campaign has been so successful it is continuing and has so far reached 15,890 students.

Malawi

An action plan to improve the use of Xpert and its diagnostic algorithms was developed, along with a system for accurate forecasting and cartridge supply management. Four additional machines were procured and installed.

Bangladesh

Following the training of pediatricians in Sylhet Division on childhood TB, the number of TB cases reported among children rose significantly. CTB partners nationwide found 5,600 of the 6,500 pediatric cases reported.

DRUG-RESISTANT TB

In 2015, there were an estimated 300,000 MDR-TB cases in the 22 CTB countries. WHO estimated that 19 (86%) CTB countries had more than 1,000 MDR-TB cases, with the highest numbers estimated for India, Indonesia, Nigeria, and Ukraine; whereas, the highest estimated MDR-TB incidence rates were in the Central Asian Republics, Ukraine, Namibia, Mozambique, and Burma. The Central Asian Republics and Ukraine show the highest percentages of MDR-TB among new and previously treated TB patients.

In Year 2, five CTB countries met or exceeded a treatment success rate of 75% for MDR/RR-TB (2013 cohort) and the average increased from 47% to 49%.

In 2015, CTB countries reported a total of 55,170 MDR/RR-TB cases (18% of the estimated 300,000 cases) and 50,990 (92%) were started on second-line treatment. Although the cohorts of MDR/RR-TB patients diagnosed and initiated on treatment in 2015 are not necessarily the same (the treatment cohort may include patients diagnosed in the previous year), a comparison of the groups shows a gap of 8% between those diagnosed and those started on treatment, which was 11% in 2014, thus 3% lower.

In the first three quarters of 2016, an estimated 42,398



patients were diagnosed with confirmed RR-TB/MDR-TB. A total of 38,650 (88%) patients initiated treatment for unconfirmed and confirmed MDR-TB, with 12 CTB countries placing at least 90% (or more) on treatment. Tanzania and Nigeria made the greatest improvements, from 53% to 79% and 63% to 83%, respectively. Delays in DR-TB treatment initiation and loss to follow-up remain a major challenge in Indonesia, Malawi and Vietnam.

TREATMENT

All CTB countries are still below the 90% global End TB Strategy priority target for TB treatment coverage, with only eight (36%) countries having a TB treatment coverage of 70% or above.

Bangladesh, Cambodia and Tanzania maintained treatment success rates (TSRs) above 90% for new patients, and 15 countries maintained or improved on 2013 TSRs. A total of 2,406,693 patients were successfully treated in CTB supported countries (2014 cohort) resulting in an overall TSR of 80%.

However, this progress is tempered by low MDR-TB TSRs in CTB countries, with only Burma, Nigeria, Bangladesh and Cambodia meeting or exceeding the 75% target. The gradual rollout of new drugs and shorter MDR-TB regimens is expected to improve these treatment outcomes.

According to the NTP data reported by 15 CTB countries, more than 47,500 children were started on isoniazid preventive therapy (IPT) accounting for more than half of those put on IPT globally and a 37% increase over 2014.

In Bangladesh CTB's local partners found around 5,600 (86%) of the 6,500 pediatric cases notified nationwide between Jan-Sep 2016. In India, the initiative to improve the diagnosis of TB in children using Xpert was extended from four to nine sites. A total of 30,963 presumptive pediatric TB cases were tested with GeneXpert compared to 15,345 in Year 1.



FINDING THE MISSING CASES

Worldwide in 2015, 6.1 million new TB cases were reported to WHO. However, there was an estimated 4.3 million gap between incident and notified cases, with India, Indonesia and Nigeria accounting for almost half of this gap.

CTB is helping to find more of these 'missing' TB cases by expanding access to and demand for high-quality TB diagnostic and treatment services.

In 2015, 3,101,191 cases (all forms) were notified across CTB countries - a 3% increase over 2014. Notable jumps in case notification occurred in Bangladesh (8%), Afghanistan (13%), Ethiopia (14%), and South Sudan (16%) - countries where CTB has played a substantial role in finding more cases.

Private Sector

The number of cases reported from the private and non-national TB program (NTP) public sector facilities increased from 19% (583,593) of all notified cases in 2014 to 24% (749,897) of cases in 2015. Of note, is Bangladesh where a new Public-Private Mix Strategic Plan to engage non-NTP providers in the diagnosis, notification and treatment of TB, contributed to substantial increases in case notification. Nearly 50% of all case notifications came from non-NTP providers in 2015 compared to only 13% the previous year.

Community Referral

The engagement of the community to help find, treat and care for TB patients is a priority for Challenge TB.

Community referral contributed roughly 22% of all cases notified in Year 2 (31,559 cases), with Afghanistan, DRC, Ethiopia, Mozambique, Nigeria, and South Sudan having substantial investment in community referral.

Though data are limited, there were increases in community referral case notification in Ethiopia (12% in 2014 to 41% in 2015), Nigeria (0% to 23%), and Indonesia (3% to 17%).

At the national level in 2015, documented community referral contributed 9% of all TB cases in comparison to only 6% in 2014 - an increase of 104,628 cases.



Strengthening Laboratory Capacity

In Year 2, 14 Challenge TB countries (67%) had a national TB laboratory operational plan, compared to only eight in Year 1. From Year 1 to 2, Cambodia, DRC, India, Indonesia, Malawi and Namibia developed national TB laboratory operational plans, with the CTB projects in DRC and Malawi investing substantially in their development.

Operationalization of these plans, and those developed in Year 1, has contributed to increases in drug-resistance testing. Uzbekistan, Ukraine, Tajikistan, Kyrgyzstan, Nigeria, Mozambique, Tanzania, Ethiopia and Burma tested more than 20% of new bacteriologically positive TB cases for MDR/RR-TB, up from 5% in 2014.

In addition, 12 (57%) countries tested more than 50% of previously treated bacteriologically confirmed TB cases tested for MDR/RR-TB - up from ten countries in 2014.

GeneXpert

Since the global rollout of GeneXpert (Xpert), the number of MDR-TB patients diagnosed has nearly doubled, as has the number of PLHIV investigated systematically for TB using the rapid test.

CTB is playing a critical role in rollout of Xpert and in improving diagnostic connectivity, to ensure results reach patients quickly and the time to treatment initiation is reduced. CTB efforts across the 21 countries significantly increased their focus on strengthening Xpert diagnostic networks and coverage to ensure machines are properly maintained and to expand their use for rapid and more accurate diagnosis.

In Vietnam, where Xpert rollout began in 2012 under TB CARE I, increases in Xpert machine coverage contributed to a 38% increase in Xpert testing with 13,910 of the 30,138 tests detecting MTB+ and 2,229 RR-TB cases.

GxAlert

To increase the efficiency of reporting test results, the open-source GxAlert software is currently being installed in 14 CTB countries.

GxAlert is now securely connecting nearly all machines in the diagnostic network in Botswana. This allows automatic real-time reporting of test results, and more than 21,000 test results have already reported.

After a five facility pilot, Bangladesh is beginning the national rollout of the GxAlert connectivity. Bangladesh is the first country to rollout the new Inventory and Stock Management features of GxAlert and to integrate these features into the scaling-up process.

Surveillance

TB prevalence surveys and drug resistance surveys have been recently completed, are ongoing or are planned in 18 CTB countries from 2016-2018. These surveys allow these countries to use quality data for monitoring the TB epidemic as well as evidence-based program implementation and planning including the next cycle of Global Fund concept note development.

FINDING THE MISSING CASES

Specimen Transport

CTB activities are also focused on strengthening specimen transport systems to increase access to and utilization of Xpert testing.

In DRC, a total of 3,153 sputum samples were transported from health facilities (many in remote areas) to Xpert sites.

Similarly in Nigeria, nearly 18,000 sample were transported by the end of the year thereby increasing the number of Xpert tests performed by 30%.

South Sudan established sample transport from TB laboratories to the central reference laboratory for testing, resulting in a 26% increase in Xpert tests.

In Ethiopia eight cold chain vehicles were procured and specimen referral software was developed to facilitate better communication between referring and testing facilities, and the new system was monitored over a six-week period. At baseline, 363 (75%) samples were delivered to the regional laboratory within seven days. Under the new system, vehicles carrying 550 specimens traveled between duty stations and specimen referral health facilities 32 times, 24 of which (75%) achieved same day delivery of sputum samples to testing facilities. In the remaining eight, sputum samples were collected and delivered to testing sites within two days, clearly showing that the use of cold chain transportation can significantly reduce sample delivery times.

Active Case Finding (ACF)

CTB works in Afghanistan, Bangladesh, Cambodia, DRC, Ethiopia, Mozambique, and South Sudan to implement ACF initiatives including:

Case detection and treatment in prison settings - Using screening with chest X-ray and diagnostic evaluation with GeneXpert, improved sputum transport and trainings for prison guards and inmates alike on referral systems, TB prevention, and the identification of presumptive TB cases, more than 970 TB cases were diagnosed in prisons across CTB countries.

Contact investigation - A total of 2,468 TB cases were diagnosed after contact investigation was introduced or scaled-up in Afghanistan, Bangladesh, Ethiopia, Mozambique, Nigeria, South Sudan, Tanzania, and Ukraine.

Community ACF - Cambodia targeted the elderly population using pagodas as a contact point. As a result of these efforts in Cambodia a total of 26,085 presumptive TB patients among the elderly were identified and referred for further investigation and 1,217 (26%) TB patients were diagnosed and initiated on treatment.

At high-burden sites in the districts of Blantyre and Lilongwe in Malawi, TB screening in ART clinics was strengthened, and on-the-spot sputum sample collection was introduced in facilities where it hadn't previously existed.

GLOBAL FUND/NEW DRUGS & REGIMENS

New Drugs & Regimens (ND&Rs)

The Bedaquiline (BDQ) project rolled out the generic implementation planning tool and the programmatic and clinical guide for the introduction of ND&Rs. Countries are calculating drug needs, establishing basic safety monitoring measures and planning to start enrollment in the coming months.

Kyrgyzstan and Tajikistan are ready to introduce ND&R having gained approval from the Ministry of Health and have trained staff in early diagnosis, early treatment initiation, and monitoring of treatment safety and efficacy.

So far 489 individuals in 13 CTB countries have started on treatment regimens containing BDQ (including patients from Kazakhstan).

Global Fund (GF)

A major achievement was the rollout of the Global Fund Hub. The primary role of the GF Hub is to ensure that CTB contributes to the success of GF grants in CTB countries, from grant application, to grant making and ultimately to implementation.

CTB now has an overall picture of grant performance in the 21 countries where it operates and at the end of the year there were 35 signed grants across CTB countries, with the majority ending in December 2017.



WEBSITE

The Challenge TB website hosts hundreds of tools that cover all aspects of TB care and prevention:

<http://www.challengetb.org/library>

NEW TOOLS:

Supporting Local Ownership of TB Care and Prevention Initiatives

This document summarizes the lessons learned on locally owned initiatives under the TB CARE I project. It describes the key factors for success, the risk factors and the role of TA. These lessons learned can be used under the Challenge TB project by country teams, local and international consultants and staff of the coalition partners who are involved in planning, monitoring and evaluating Challenge TB projects.

http://www.challengetb.org/publications/tools/hss/Locally_Owned_initiatives..pdf

Health Care Workers Desk Guide for the Management of TB in Children - Zimbabwe

This guide is aimed at health workers managing sick children at primary care level and any health worker working in outpatients' settings. It was revised and adapted from The Union's Desk-Guide for the diagnosis and management of TB in children in consultation with key stakeholders in child health activities including specialist pediatricians, policy makers and partners in child health.

http://www.challengetb.org/publications/tools/country/Desk_Guide_Management_TB_Children_Zimbabwe.pdf

GxAlert implementation Strategy 2016 (Archive ZIP)

A guide to the implementation of GxAlert or other connectivity devices that are capable of linking diagnostic results to patient records. GxAlert allows for fast feedback of laboratory results to patients, referring clinicians, treatment centers, Ministry of Health staff and the country's existing health information systems.

http://www.challengetb.org/publications/tools/lab/GxAlert_implementation_Tool_Box_version_1_2016.zip

WANT TO FIND OUT MORE?

The full Challenge TB Year 2 Annual Report is available to download here:

<http://www.challengetb.org/reports>

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Photos:
Women miners waiting for TB screening, Zimbabwe - Paidamoyo Magaya
An MDR-TB and a pre-XDR-TB patient, Indonesia - Trishanty Rondonuwu
TB/HIV Patient, Zimbabwe - The Union
Evaluation of a child during contact investigation in Geita Region, Tanzania - Viocena Mlaki
Social Worker providing an MDR-TB patient with a food certificate to help with treatment adherence, Ukraine - Inessa Protaschlyk
Partnering with Riders for Health during an Outreach in Mkat Enin LGA, Nigeria - KNCV
MDR-TB patient on initial phase of treatment, Tanzania - Ladislaus Ritte

Challenge TB is led by KNCV Tuberculosis Foundation.



The project is implemented by a unique coalition of nine organizations:

American Thoracic Society (ATS)

FHI 360

International Union Against Tuberculosis and Lung Disease (The Union)

Interactive Research & Development (IRD)

Japan Anti-Tuberculosis Association (JATA)

KNCV Tuberculosis Foundation (KNCV)

Management Sciences for Health (MSH)

PATH

World Health Organization (WHO)

Challenge TB contributes to the WHO End TB Strategy targets:

Vision: A world free of TB

Goal: To end the global TB epidemic

By 2025: A 75% reduction in TB deaths (compared with 2015) and less than 50 cases per 100,000 population.

Global Fund:

Challenge TB assists countries with the full Global Fund life cycle, from epi-analysis and national strategic plans to concept notes and full implementation.

Overarching:

Challenge TB is a cost-effective and efficient mechanism with a particular emphasis on reaching out to vulnerable communities. It assists countries to move towards universal access through a patient-centered approach that identifies and addresses the needs of all patients including women and children.

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