

CHALLENGE TB

PERFORMANCE MONITORING REPORT

YEAR 4 JANUARY - MARCH 2018



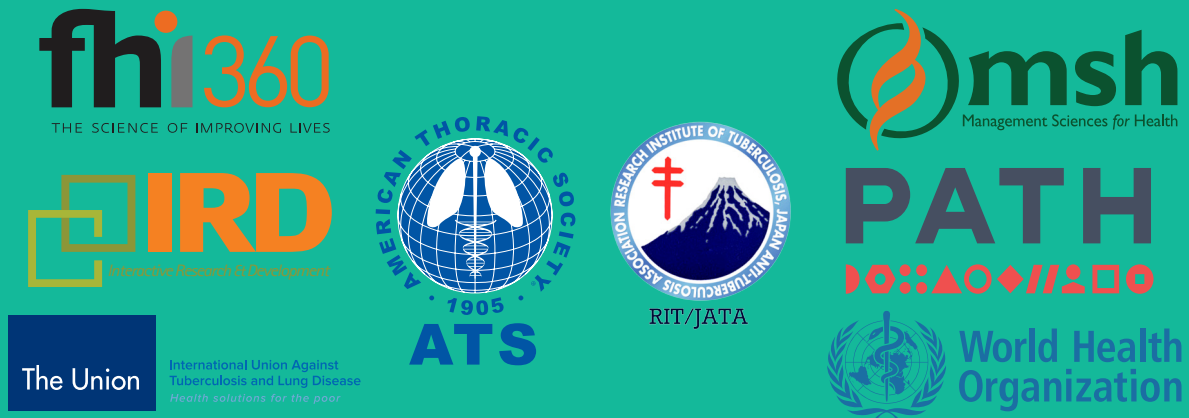
USAID
FROM THE AMERICAN PEOPLE



KNCV
TUBERCULOSIS FOUNDATION

CHALLENGE TB





Challenge TB is USAID's flagship TB care and prevention project. It is implemented by a unique coalition of nine international organizations:

LED AND MANAGED BY:

KNCV Tuberculosis Foundation

COALITION PARTNERS:

American Thoracic Society (ATS)

FHI 360

Interactive Research & Development (IRD)

International Union Against Tuberculosis and Lung Disease (The Union)

Japan Anti-Tuberculosis Association (JATA)

Management Sciences for Health (MSH)

PATH

World Health Organization (WHO)

COVER PHOTO:

Toddler Rahat who has been cured of MDR-TB, Bangladesh - Samuel Murmu

This report was made possible through the support for Challenge TB provided by the United States Agency for International Development (USAID), under the terms of cooperative agreement number AID-OAA-A-14-00029.

The authors' views expressed in this publication do not necessarily reflect the views of the United States Agency for International Development or the United States Government.

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ABBREVIATIONS

ACF	Active Case Finding	IGRA	Interferon-gamma Release Assays
aDSM	Active Drug Safety Monitoring	IPT	Isoniazid Preventive Therapy
BDQ	Bedaquiline	MDR	Multidrug-resistant
CB-DOTS	Community-Based DOTS	MoH	Ministry of Health
C/DST	Culture & Drug Susceptibility Testing	MTB	Mycobacterium Tuberculosis
CI	Contact Investigation	ND&R	New Drugs & Regimens
CP	Community Pharmacist	NTP	National TB Program
CTB	Challenge TB	PLHIV	People Living with HIV
DLM	Delamanid	PMDT	Programmatic Management of Drug Resistant TB
DOTS	Directly Observed Treatment Shortcourse	PMV	Patent Medicine Vendor
DPPM	District Public Private Mix	PPM	Public Private Mix
DR	Drug-Resistant	PTE	Pre-treatment Evaluation
DSMB	Data Safety and Monitoring Board	RR	Rifampicin Resistant
DST	Drug-Susceptibility Testing	SAE	Severe Adverse Event
EPHI	The Ethiopian Public Health Institute	SL-DST	Second-Line Drug Susceptibility Testing
GF	Global Fund	SL-LPA	Line Probe Assay for Second-Line Drugs
HCW	Healthcare Worker	SNRL	Supranational Reference Laboratory
HIV	Human Immunodeficiency Virus	STR	Shorter Treatment Regimen
ICF	Intensified Case Finding	STTA	Short-term Technical Assistance
		TB	Tuberculosis
		USAID	United States Agency for International Development



EXECUTIVE SUMMARY

Challenge TB (CTB) is the flagship global mechanism of the United States Agency for International Development (USAID) to prevent and control tuberculosis (TB).

This performance monitoring report summarizes project progress, achievements and challenges during the second quarter of Year 4, January-March

2018, across the 22 country projects, the East Africa Regional project, and five approved core projects. The total obligated amount as of March 31, 2018 is \$265.8 million, which is 50% of the ceiling amount of \$525 million. As of March 31, 2018, Year 4 workplans were approved for all countries.

PROGRESS ON KEY PERFORMANCE INDICATORS

The CTB contribution to national case notification increased by 16% compared to 10% in first quarter of year 4.

Over 52,189 TB cases were diagnosed and notified from the CTB geographical areas in 12 countries.

As of end of March 2018, 20 countries are implementing and scaling-up the use of new drugs and regimens and the shorter treatment regimen (STR). There are currently 459 patients enrolled on Bedaquiline (BDQ), 295 patients on Delamanid (DLM), and 758 patients on the STR.

Universal DST coverage was 34% and 61% for new and previously treated cases respectively; with countries like Mozambique, Tajikistan, Ukraine, Kyrgyzstan, Indonesia and Nigeria above 50% for both indicators.

The following are key interventions with a significant yield within the quarter: Contact investigation 10%, private health care facilities contribution 20%, and CB-DOTs and sample transportation and referral contributing an average of 20%. The contribution of these strategies varied significantly by country.



MAJOR CHALLENGES

Some issues were identified for individual countries for which immediate action is required:

The low uptake and non-initiation of new drugs and regimens (ND&R) in key countries such as Malawi, Tanzania, Ethiopia, Kazakhstan, and Ukraine; for reasons including inadequate DST capacity and limited access to SL-DST and sample transportation

Although utilization of GeneXpert is increasing, it still remains low for several reasons including: delays in responding to maintenance requests

Inadequate capacity to maintain the ventilation systems of Culture/DST laboratories (including biosafety cabinets) in the African region.

ACTIONS

Discuss the detail of the project performance gap during the next partner's meeting with the aim of prioritizing headquarters' response to some of the critical issues.

Organize visits to key countries in collaboration with partner headquarters and USAID backstops where feasible. The priority countries for next quarter include: India, Malawi, Tanzania, Ethiopia and DR Congo. These priority countries were selected for either low or non-commencement of STR for MDR-TB for various reasons; the objective of the visit includes capacity building for Malawi; addressing bottlenecks for slow pace of enrolment in Ethiopia, and Tanzania; and DR Congo to discuss potential

challenges for two region and national drug supply system with the NTP and USAID.

In collaboration with USAID and CTB partners discuss current status on GeneXpert and culture/DST maintenance during the partners meeting in June 2018.

Using the BDQ core project, intensify follow-up to low performance countries (i.e. Kazakhstan, Malawi, and Ukraine that are facing important challenges as described above) with ND&R rollout including data quality.

REPORT DEVELOPMENT PROCESS

This report is organized based on CTB Monitoring & Evaluation (M&E) framework, mandatory indicators, and some key process indicators. For each of the thematic areas/indicators, the number of countries is a subset of the 22 countries based on interventions approved in the country work plan and availability of data for the reporting period. Completeness of data remains a major challenge - i.e., many CTB country projects experience significant delays in obtaining the NTP data (often due to extra time NTPs need for the validation of data and approval before releasing it to partners); in

order to present a more complete picture, the data from previous quarters are pooled and presented for most of the indicators. As the calendar year 2017 data became available this quarter, 2014-2017 trends are also presented for selected indicators. Country-specific examples are provided for each of the thematic areas to illustrate an example of the achievement, lessons learned, and challenges. As a follow-up to the global trend of each indicator, disaggregation by country is provided to identify outlying countries.



WHAT IS 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), the Tuberculosis Control Assistance Program (TB CAP, 2005-2010) and Tuberculosis Control Technical Assistance (TBCTA, 2000-2005). KNCV Tuberculosis Foundation (KNCV), which also led the aforementioned programs, leads a unique and experienced coalition of nine partners implementing CTB. The coalition partners are: American Thoracic Society (ATS), FHI 360, Interactive Research and Development (IRD), International Union Against Tuberculosis and Lung Disease (The Union), Japan Anti-Tuberculosis Association (JATA), Management Sciences for Health (MSH), PATH, and the World Health Organization (WHO).

Working closely with Ministries of Health, USAID, Global Fund, the STOP TB Partnership and other key stakeholders at a global, regional, national and community level, CTB 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.

CTB is aligned with the USG strategy to prevent and control TB, and has three objectives, each with several focus areas for interventions:

Objective 1: Improved access to high-quality patient-centered TB, DR-TB & TB/HIV services by:

- Improving the enabling environment
- Ensuring a comprehensive, high quality diagnostic network
- Strengthening patient-centered care and treatment

Objective 2: Prevent transmission and disease progression by:

- Targeted screening for active TB
- Implementing infection control measures
- Managing latent TB infection

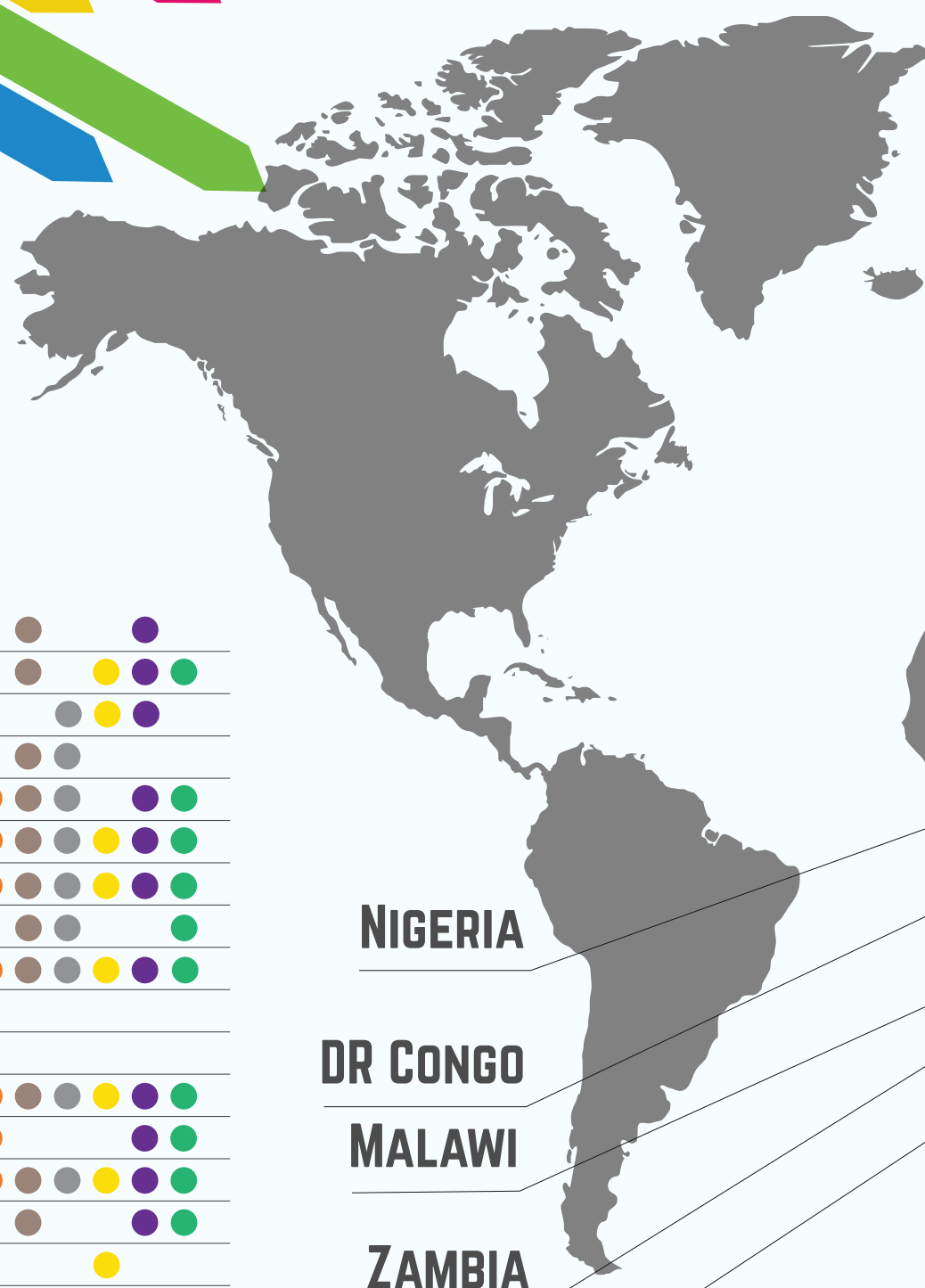
Objective 3: Strengthen TB service delivery platforms by:

- Enhancing political commitment and leadership
- Strengthening drug and commodity management systems
- Ensuring quality data, surveillance and monitoring & evaluation
- Supporting human resource development
- Building comprehensive partnerships and informed community engagement.

CTB implements projects at the country, regional, and international/global level with the majority of the project's work being done through country-specific projects. As of March 31, 2018, 22 countries were implementing CTB. At the regional level, CTB continued implementation of the East African Region project, and also continued implementation of five core projects (see page 51 for more details).



TAJIKI
UZBEKIS
UKRA



NIGERIA

DR CONGO

MALAWI

ZAMBIA

NAMIBIA

BOTSW

ZIMBA

Afghanistan	●	●	●							●
Bangladesh	●	●	●	●	●		●	●	●	●
Botswana		●	●	●			●	●	●	
Burma	●	●	●	●	●		●	●		
Cambodia	●	●	●	●	●	●	●		●	●
DR Congo		●	●		●	●	●	●	●	●
Ethiopia	●	●	●	●	●	●	●	●	●	●
India		●	●				●	●		●
Indonesia	●	●	●		●	●	●	●	●	●
Kazakhstan		●								
Kyrgyzstan		●								
Malawi	●	●	●	●	●	●	●	●	●	●
Mozambique	●	●	●	●	●	●			●	●
Namibia	●	●	●	●	●	●	●	●	●	●
Nigeria	●	●	●	●			●		●	●
Tajikistan		●						●		
Tanzania	●	●	●	●	●	●	●	●	●	●
Ukraine	●	●		●		●				●
Uzbekistan		●						●		
Vietnam		●	●		●	●	●	●	●	
Zambia		●	●	●	●		●	●	●	
Zimbabwe	●	●	●	●			●	●	●	●

Sub-Objectives

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- 11

- 1 Enabling Environment
- 2 Comprehensive, high quality diagnosis
- 3 Patient-centered care & treatment
- 4 Targeted screening for active TB

KISTAN

KISTAN

RAINE

KAZAKHSTAN

KYRGYZSTAN

AFGHANISTAN

BURMA

VIETNAM

CAMBODIA

INDONESIA

ETHIOPIA

TANZANIA

INDIA

BANGLADESH

SWANA

BABWE

- 5 Infection Control
- 6 Management of latent TB infection
- 7 Political commitment & leadership
- 8 Comprehensive partnerships and informed community involvement

- 9 Drug and commodity management systems
- 10 Quality data, surveillance and M&E
- 11 Human resource development

TRENDS PER THEMATIC AREA

OBJECTIVE 1: IMPROVED ACCESS TO HIGH-QUALITY PATIENT-CENTERED TB, DR-TB & TB/HIV SERVICES

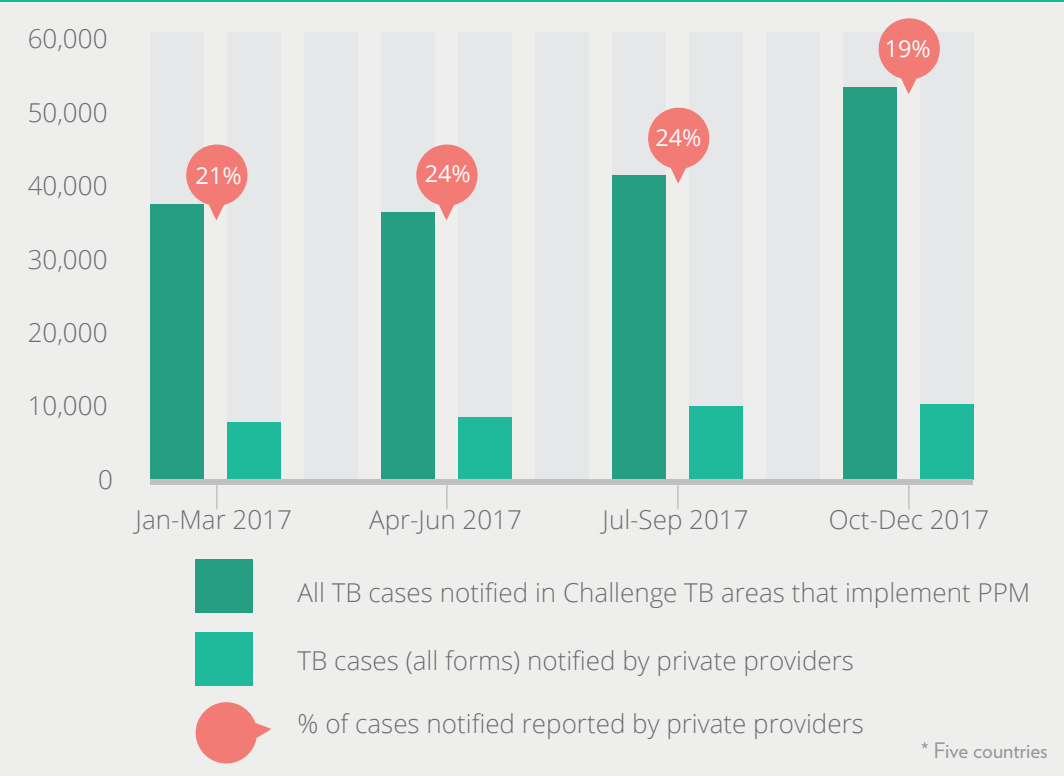
SUB-OBJECTIVE 1. IMPROVING THE ENABLING ENVIRONMENT

INTERVENTION AREA 1.1. ENHANCING PRIVATE/NON-NTP SECTOR CONTRIBUTION

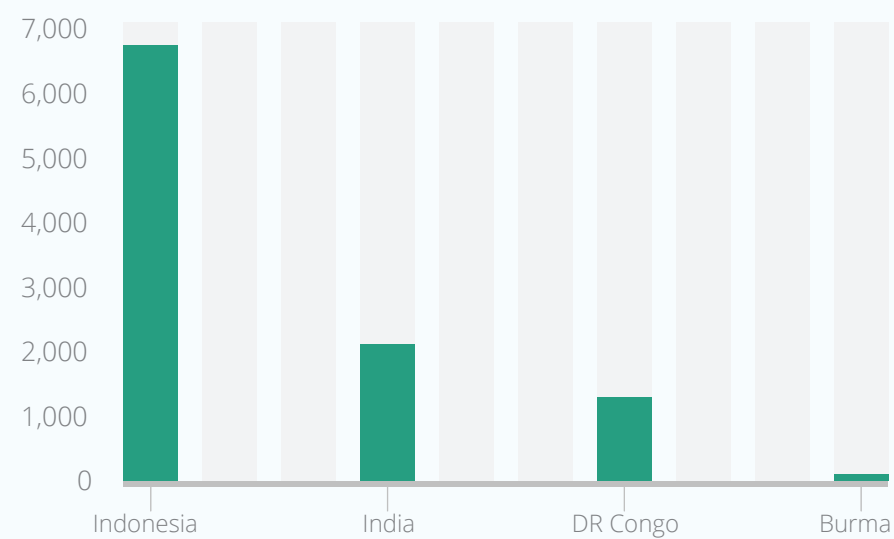
All five countries with CTB investment/activities in this area reported data on this indicator for all four quarters of 2017 (Burma, DR Congo, India, Indonesia, and Namibia); NTP data from this quarter (Jan-Mar 2018) is not complete (reported by India, Indonesia, and Namibia only). The trend for case notifications from the private sector is rising

in the aforementioned five countries, with around a 22% contribution to all notifications during 2017. As for individual countries, Indonesia is the country with the most patients notified by private providers in Oct-Dec 2017.

THE NUMBER AND PERCENTAGE OF CASES (ALL FORMS) NOTIFIED BY PRIVATE PROVIDERS IN CTB COUNTRIES (CTB AREAS COMBINED, CTB DATA 2017*)



THE NUMBER OF CASES (ALL FORMS) NOTIFIED BY PRIVATE PROVIDERS IN CTB AREAS (CTB DATA OCT-NOV 2017)

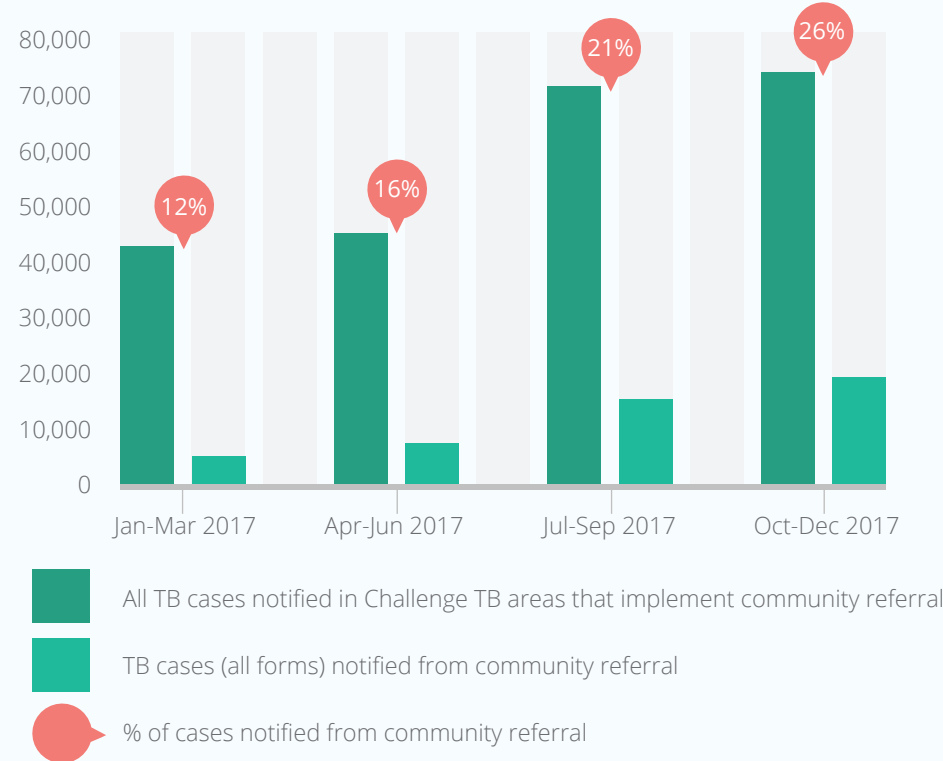


INTERVENTION AREA 1.2 CB-DOTS/COMMUNITY REFERRALS

CTB continues to invest in and implement activities in this area in eight countries. Data was reported for 2017 from six countries (Afghanistan, DR Congo, Mozambique, Nigeria, South Sudan (Jan-Jul 2017 data only as the project was closed by the end of Year 3), and Tanzania; data was not reported from Zambia and Uzbekistan); data for Jan-Mar 2018 is not complete because of missing NTP approved

data (reported by Afghanistan, Mozambique, and Tanzania only). There was an increasing trend in terms of the contribution to notifications by CB-DOTS/community referrals during 2017. The highest number of cases from community referrals were reported in Mozambique, Nigeria, and DR Congo in Oct-Dec 2017.

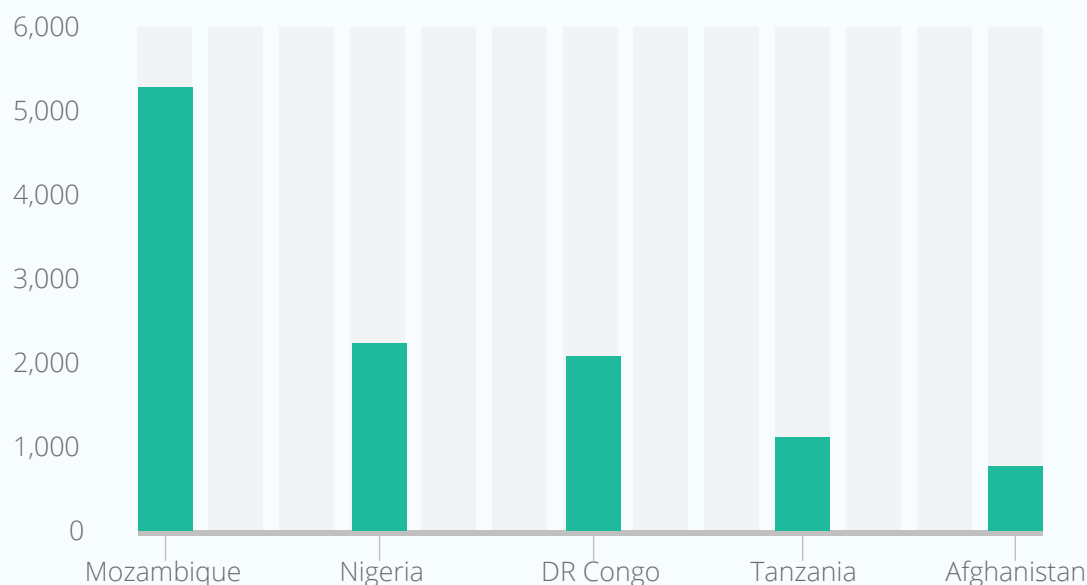
THE NUMBER AND PERCENTAGE OF CASES (ALL FORMS) NOTIFIED THROUGH CB-DOTS IN CTB COUNTRIES (CTB AREAS COMBINED, CTB DATA 2017)*



* Six countries



THE NUMBER OF CASES (ALL FORMS) NOTIFIED THROUGH CB-DOTS IN CTB AREAS (CTB DATA OCT-DEC 2017)



COUNTRY HIGHLIGHTS

Indonesia - This quarter, the NTP granted permission to rollout the implementation of District-based Public-Private Mix (DPPM) at the primary and secondary health facilities in CTB-supported districts, in parallel with the finalization of the DPPM National Guidance and Action Plan. CTB supported the establishment of 22 DPPM networks by strengthening the role of the Puskesmas (community health clinics) as the coordinator in its catchment area to ensure the effective engagement with private providers. This was done through TB update workshops, the establishment of TB teams, and the introduction of health network mapping tools. In preparation for the workshops, the CTB team facilitated self-assessment of TB services and NTP performance at the Puskesmas, using a benchmarking tool. As a result of working with the private sector in 2016 and especially 2017, which was first focused on private hospitals, TB notification in the 16 CTB districts increased by 66% in 2017 (n=98,276) compared to 2015 (n=59,113). The total private sector contribution to case notification has nearly doubled in absolute numbers, increasing from 22% (13,116) of total notification (59,113) in 2015 to 27% (26,534) of total notification (98,276) in 2017 (as reported by the end of March 2018).

Nigeria - To ensure access to quality TB care, CTB continued to engage Patent Medicine Vendors (PMVs) and Community Pharmacists (CPs) for TB screening and referral services across 112 supported Local Government Areas in 14 states. In this

reporting period, a total of 2,483 PMVs/CPs were operational, they identified 11,403 presumptive TB cases, of which 875 were diagnosed and linked to TB care (8% yield). Compared to the previous quarter (Oct-Dec 2017), this result represents a 1% increase in the number of TB patients diagnosed.

Afghanistan - From Jan-Mar 2018, 618 health facilities implemented CB-DOTS in 15 CTB intervention provinces. In addition, 14,655 community health workers helped the NTP to identify and refer presumptive TB patients to diagnostic centers. As a result, community health workers/members identified 10,022 presumptive TB patients and health care staff tested all (100%) for acid-fast bacilli (AFB). Of the patients examined, 756 (8%) were diagnosed as TB cases; 723 (96%) TB cases were linked to treatment.

Mozambique - Local CTB partners began implementing CB-DOTS activities during the reporting period after finalizing sub-awards. They reached 57,958 people with TB information through different CB-DOTS approaches including house-to-house visits and monthly cough days, outreach, and contact investigations, amongst other interventions. A total of 5,090 TB cases were diagnosed following referral or other services provided through CB-DOTS activities; of which 2,391 (47%) were bacteriologically confirmed TB. House-to-house visits and monthly cough days contributed to 4,445 (87%) of the 5,090 TB cases detected.

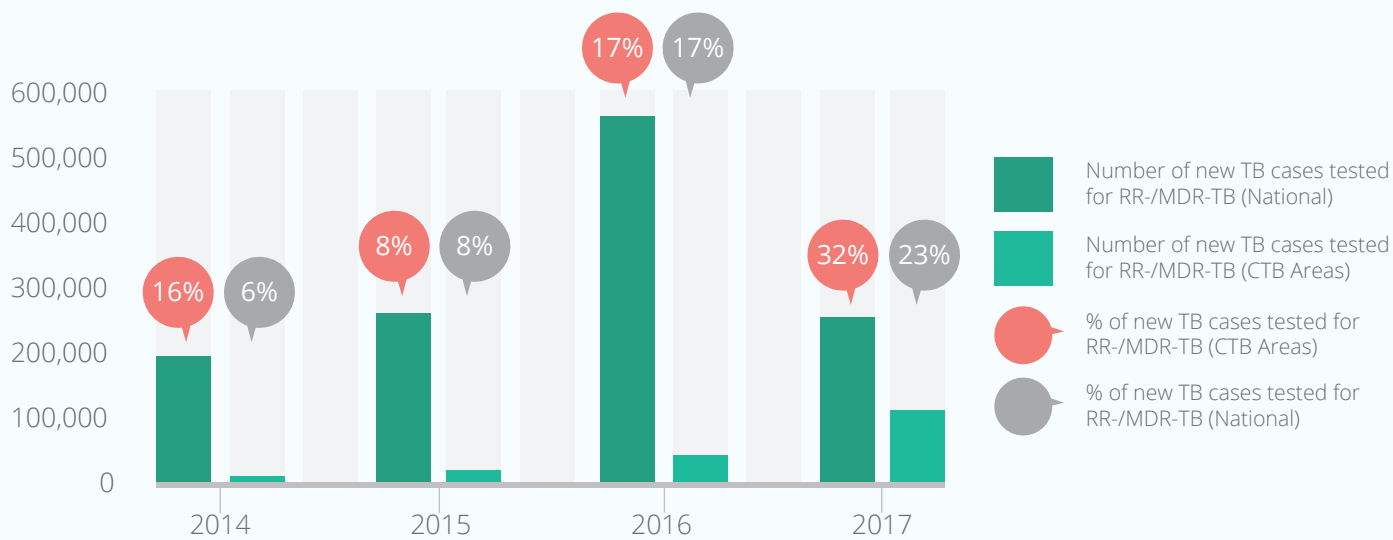
SUB-OBJECTIVE 2. ENSURING A COMPREHENSIVE, HIGH QUALITY DIAGNOSTIC NETWORK

INTERVENTION AREA 2.3 IMPROVED PERFORMANCE ON RR-/MDR-TB TESTING

Complete data for this indicator for 2017 is available for 14 of the 22 CTB countries. Based on the pooled data of these countries, the absolute numbers and proportion of new patients tested for resistance continued to increase - in 2017, 32% (109,466) of new patients in CTB areas were tested for RR,

a significant increase from 2016 when only 15% (43,300) of patients were tested for RR; in CTB-supported areas RR-/MDR-TB testing coverage is higher compared with the national average (23% vs. 17%).

RR-/MDR-TB TESTING COVERAGE FOR NEW CASES IN CTB COUNTRIES
(NATIONAL LEVEL AND CTB AREAS COMBINED, 2014-2016 WHO DATA, CTB DATA 2017*)



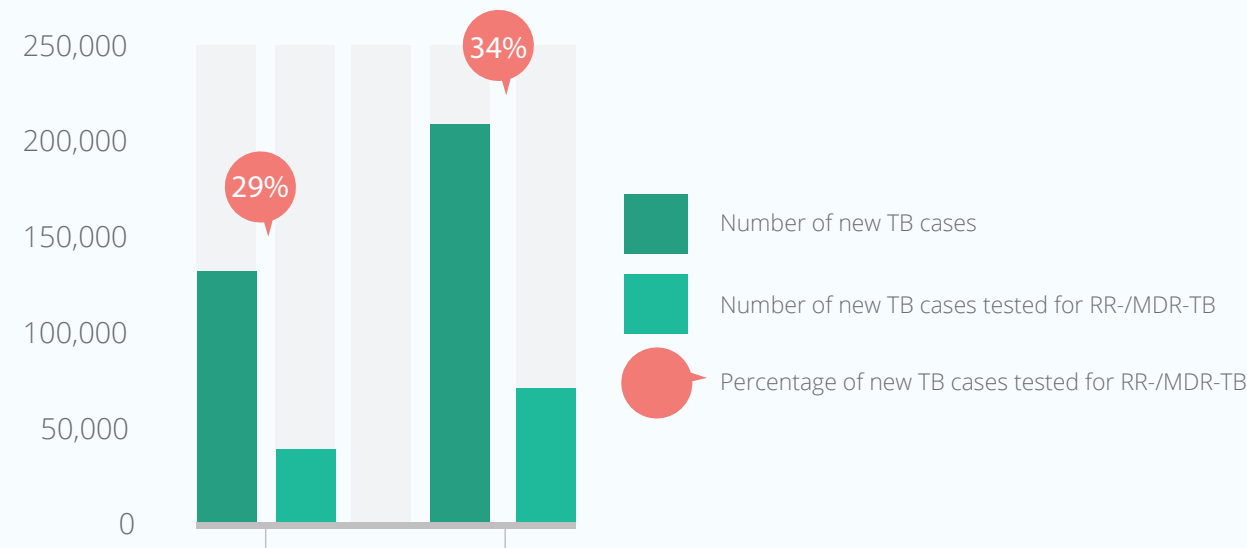
* 2014 – three countries reported data for CTB areas; 13 countries national; 2015 – eight countries for CTB areas; 16 countries national; 2016 – 11 countries for CTB areas; 17 countries national; 2017 – 14 countries for CTB areas; 16 countries national.



If analyzed semi-annually (based on the frequency of reporting on this indicator), there was a significant increase in the number of new TB cases reported in CTB areas during the second half of 2017, which was

accompanied by an increase in the proportion of new cases tested for RR (34% in Jul-Dec vs. 29% in Jan-Jun).

RR-/MDR-TB TESTING COVERAGE FOR NEW CASES IN CTB COUNTRIES
(CTB AREAS COMBINED, CTB DATA 2017*)

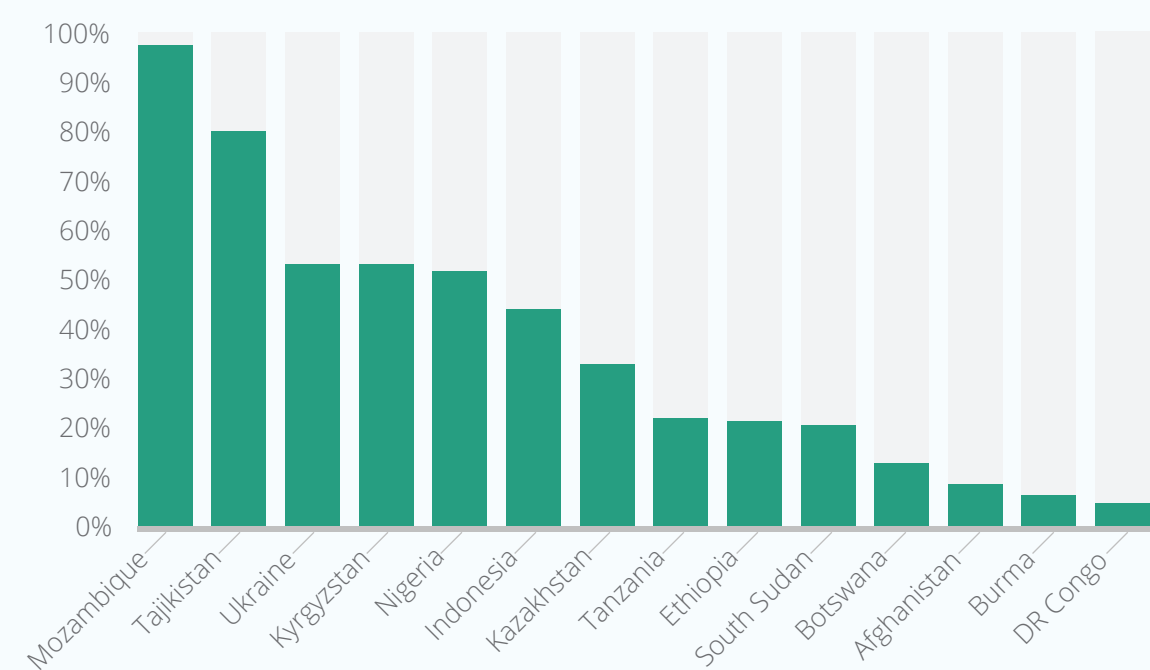


* 14 CTB countries

Of the 14 CTB countries that presented complete data for Jul-Dec 2017, the highest proportion of RR-/MDR-TB testing coverage for new cases in CTB areas was reported in Mozambique

and Tajikistan, however, the 90% coverage in Mozambique is very high, which will be validated by the country team next quarter

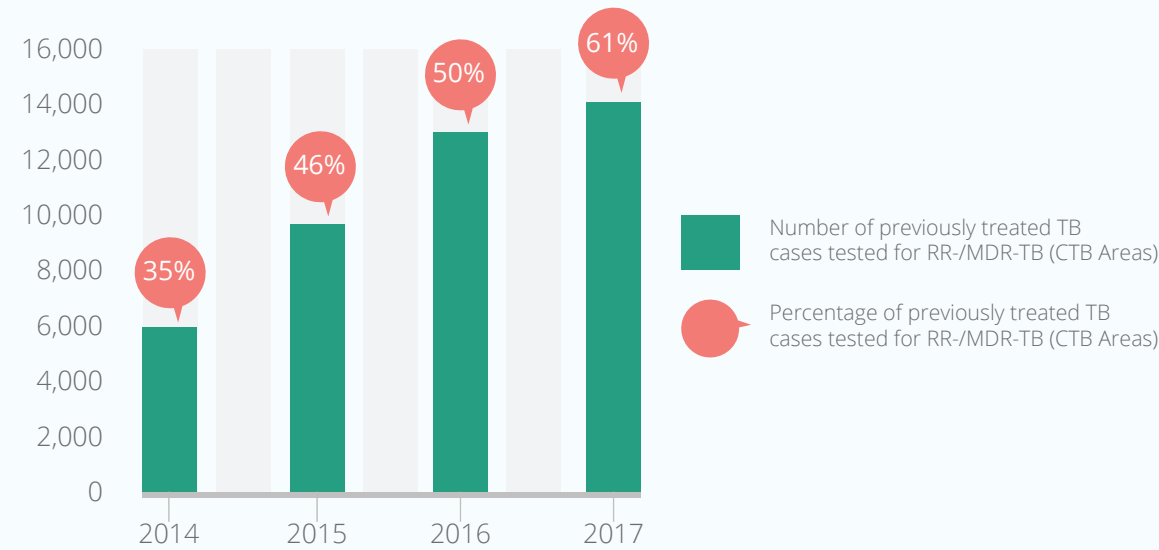
RR-/MDR-TB TESTING COVERAGE FOR NEW CASES IN CTB AREAS
(CTB DATA JUL-DEC 2017)



Complete data for RR-/MDR-TB testing coverage for previously treated cases for 2017 are available for 10 of the 22 CTB countries. The absolute numbers and the proportion of previously treated TB cases tested for RR-/MDR-TB continues to increase in

CTB areas, with 61% of previously treated patients tested RR-/MDR-TB in 2017 compared to 47% in 2016 and 35% at the beginning of the project in 2014.

NUMBER AND PERCENTAGE OF PREVIOUSLY TREATED TB CASES TESTED FOR RR-/MDR-TB IN CTB COUNTRIES (CTB AREAS COMBINED, CTB DATA 2014-2017*)



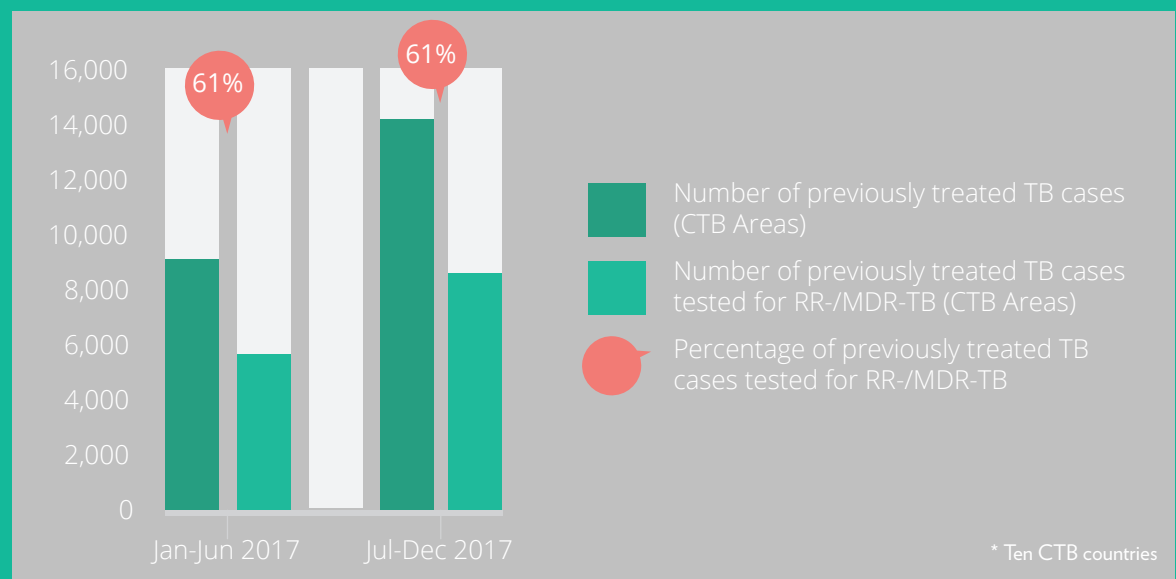
* Six CTB countries in 2014; 10 CTB countries in 2015; 10 CTB countries in 2016; 12 CTB countries in 2017

During the second half of 2017, there was a significant increase in the number of previously

treated patients reported; the proportion of those tested for RR-/MDR-TB was stable at 61%.



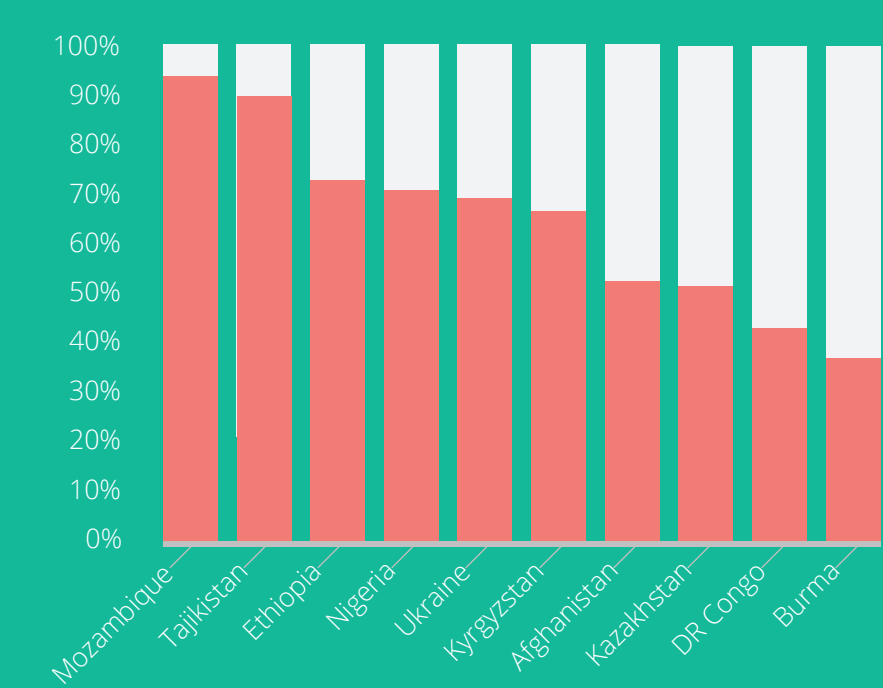
NUMBER AND PERCENTAGE OF PREVIOUSLY TREATED TB CASES TESTED FOR RR-/MDR-TB IN CTB COUNTRIES
(CTB AREAS COMBINED, CTB DATA 2017)*



Of the ten countries that presented complete data for Jul-Dec 2017, the highest proportions of RR-/MDR-TB testing coverage for previously treated cases in CTB areas were reported in Mozambique,

Tajikistan, and Ethiopia, however, as previously stated, the figures for Mozambique will be validated by the country team next quarter.

PERCENTAGE OF PREVIOUSLY TREATED TB CASES TESTED FOR RR-/MDR-TB IN CTB AREAS
(CTB DATA JUL-DEC 2017)



COUNTRY HIGHLIGHTS

India - CTB expanded access to rapid diagnostics through the use of GeneXpert machines in public sector labs with outreach to key pediatric centers in six metropolitan areas. Overall, from April 2014 to March 2018, a total of 94,415 presumptive pediatric TB and DR-TB patients have been tested under this intervention. Of these, 6,270 (7%) were diagnosed as Xpert-TB positive and 545 (9%) were found to be RR. Around half of the tested specimens were non-sputum. Of the total TB cases diagnosed under the project so far, 6,045 (89%) of the patients were initiated on treatment.

Afghanistan - CTB assisted in the expansion of access to GeneXpert technology in 15 provinces.

From Jan-Mar 2018, 11 GeneXpert machines were installed; during Jan-Mar 2018, 1,843 Xpert tests were conducted. Of these 1,058 (57%) were notified as Mycobacterium Tuberculosis (MTB) detected and 66 (6%) diagnosed as RR/MDR-TB. The NTP initiated treatment in all 66 RR-TB patients. The NTP with technical support from CTB will update the standard operating procedures for case detection to increase the demand for GeneXpert tests in Apr-Jun.

Uzbekistan - Four GeneXpert machines were procured by CTB and installed in CTB pilot facilities in Tashkent and the region of Fergana.



Unbeknownst to his family, seven-month-old Rahat had already been exposed to TB. He got it from his grandfather who had recently died of the disease.

The first signs of trouble came when Rahat, a normally happy baby, stopped smiling. He lost the usual playfulness of a healthy child, rapidly lost weight, and developed a large swelling on the left side of his neck. His parents were very worried, as they knew that this type of swelling was a possible sign of TB.

Rahat's parents went to the pharmacy and purchased some generic antibiotics to treat his symptoms, but his condition continued to worsen each day. They sought help at the Dhaka Population Services and Training Center (PSTC), where Rahat was referred to the National Institute of Chest Disease and Hospital (NICDH). There, the doctors used a special diagnostic method called fine needle aspiration cytology to find out what was wrong. Rahat's parents learned the terrible news, that their ten-month-old son had TB.

Rahat was immediately started on treatment, but after two months his condition had not improved. He was taken back to the NICDH, but this time he went to the drug-resistant TB unit. There, a team of experts trained and supported by USAID-funded Challenge TB project assessed Rahat's response to treatments and referred him for GeneXpert testing at the National Tuberculosis Reference Laboratory. This test eventually confirmed that Rahat was suffering from drug-resistant TB, which is why the initial course of treatment had no effect.

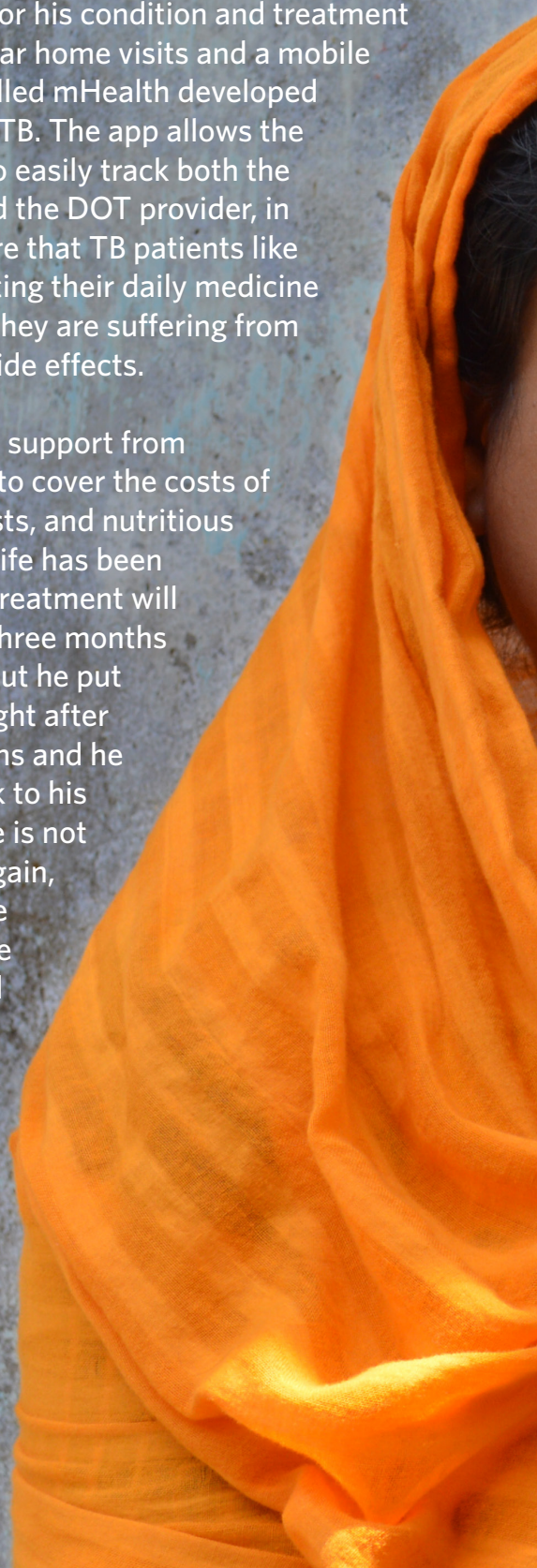
"I will never forget the 12 of July, 2016. That was the day the doctor told me that my child had drug-resistant TB. I walked home from the hospital in a state of bewilderment and shock. How could my child have drug-resistant TB?" - Rahat's mother, Nasrin

Given how young Rahat was and the fact that he only weighed seven kilograms, the team of doctors treating him were justifiably worried that he would not be strong enough to fight this devastating disease. To give him the best possible chance of survival, they set up community-based treatment that allowed Rahat to receive his medicines at home and to continue being breastfed by his mother.

Challenge TB's community TB coordinators closely monitor his condition and treatment through regular home visits and a mobile phone app called mHealth developed by Challenge TB. The app allows the coordinator to easily track both the treatment and the DOT provider, in order to ensure that TB patients like Rahat are getting their daily medicine and whether they are suffering from any adverse side effects.

With financial support from Challenge TB to cover the costs of check-ups, tests, and nutritious food, Rahat's life has been restored. His treatment will take another three months to complete, but he put on 3 kg of weight after just two months and he is already back to his former self. He is not only smiling again, but he is active and playing like any other child his age.

Finding more children with TB is a high priority for the Challenge TB project in Bangladesh.



In 2017, more than 240,000 children were screened for TB at six selected facilities and a total of 404 were found to have TB and put on treatment. In the first three months of 2018, a total of 27 children with drug-resistant TB have also been diagnosed and all of them have been put on treatment and are doing well.

DHAKA TODDLER BEATS DRUG-RESISTANT TB

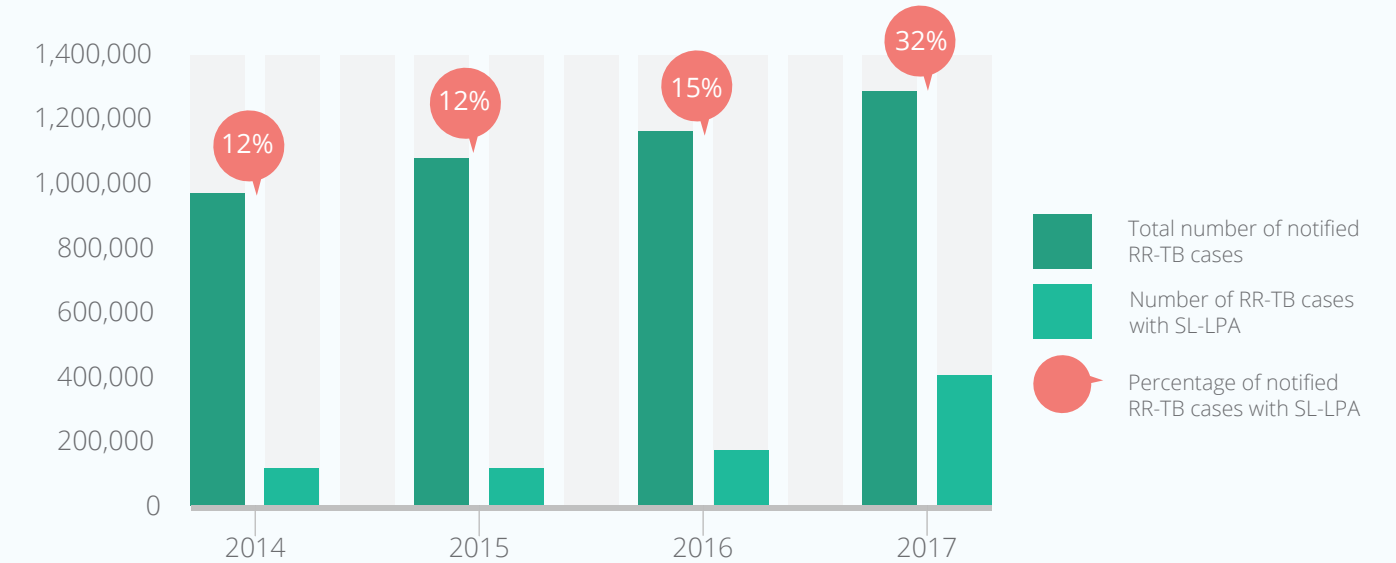


EXPANDING CAPACITY FOR SECOND-LINE DRUG SENSITIVITY TESTING

Complete data for SL-LPA testing coverage for 2017 was available for 15 CTB countries. The number of patients tested with SL-LPA in 2017 more

than doubled in compared to 2016, the proportion of notified RR-TB patients that benefited from the test climbed from 15% to 32% from 2016 to 2017.

SL-LPA COVERAGE
(NATIONAL LEVEL COMBINED, CTB DATA 2014-2017*)



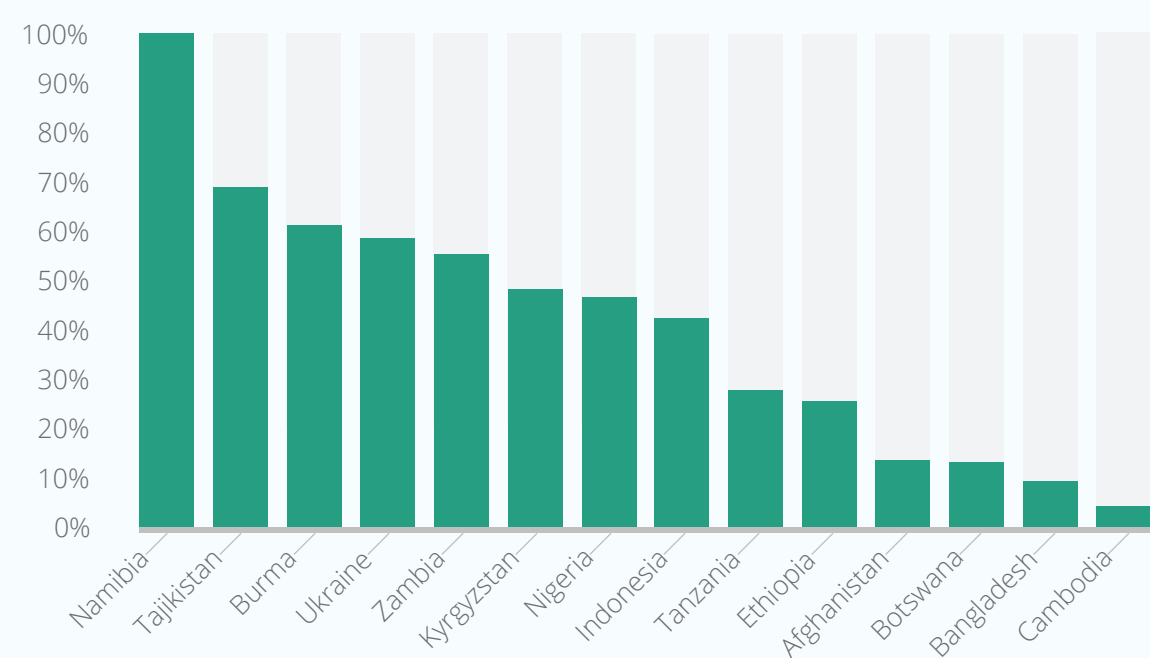
* 2014 – 12 countries; 2015 - 14 countries; 2016 – 15 countries; 2017 – 15 countries.



Fourteen CTB countries reported complete data for the period of Jul-Dec 2017, of those Namibia managed to test 100% (240 out of 240) of the

RR-TB notified patients with SL-LPA, followed by Tajikistan (69%), Burma (62%), and Ukraine (58%).

SL-LPA NATIONAL COVERAGE
(CTB DATA JUL-DEC 2017)



COUNTRY HIGHLIGHTS

Ethiopia - In order to facilitate universal access to DST, including SL-LPA at the central and regional levels, CTB supports the NTP to develop a well-established specimen referral system. Currently the specimen referral service is fully outsourced to the Ethiopian Postal Service. According to the Ethiopian Public Health Institute (EPHI) specimen referral plan, 3,500 health facilities are to be linked to 300 GeneXpert testing sites. To date, 136 GeneXpert machines are installed and functional, 140 are being installed, and 2 are for backup. On top of the testing sites, the system links 50 Treatment Initiation Centers to eight culture/LPA laboratories for first- and second-line DST services. In the quarter, SL-LPA testing was done in one national (EPHI) and seven regional for 105 DR-TB patients, with one pre-XDR and four XDR-TB patients being identified and linked to care.

Eritrea, Ethiopia, Kenya, Somalia, Sudan, South Sudan, Tanzania, and Uganda) were trained on LPA with an emphasis on SL-LPA.

Tanzania - CTB supported the scale-up of rapid diagnostic tests for the detection of TB, MDR/XDR-TB by introducing LPA (GenoType MTBDRsl) for molecular detection of second-line drug resistance in three zonal TB laboratories namely Kibong’oto Infection Disease Hospital, Mbeya Referral Hospital, and the Central TB Reference Laboratory. The support includes procurement and distribution of first- and second-line molecular HAIN DST reagents, machine maintenance and calibration, and the training laboratory staff and clinicians. These activities have played a critical role in the implementation of the STR in the country.

East Africa Region - CTB supported the Supranational Reference Laboratory (SNRL) in Kampala in piloting the developed laboratory curriculum on rapid diagnostics for first- and second-line LPA. A six-day workshop was held at the SNRL and a total 20 participants (six local and 14 international) from nine countries (Burundi,

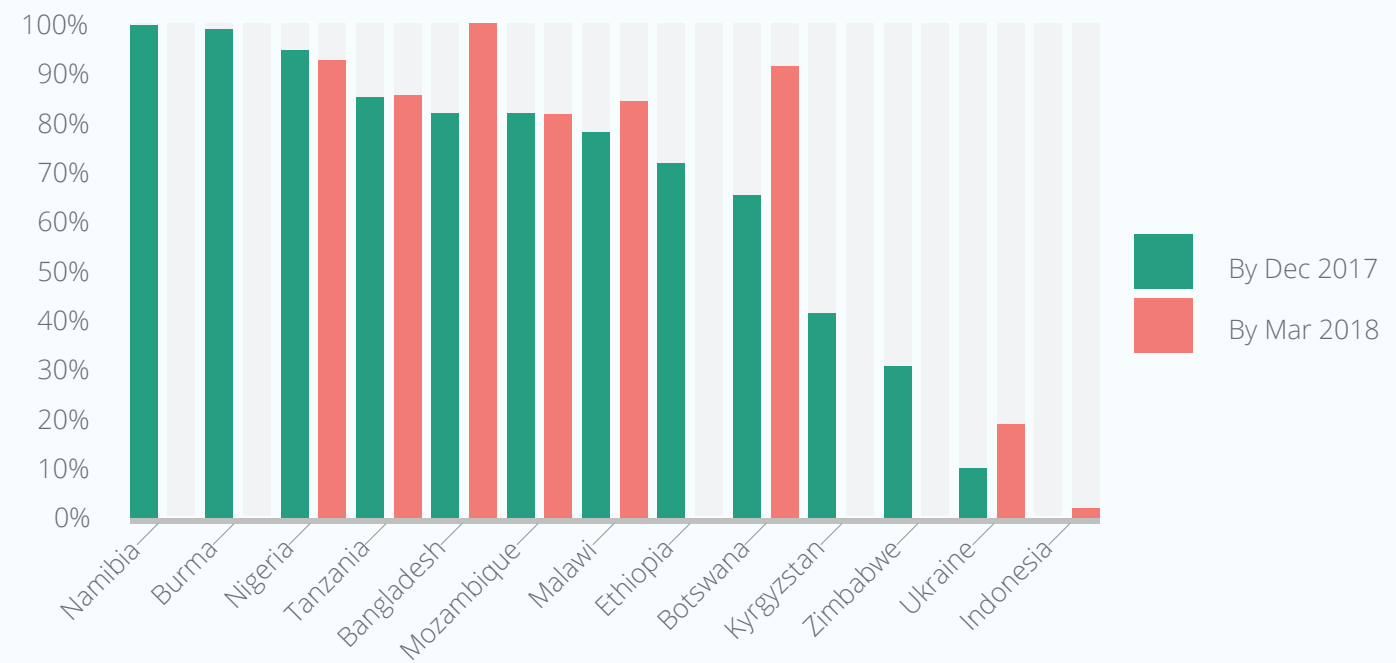


INTERVENTION AREA 2.4 ACCESS, OPERATION AND UTILIZATION OF GENEXPERT

CTB supports the establishment and strengthening of diagnostic connectivity systems in 14 countries; complete data for 2017 are reported from 12 CTB countries (Jan-Mar 2018 data are reported from eight countries only. Three countries, Namibia, Burma, and Nigeria managed to close 2017 with

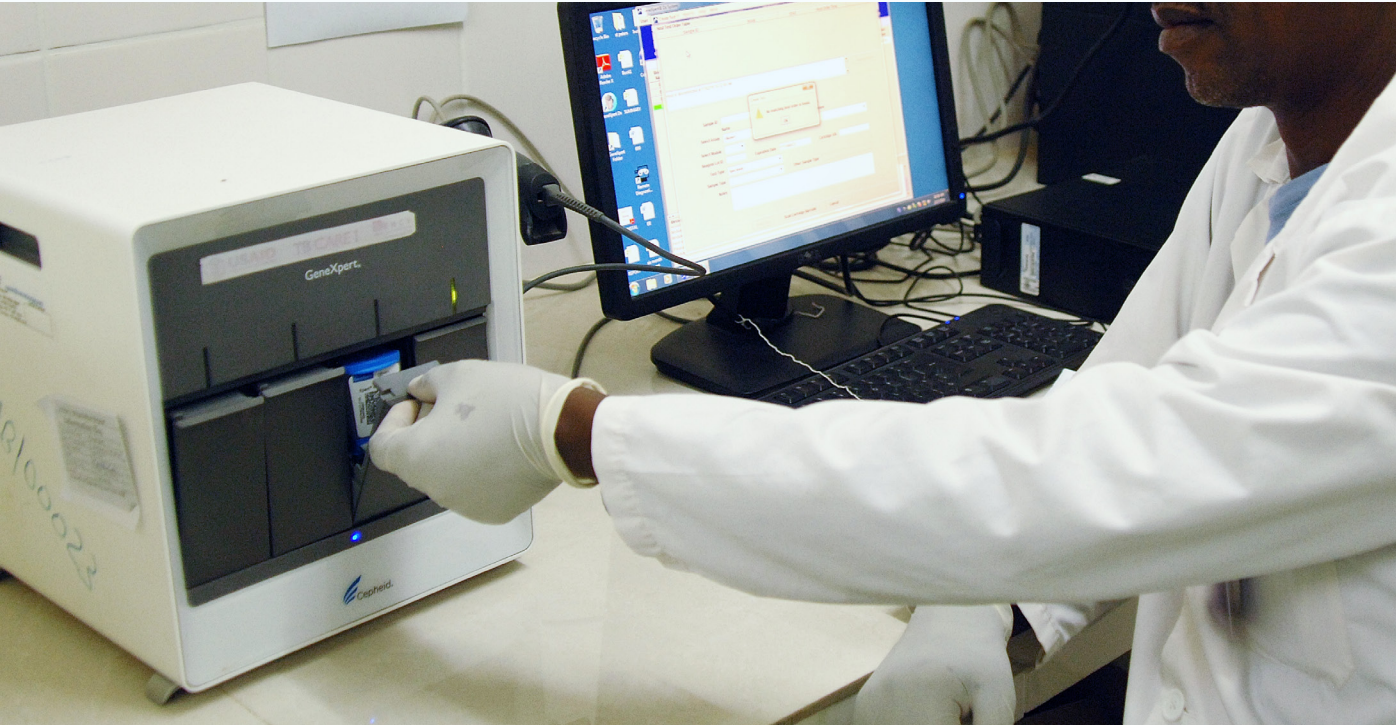
100%, 99% and 94% of GeneXpert machines connected to a connectivity system, respectively; similarly, 100% of GeneXpert machines were linked to a connectivity system in Bangladesh by the end of March 2018.

THE PERCENTAGE OF GENEXPERT MACHINES CONNECTED TO A CONNECTIVITY SYSTEM IN CTB COUNTRIES

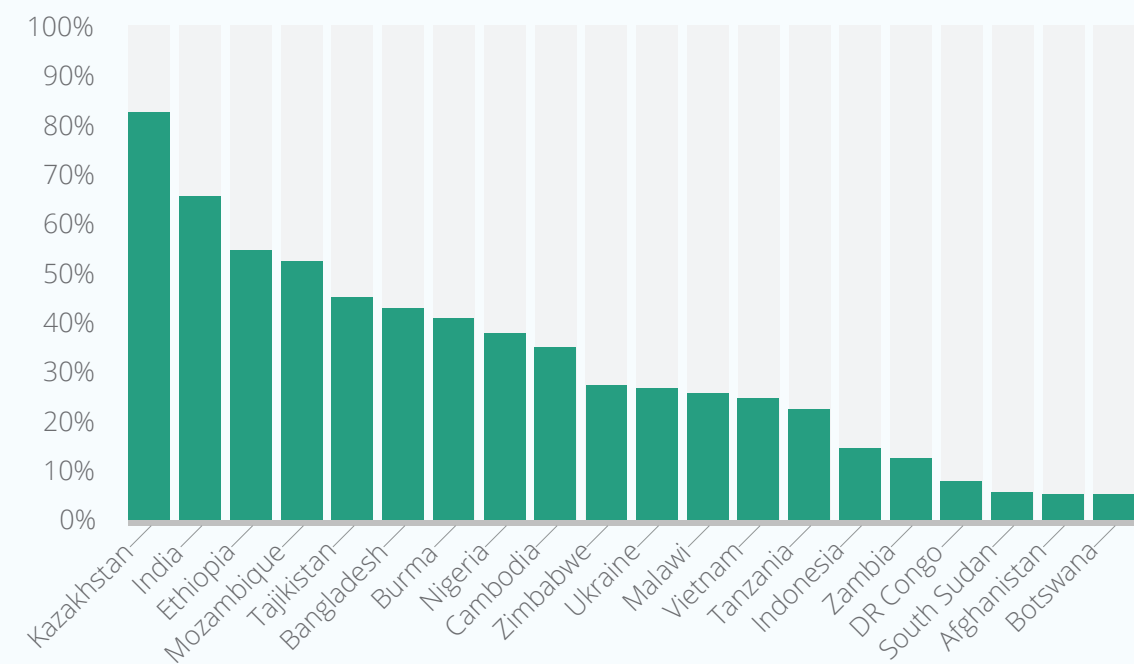


Complete data for Xpert utilization rates for 2017 are reported by all 22 countries (Jan-Mar 2018 data are reported from eight countries only). Based on this data, Xpert utilization increased from 18% in

2016 to 32% in 2017 and it doubled from Jan-Jun to Jul-Dec 2017. As for individual countries, the highest rates were reported in Kazakhstan (83%), India (66%), Ethiopia (55%), and Mozambique (53%).



UTILIZATION RATE OF XPERT IN CTB COUNTRIES
(CTB DATA, JUL-DEC 2017)



COUNTRY HIGHLIGHTS

Mozambique - With the support of CTB and others, activities took place to integrate all the relevant TB test results into one platform (OpenLDR) located at the Ministry of Health (MoH). Support was provided to publish an RFP for the development of a user interface for this platform to allow the NTP to see a comprehensive and clear picture of TB testing nationwide, including GeneXpert, LPA, and culture with DST.

Botswana - All GeneXpert machines are connected to GxAlert via the Government Data Network and not via mobile router. Challenges were observed with the connection to this network which meant several GeneXpert machines were not reporting to GxAlert. Site visits took place to solve issues related to connection. In some sites network cables had to be reconnected, at others the GxConnect application had to be reinstalled or reconfigured. SystemOne addressed support tickets for GeneXpert machines that were connected to the platform but did not show on the dashboard. During site visits, basic technology and connection training was given to the lab technician and/or IT coordinator so these technical issues will be resolved more quickly if they occur again.

India - CTB was requested to provide support for countrywide implementation of a data connectivity system capable to transmit data from CBNAAT devices (GeneXpert) to NIKSHAY (online TB database) in the Central TB Division, MoH, and the Government of India. As a preparatory step, CTB developed an RFP document that lists the: (I) technical, (II) business, (III) implementation, (IV) organizational, and (V) budget requirements

of a proposed solution. Further steps will be taken based on consultations between the CTB Country Director and the Revised National TB Control Program (RNTCP).

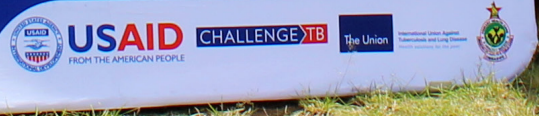
Bangladesh - CTB installed the GxAlert system for an additional 11 GeneXpert machines from Jan-Mar 2018; the connection of all 39 machines to the GxAlert system was supported through CTB. The project also provided support to the NTP for the scale-up of this system for other GeneXpert machines which were procured through the GF. By February 2018, the percentage of functional modules and machines was 96% (220 out of 228 modules) and 100% (39 out of 39 machines), respectively. From Jul-Dec 2017, a total of 35,394 TB presumptive patients were tested with GeneXpert.

Indonesia - The number of Xpert tests increased significantly during the reporting period, with 81,735 tests over the first three months of 2018, which is equal to 87% of the tests conducted between Jul-Dec 2017. This quarter, CTB provinces contributed around 75% of Xpert testing performed in the country with a utilization rate of 39%. The CTB laboratory team continues to monitor performance and provide on the job mentoring where needed. This quarter, the proportion of non-functional GeneXpert modules and error rates were lower than 4% and 2%, respectively. Nationwide, 511 GeneXpert machines are operational with a utilization rate of 28% (compared to 20% from Oct-Dec 2017). Access to high quality diagnostics for presumptive TB is slowly expanding. Another 425 GeneXpert machines are in storage and will be installed this year.





A
ZIMBABWE
FREE OF
TB

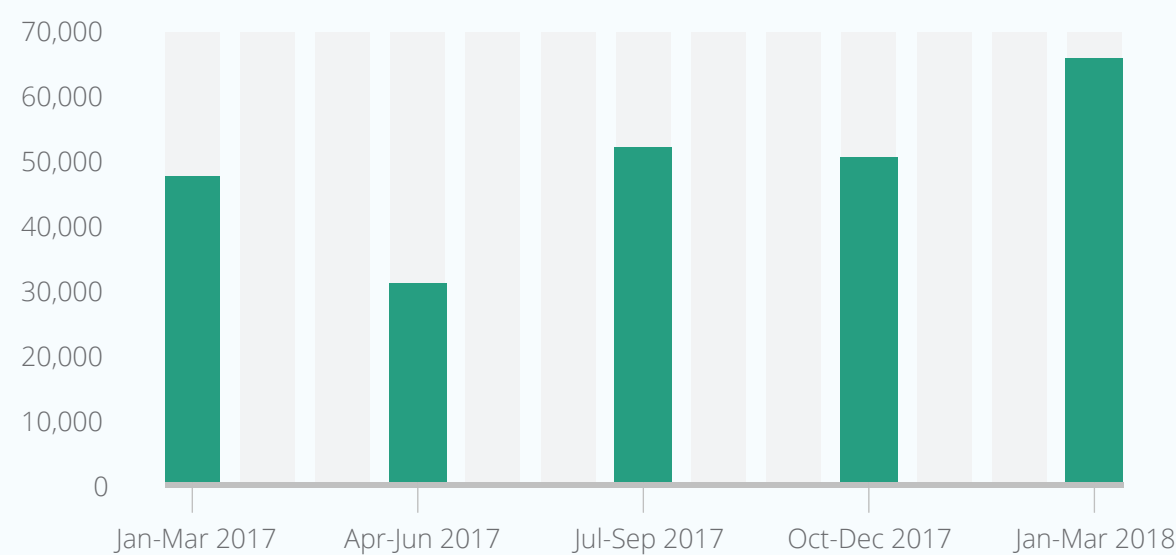


INTERVENTION AREA 2.6 STRENGTHENING SPECIMEN TRANSPORT SYSTEMS

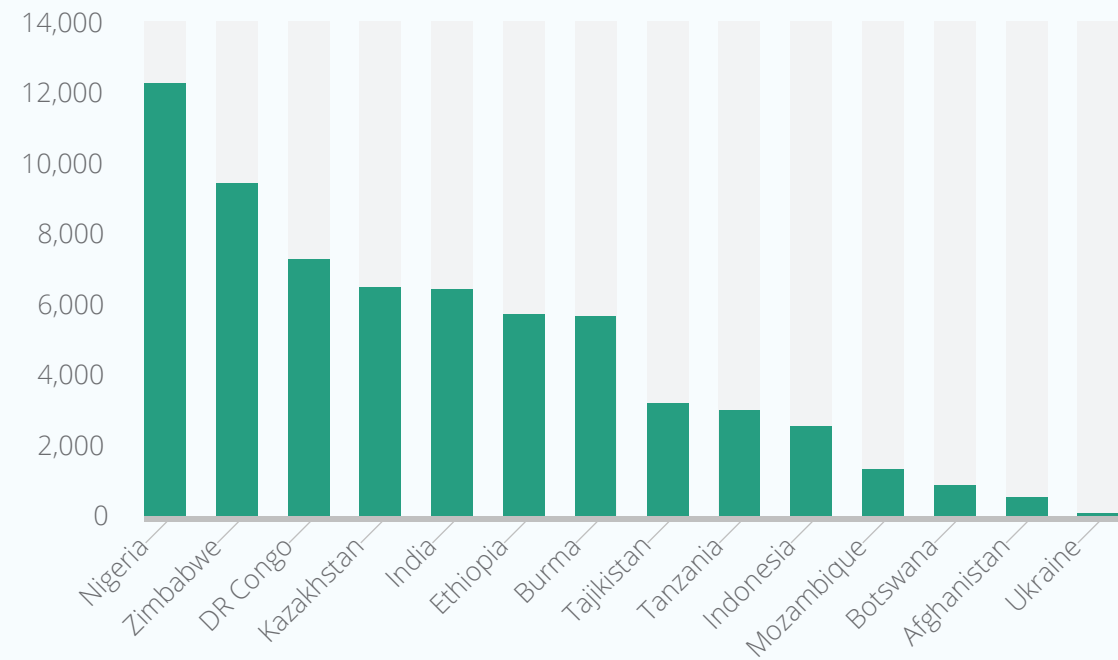
CTB plays an increasing role in supporting and strengthening specimen transport systems in 15 of the 22 CTB countries. Based on the data from 14 countries, the number of specimens transported in CTB areas is gradually increasing over the past quarters, with a little over 65,000 specimens transported from Jan-Mar 2018. The graph below presents the number of specimens transported in

individual countries from Jan-Mar 2018, with Nigeria (12,424), Zimbabwe (9,548), DR Congo (7,351), Kazakhstan (6,590), and India (6,531) representing the largest proportion of the Jan-Mar 2018 total. As data on specimen transport are often not available/ reported at the national level, a comparison between CTB and the national-level is difficult to measure across all 14 countries.

THE NUMBER OF SPECIMENS TRANSPORTED FOR TB DIAGNOSTIC SERVICES
(CTB AREAS COMBINED, CTB DATA 2017-2018)



THE NUMBER OF SPECIMENS TRANSPORTED FOR TB DIAGNOSTIC SERVICES WITH PROJECT SUPPORT IN CTB AREAS
(CTB DATA JAN-MAR 2018)



COUNTRY HIGHLIGHTS

Nigeria - CTB through ‘Riders for Health’ ensured the transportation of 9,778 sputum samples to GeneXpert sites in seven states (Rivers, Cross River, Akwa Ibom, Lagos, Kano, Bauchi, and Niger); out of these samples, 9,758 were tested, and 844 were diagnosed as MTB positive including 52 RR cases. In the other seven states, CTB supported the “hub and spoke” model of sample transportation through HCWs, which resulted in the transportation of 2,646 sputum samples to GeneXpert sites, totaling 12,424 transported samples and 12,053 tested samples during the reporting quarter, resulting in 281 MTB positives including 29 RR cases.

Tajikistan - CTB established a sample transportation system in seven new sites in the Khatlon region by providing the required conditions for the collection, storage, and transportation of samples. This included the training of 192 TB and PHC health providers (managers and sputum collectors) who are involved in the process. With CTB support, a total

of 3,235 samples were delivered to TB laboratories and tested (27% of national) and 576 TB cases (41% of national) were found using rapid testing methods. In the next quarter, CTB plans to expand the sample transportation system to two more districts, Varzob and Rogun, so that all 16 districts have a transportation system in place by the end of the Year 4.

Zimbabwe - CTB continued to support a dedicated specimen transportation system to improve access to TB diagnostic and treatment follow-up services. A total of 75,255 samples were transported from Jan-Mar 2018, translating to 25,085 samples per month, compared to 19,896 per month in the previous quarter. Of the total samples transported (not only TB specimens), 9,548 (13%) were TB specimens, more than double the 4,067 (10%) transported in the previous quarter.



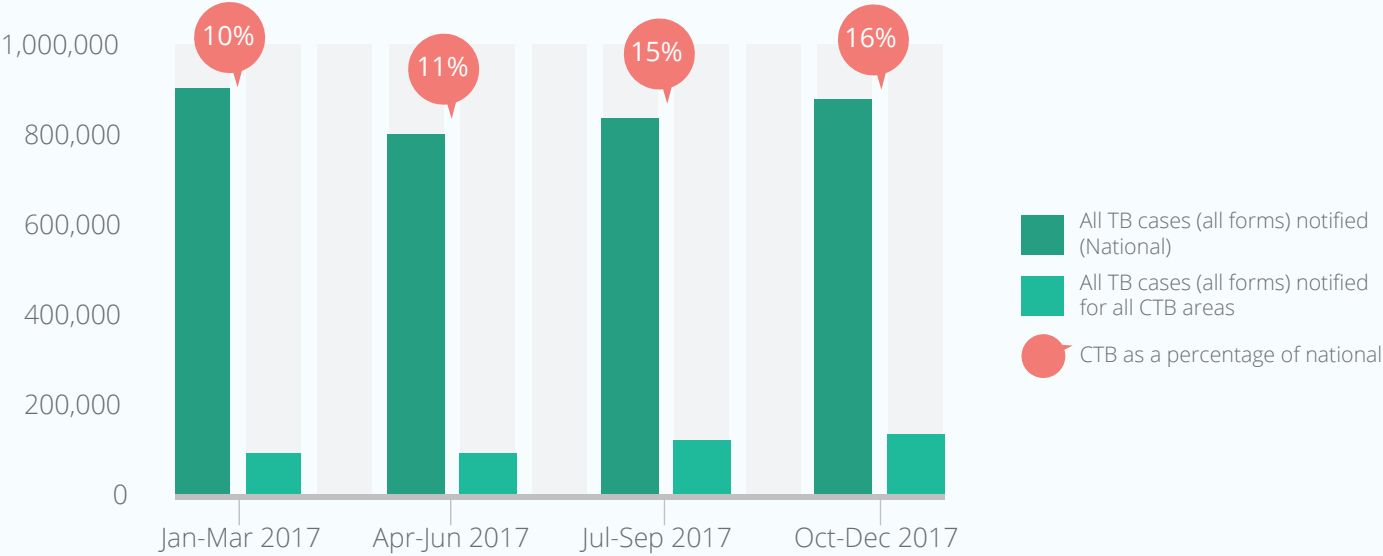
SUB-OBJECTIVE 3. STRENGTHENING PATIENT-CENTERED CARE AND TREATMENT

INTERVENTION AREA 3.1 CASE NOTIFICATION – IMPROVED ACCESS TO HIGH-QUALITY TB, MDR-TB AND TB/HIV SERVICES

CTB area data on case notifications for 2017 are reported for all countries except Uzbekistan and Vietnam, and national data for 2017 are missing for these two countries and Kazakhstan. Compared to 2016, there was an increase in the percentage of TB cases notified in 2017 from CTB areas in Cambodia (21% to 25%), Ethiopia (87% to 94%), Indonesia (19% to 21%), Kyrgyzstan (43%-49%), Nigeria (46%-51%),

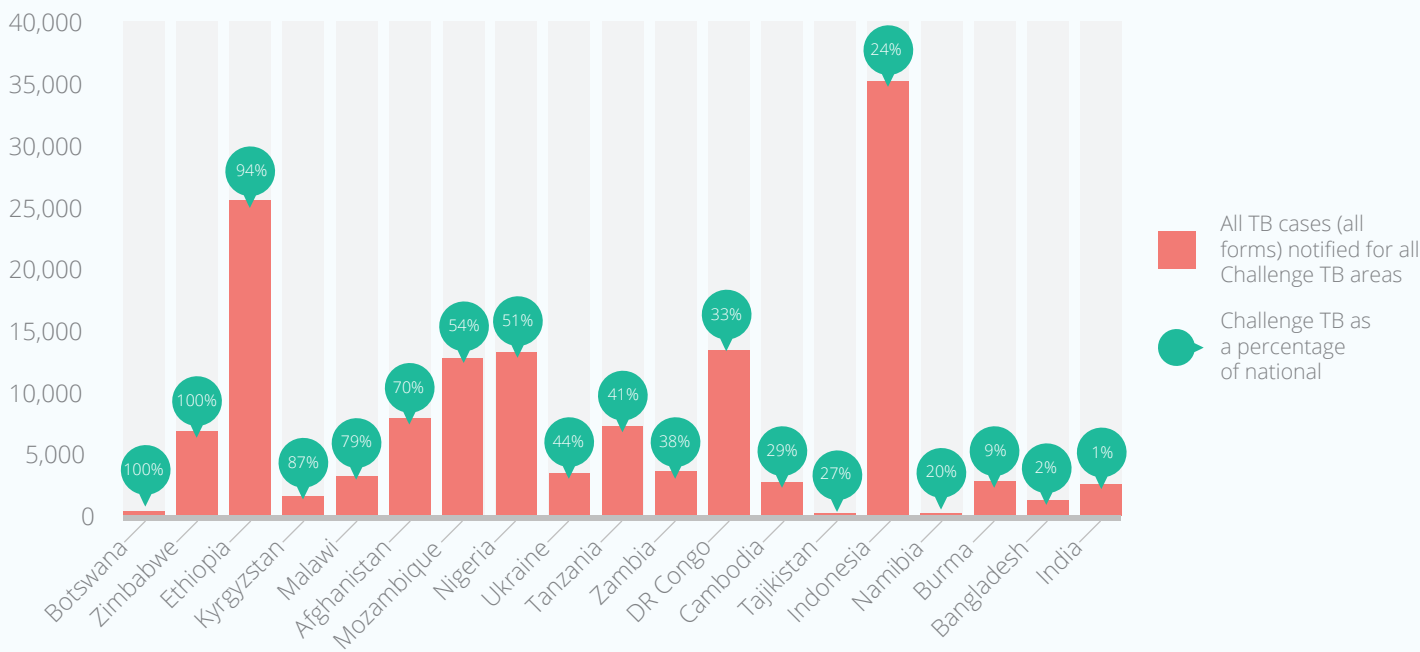
and Ukraine (8%-43%). The contribution of CTB areas to national notifications increased from 10% in Jan-Mar to 16% in Oct-Dec 2017. In Oct-Dec 2017, the highest contribution of cases from CTB areas to national notifications were reported in Ethiopia (94%), Kyrgyzstan (87%), Malawi (79%), and Afghanistan (70%).

THE NUMBER AND PERCENTAGE OF TB CASES (ALL FORMS) NOTIFIED IN CTB COUNTRIES
(CTB AREAS COMBINED, CTB DATA 2017*)



* National data – 19 countries; CTB area data – 20 countries.

THE NUMBER AND PERCENTAGE OF TB CASES (ALL FORMS) NOTIFIED IN CTB AREAS
(CTB DATA OCT-DEC 2017)



COUNTRY HIGHLIGHT

Indonesia - As a result of working with hospitals (e.g., the provision of training and guidelines) to increase notification in 2016 and 2017 and improvements in the electronic reporting system, the number of TB cases reported in the 16 CTB districts increased by 66% from 59,113 in 2015 to

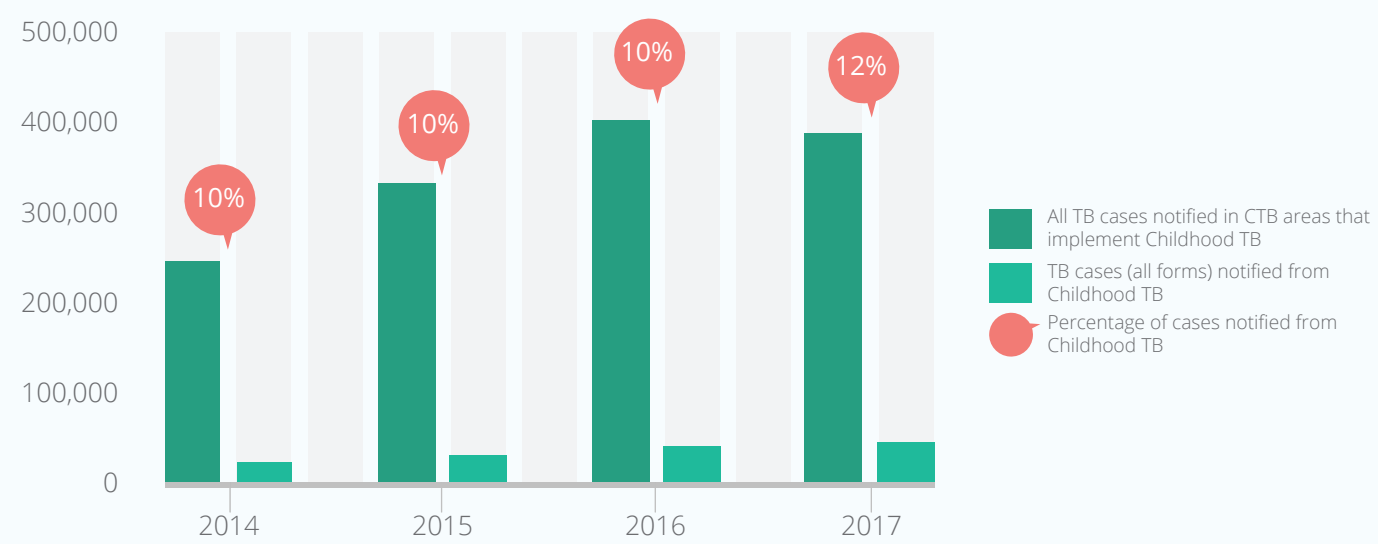
98,276 in 2017. The total private sector contribution to case notification has more than doubled, increasing from 13,116 or 22% of total notification in 2015 to 26,534, or 27% of total notification in 2017 (as reported by the end of March 2018).

INCREASING CASE NOTIFICATION AMONG CHILDREN

CTB continues to invest in and implement activities in this area in 13 countries. Complete data for 2017 are reported from all these 13 CTB countries (Jan-Mar 2017 data are reported from seven countries only). The CTB contribution of case notifications among children to the total notifications rose slightly from 10% in 2014 to 12% in 2017. Increases were particularly seen in Afghanistan, Bangladesh, Cambodia, Malawi, Nigeria, and Tanzania. Across 2017, around 12% of total notifications are among

children. The Mozambique NTP is not yet providing data on children with TB notified due to a flaw in the notification system, which is being corrected. The contribution of children with TB to overall notifications varies from 6% in Zimbabwe to 26% in Afghanistan in Oct-Dec 2017 in the 13 countries reporting both NTP and CTB data. In order to increase the childhood TB notifications, CTB Zimbabwe will scale-up its interventions in 21 districts during the remaining months of Year 4.

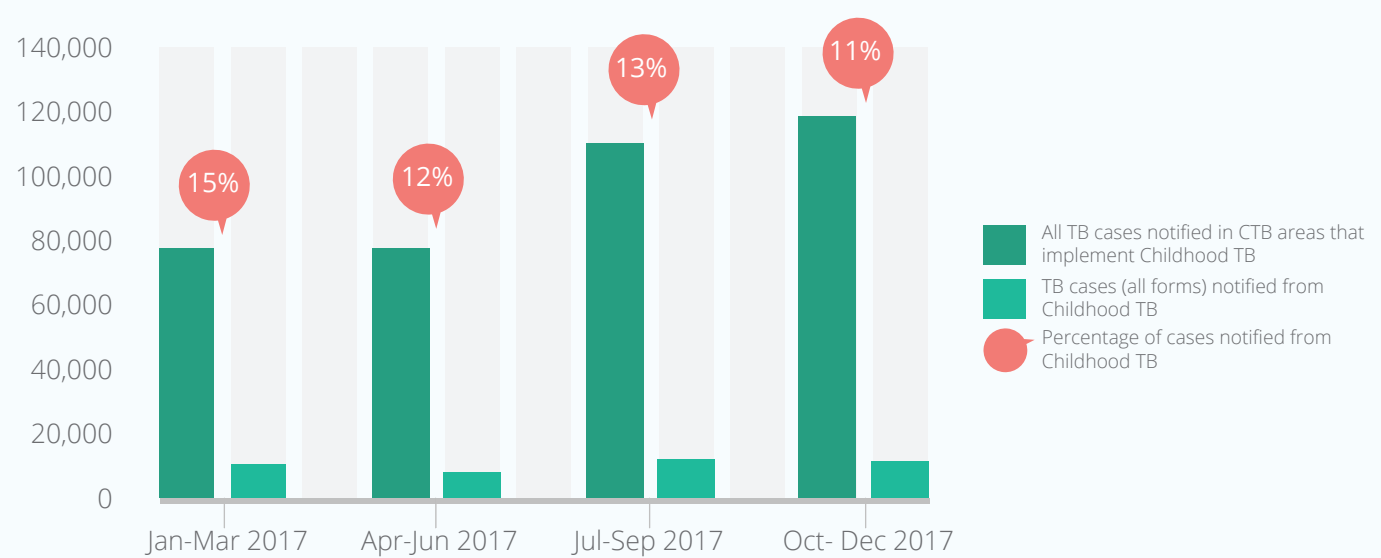
THE NUMBER AND PERCENTAGE OF CASES (ALL FORMS) NOTIFIED AMONG CHILDREN IN CTB COUNTRIES (CTB AREAS COMBINED, CTB DATA 2014-2017*)



*2014 – six countries; 2015-2016 – 11 countries; 2017 – 13 countries.

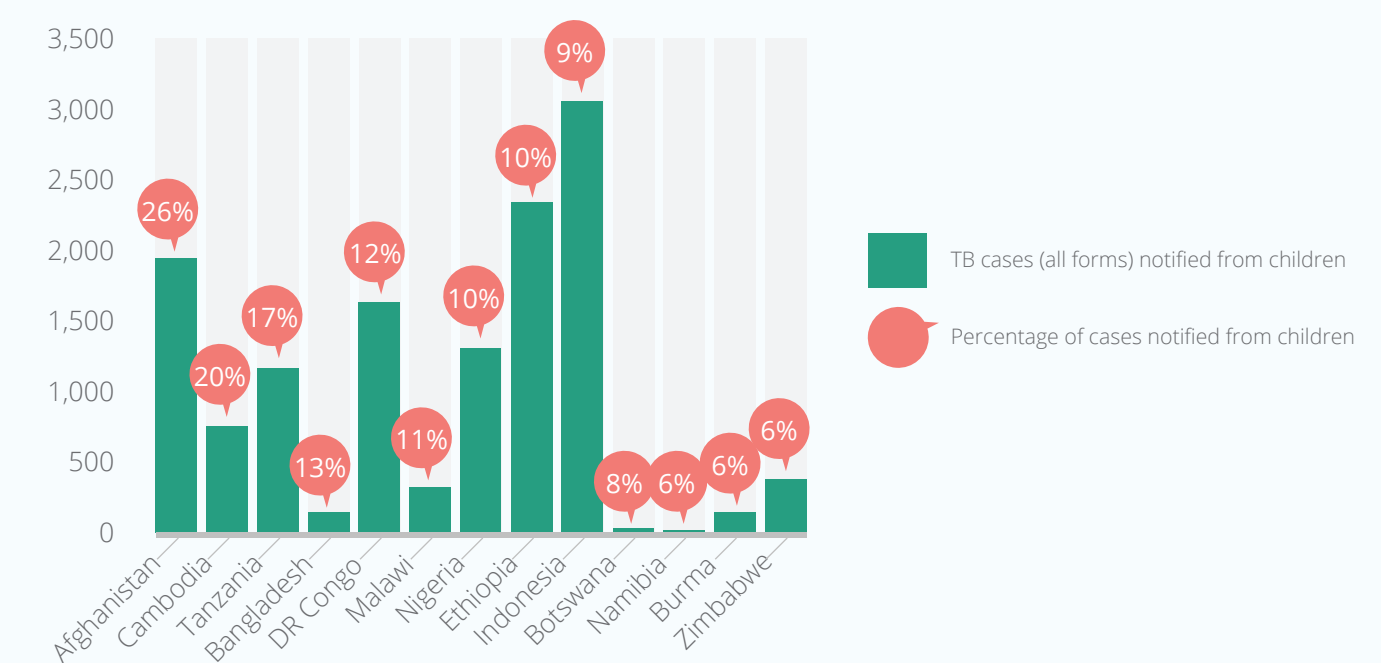


THE NUMBER AND PERCENTAGE OF CASES (ALL FORMS) NOTIFIED AMONG CHILDREN IN CTB COUNTRIES (CTB AREAS COMBINED, CTB DATA 2017*)



*13 countries.

THE NUMBER AND PERCENTAGE OF CASES (ALL FORMS) NOTIFIED AMONG CHILDREN IN CTB AREAS (CTB DATA OCT-DEC 2017*)



COUNTRY HIGHLIGHTS

Bangladesh - CTB screened a total of 97,241 children at selected facilities and 2,092 (2%) were identified with presumptive TB (Jan-Mar 2018). A total of 1,458 (70%) children with possible TB were tested based on the physician’s decision and 134 (9%) were diagnosed with TB and put on treatment.

children. To date, a total of 427 HCWS have been trained, which has led to an improvement in the detection of childhood TB cases in Oct-Dec 2017 as compared to the same quarter in 2016. A similar increase is also seen when a yearly comparison is made from 9% in 2016 to 11% in 2017

Malawi - CTB has invested significantly in training on childhood TB and mentoring to address the lack of HCWs who are trained to diagnose TB in

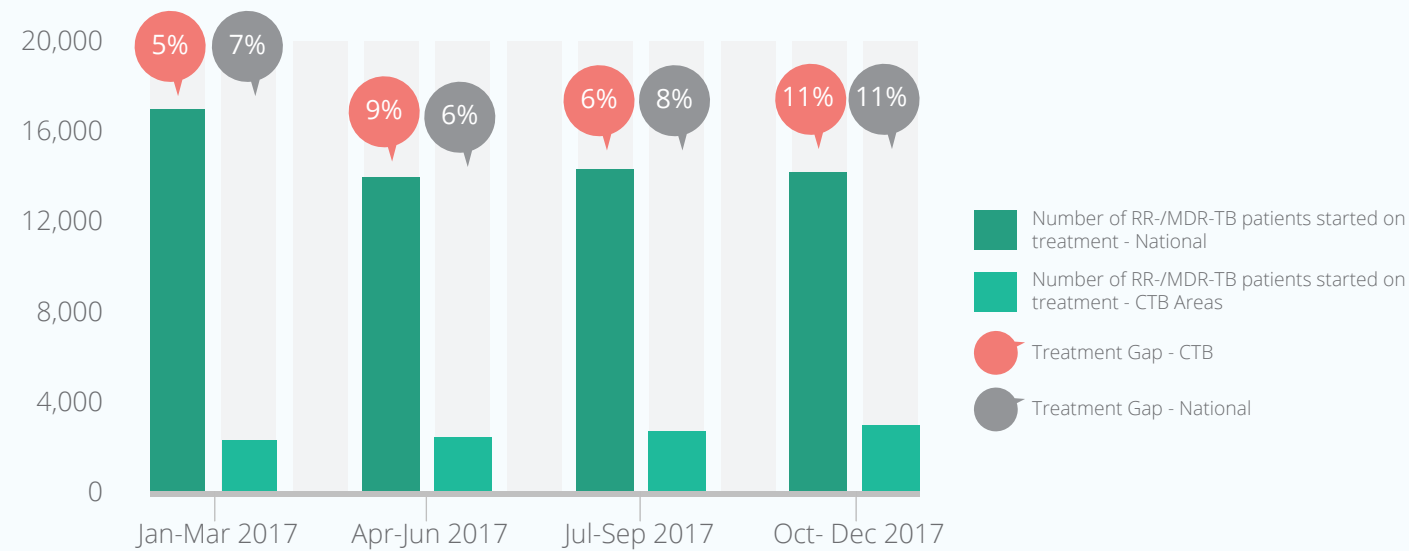


INTERVENTION AREA 3.2 NOTIFYING AND TREATING MDR-TB

CTB continues to invest in and implement activities in this area in all 22 countries. Complete data for 2017 are reported from 19 CTB countries (Jan-Mar 2018 data are reported from 12 countries only). The number of RR-/MDR-TB patients started on second-line treatment in CTB supported areas increased steady during 2017, closing the year with an 11% treatment gap. This gap can be attributed to Indonesia, Zambia, and India which still present a high treatment gap. In order to improve the situation, the CTB team in Indonesia has implemented the Monthly Interim Cohort Analysis (MICA) that has shown promising results

(the enrollment increased to 78% in this quarter, compared to 71% in 2016). In Zambia, the CTB team is addressing this gap by supporting the decentralization of MDR-TB services in all provinces, improving the recording and reporting system, and raising awareness and the involvement of HCWs and communities in PMDT services. In Zambia, CTB supported the NTP to revise PMDT guidelines which include linkages to diagnosis, treatment, and reporting (see other highlights below). In India, CTB is supporting linkage of RR-/MDR-TB patients diagnosed in private facilities to public sector DR-TB centers for treatment initiation.

RR-/MDR-TB TREATMENT GAP
(NATIONAL LEVEL AND CTB AREAS COMBINED CTB DATA 2017*)



*19 countries



COUNTRY HIGHLIGHTS

Zambia - CTB supported RR-TB data verification to determine whether all patients diagnosed with RR-TB are initiated on MDR-TB treatment in Kitwe District as per the NTP guidelines. All RR-TB patients were tracked by reviewing the 2017 registers for presumptive TB, treatment, and laboratories. The actual number of RR-TB cases was verified by checking data from the five GeneXpert machines in the district. From Jan-Dec 2017, 27 RR-TB cases were diagnosed in the district based on results verified by GeneXpert. Out of these, 11 (41%) patients were initiated on second-line treatment, 5 were incorrectly initiated on first-line treatment, 1 died, and 10 patients were lost to follow-up. This activity has provided important lessons for MDR-TB management in Zambia, namely the need for improved mentoring and supervision, implementation of the new PMDT guidelines, improved referral and linkages as well as improved data quality and data connectivity solutions.

Ukraine - In collaboration with oblast TB programs, primary health care, local NGOs, and regional branches of the Ukrainian Red Cross, CTB continued to implement high-quality ambulatory patient-centered support services for MDR-TB patients in five oblasts: Mykolayivska, Poltavska, Kyivska, Lvivska, and Odeska. CTB led three roundtable discussions to advocate, introduce, adopt, and assist on the implementation of ambulatory DR-TB case management. The project supported 29 mentoring and monitoring visits of regional specialists to the oblasts' rayons to conduct supervision and TA, as well as training in the workplace for 340 providers. Such visits helped to identify problems in TB case management and to promptly provide the right solutions, thus ensuring quality DR-TB care for around 2,000 patients.

EXPANDING THE PROGRAMMATIC USE OF NEW DRUGS AND REGIMENS (ND&R); BEDAQUILINE, DELAMANID, AND THE SHORTER TREATMENT REGIMEN

With the aim of improving the treatment outcomes of DR-TB patients and improving their adherence to treatment, CTB has been actively helping countries plan, implement, and introduce new TB drugs: Bedaquiline (BDQ), Delamanid (DLM), and the shorter treatment regimen (STR). BDQ has been introduced in 20 CTB countries by March 2018; the number of sites providing treatment with BDQ has also increased, in this quarter 19 additional sites are offering BDQ, for a grand total of 98 treatment sites. The number of patients put on treatment with BDQ continues to increase with 459 patients

starting treatment in this quarter; it is the highest level of initiation of patients on the drug compared with the previous quarters. Following the WHO recommendations on active drug safety monitoring (aDSM) any severe adverse events (SAEs) are reported to the relevant authorities, 113 SAEs were reported this quarter. A total of 29 deaths were reported this quarter, however, it is important to note that deaths cannot be attributed exclusively to BDQ as some of the reported deaths still need to undergo a causality assessment (including the 24 deaths reported in India this quarter).

BDQ INTRODUCTION IN CTB COUNTRIES

	2014	2015	2016	2017	2018 Jan-Mar
Number of BDQ Treatment Initiation Sites in 19 CTB countries (excluding India)	2	12	21	55	75
- in India	0	0	6	24	24
Number of patients started on BDQ 19 CTB countries (excluding India)	2	30	301	752	276
- in India	0	0	226	655	183

BDQ SAES CTB COUNTRIES

	2014	2015	2016	2017	2018 Jan-Mar
Total number of patients starting BDQ in 9 CTB countries excluding India	0	25	129	569	207
- in India	0	0	226	655	183
Number of reported BDQ SAEs in 9 CTB countries excluding India	0	9	42	96	24
- in India	0	0	62	219	89
Number of reported BDQ SAEs which led to a death in 9 CTB countries excluding India	0	1	7	32	4
- in India	0	0	5	50	25

DLM had been introduced in 13 CTB countries by March 2018. The number of sites offering DLM has increased, with 10 new sites are offering treatment with DLM in this quarter with a total of 44 sites; 51 new patients started treatment with DLM this quarter (Table 2), 32 patients are on both BDQ and DLM and are reported in the table below. Following

the WHO recommendations on aDSM, any SAEs are reported to the relevant authorities. Seven SAEs and one death were reported this quarter (Table 2), however, it is important to note that the death cannot be attributed exclusively to DLM as it still needs to undergo a causality assessment.

DLM INTRODUCTION IN CTB COUNTRIES

	2014	2015	2016	2017	2018 Jan-Mar
Number of DLM Treatment Initiation Sites	0	0	9	34	44
Number of patients started on DLM	0	0	16	199	51
Number of reported DLM SAEs	0	0	1	3	7
Number of reported DLM SAEs which led to a death	0	0	0	0	1

The STR has now been introduced in 19 countries, 63 new sites started providing the STR in this quarter, giving a total of 374 treatment sites; a record number of patients started on the STR this quarter, with 758 patients initiating treatment.

A total of 45 SAEs and 15 deaths were reported this quarter, however, it is important to note that the deaths cannot be attributed exclusively to the STR as some of the reported deaths still need to undergo a causality assessment.

STR INTRODUCTION IN CTB COUNTRIES

	2014	2015	2016	2017	2018 Jan-Mar
Number of STR Treatment Initiation Sites	36	36	132	311	374
Number of patients started on the STR	220	217	655	1951	758
Number of reported STR SAEs	0	0	0	27	45
Number of reported STR SAEs which led to a death	0	0	0	20	15

Thirty-two patients with an extensive pattern of drug-resistance are currently receiving dual treatment with both BDQ and DLM with the

authorization of the national authorities, and so far no SAEs have been reported in these patients.

	2014	2015	2016	2017	2018 Jan-Mar
Number of patients started on BDQ+DLM (at the same time)	0	0	0	7	32
Number of reported BDQ+DLM SAEs	1	0	0	0	0
Number of reported BDQ+DLM SAEs which led to a death	1	0	0	0	0
Number of reported STR SAEs which led to a death	0	0	0	20	15

COUNTRY HIGHLIGHTS

Kazakhstan - The assessment and preparation for introduction of ND&R in all five CTB sites (Kyzylorda, Pavlodar, Northern Kazakhstan, Western Kazakhstan, Mangystau regions) including the training of clinicians was completed, and 58 patients have already started on individualized treatment regimens.

Mozambique - In Zambezia province, CTB supported the first MDR-TB patient to receive and individualized treatment regimen with a combination of BDQ and DLM (following the recommendation of the national MDR-TB Technical working group) outside of MSF-supported sites. The patient is currently doing well with no major side effects and achieved culture conversion at the end of the first month.

Tajikistan - CTB supported the enrollment of 18 XDR-TB patients on BDQ and 13 MDR-TB patients on the STR this quarter. Between December 2016 and March 2018, 170 patients from CTB sites were enrolled on ND&R (88 patients on the STR and 82 patients on BDQ). Among all 88 patients enrolled on the STR, 93% (82) were new and 7% (6) retreatment cases; 52% (46) of patients started their treatment as outpatients. Three patients (3%) were HIV-positive among the total number of patients enrolled on the STR. Eight patients with extra-pulmonary TB were also enrolled on the STR. The final STR treatment outcomes are currently available for 31 patients who started treatment

between December 15, 2016 and June 30, 2017. The treatment success rate of 84% is encouraging: 22 (71%) patients were cured, four (13%) completed treatment, one (3%) is still on treatment, two (7%) were lost to follow-up and for two (7%) the treatment failed. Ten patients were switched to individualized regimens (excluded from the STR treatment outcome analysis) upon obtaining DST results confirming drug resistance to SLDs.

India - CTB supports the rollout and scale-up of new diagnostics, and new drugs and regimens in the country. During this quarter, 183 new patients were initiated on BDQ at the 24 CTB-supported sites, and the total number of patients on BDQ reached 1,064. CTB facilitated the pre-treatment evaluation of 172 eligible patients during this quarter (1,212 eligible patients cumulatively up to March 31, 2018).

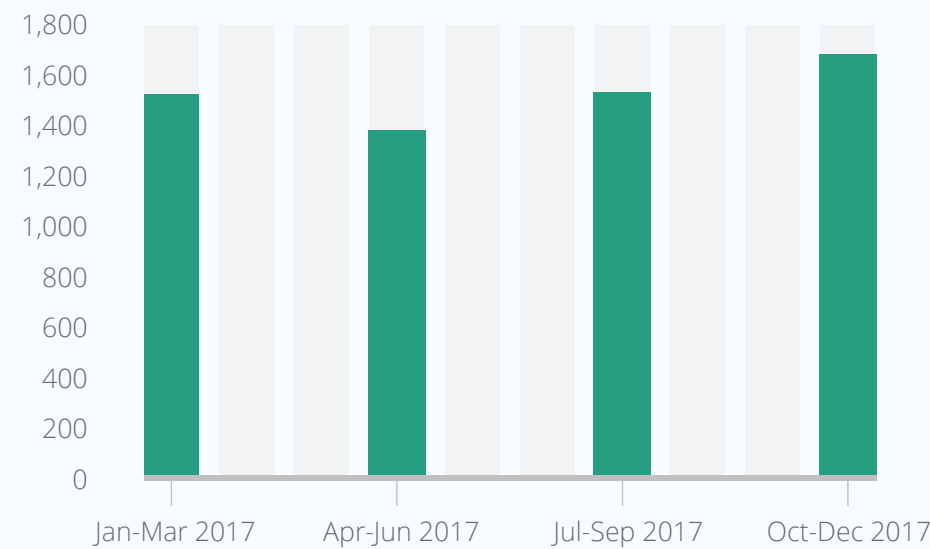
Namibia - Three XDR-TB patients who started treatment with BDQ containing regimens were declared cured. The three patients were part of a cohort of 46 patients who have received BDQ since the USAID-supported donation project began in April 2016. CTB continued supporting the NTLP to adopt new regimens for DR-TB treatment. Seven patients started the STR this quarter, bringing the cumulative number to ten in Year 4. DLM was ordered for 24 patient courses and is expected to be delivered in the next quarter, all funded by the MoH.

MORE MDR-TB PATIENTS RECEIVING SOCIAL OR ECONOMIC SUPPORT

CTB is investing/implementing activities in this area in 13 countries. During this quarter, eight CTB countries (Nigeria, India, Indonesia, Tajikistan, DR Congo, Tanzania, Cambodia, and Botswana) reported data for provision of social and economic

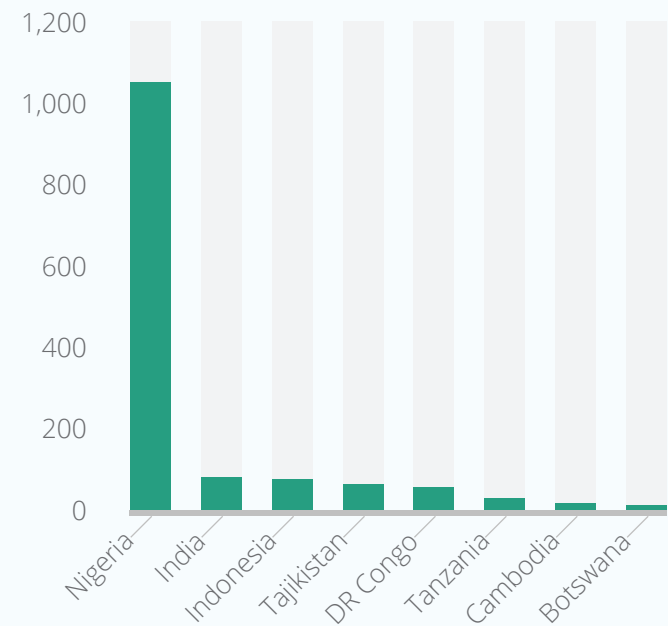
benefits to MDR-TB patients; the number of patients receiving benefits has increased in these countries over the past quarters, the total reached 1,487 by March 2018, with Nigeria reporting the highest number (1,065).

NUMBER OF MDR-TB PATIENTS WHO RECEIVE ANY SOCIAL OR ECONOMIC BENEFITS DURING THE FIRST MONTH OF SLD TREATMENT (CTB DATA 2017-2018*)



* Eight countries

NUMBER OF MDR-TB PATIENTS WHO RECEIVE ANY SOCIAL OR ECONOMIC BENEFITS DURING THE FIRST MONTH OF SLD TREATMENT (CTB DATA JAN-MAR 2018)



* Eight countries



COUNTRY HIGHLIGHTS

Ukraine - CTB continued to build and improve the multidisciplinary team's model to reduce loss to follow-up (on treatment) and keep patients on treatment until it is complete. CTB Ukraine supports organizations that provide medical, social, psychological, and legal support for DR-TB patients. A total of 569 DR-TB patients were provided with psychosocial support services tailored to meet their individual needs in this quarter. Since this model was developed and started to be implemented with

project support, 964 patients have received support; 374 patients (39%) have successfully completed treatment, and 510 patients (53%) are continuing treatment. Due to timely support from the project, 66 patients who interrupted their treatment for less than a month returned and are currently continuing with their treatment. In spite of the efforts, 26 patients (3%) were lost to follow-up and the remaining 54 patients either died or failed treatment.



OBJECTIVE 2: PREVENT TRANSMISSION AND DISEASE PROGRESSION

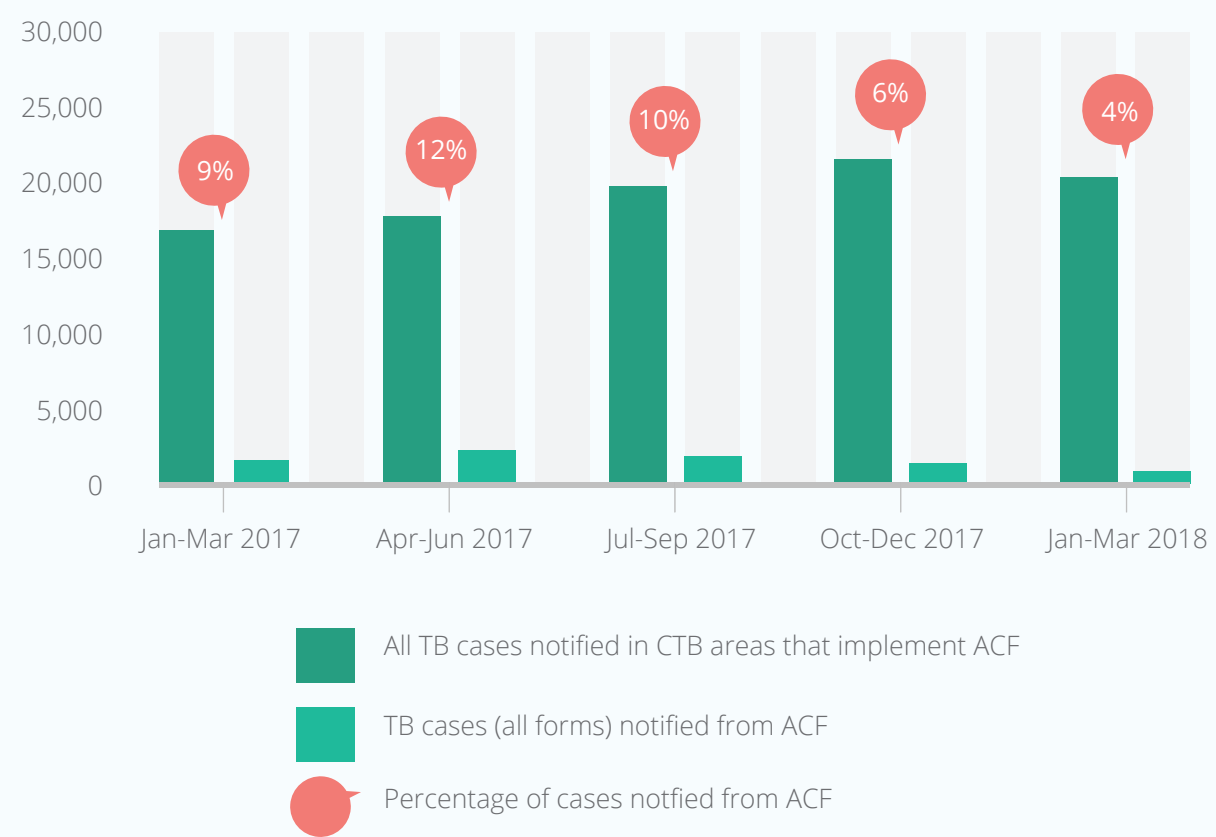
SUB-OBJECTIVE 4: TARGETED SCREENING FOR ACTIVE TB

INTERVENTION AREA 4.1 EXPANDING ACTIVE CASE FINDING (ACF)

CTB continues to invest in and implement activities in this area in seven countries. Complete data for 2017 are reported for six countries (Burma, Mozambique, Nigeria, South Sudan (Jan-Sep 2017 data only), Tanzania, and Zimbabwe); complete data for Jan-Mar 2018 are reported from three countries

only (Mozambique, Tanzania, Zimbabwe. Trends vary by country; overall, for the aforementioned six countries, the contribution from ACF activities decreased to 6% in Jan-Mar 2018. Tanzania notified 446 cases through ACF; Mozambique notified 197, and Zimbabwe 2 from Jan-Mar 2018.

THE NUMBER AND PERCENTAGE OF CASES (ALL FORMS) NOTIFIED THROUGH ACF
(CTB AREAS COMBINED, CTB DATA 2017-2018)



COUNTRY HIGHLIGHTS

Tanzania - CTB implemented ACF in 67 health facilities this quarter compared to 32 facilities in the previous quarter. The intervention contributed to 3% increase in the number of TB patients notified by this intervention (61). The small increase is due to the fact that these health facilities only started implementation mid-way through this quarter. This intervention has contributed 2,524/7,316 (34%) of total TB notifications from implementing health facilities this quarter. The results show an increasing trend in TB notification among the elderly (55 years and older), from 1,244 previous quarter to 1,307 this quarter.

Burma - CTB assisted the NTP to find 653 TB cases through ACF in thirty-seven poor and urban hard-to-reach remote towns in this quarter; adding to a total of 1,595 TB cases since start of the intervention in April 2017. This result was possible through the close collaboration and cooperation of CTB-supported partners with township health departments and basic health staff at village level. The referral of 8,195 presumptive TB patients in this quarter for diagnostics was supported, 8% (653) were found to have TB, 254 (39%) of which were bacteriologically confirmed TB cases. From Oct-Dec 2017, using the latest national data available,



CTB contributed 19% of all notified TB cases in the 37 townships where 5 CTB partners are implementing activities. This is a notable increase from 11% in Jul-Sep 2017.

Ethiopia - CTB targeted TB screening of key populations in selected areas of the Oromia region, which showed a higher yield and return on effort/investment. A total of 6,149 people from high-risk population were screened for TB (4,291 mining workers, 1,078 dwellers of 348 houses in the mining woreda, and 780 contacts of 236 TB index cases), 851 (14%) presumptive TB cases were identified and 88 (1%) TB cases were diagnosed and were put on treatment showing a high TB burden of 1,431 cases per 100,000 among mining workers.

Nigeria - CTB continued to implement the Wellness on Wheels (WoW) campaign for TB ACF within communities in Ogun and Nasarawa states. During this reporting period, a total of 1,326 possible TB cases were identified, of which 141 (11%) were diagnosed and linked to care. Of the 141 TB patients diagnosed with TB, 5 (4%) were RR-TB cases. Compared to the previous quarter, there is 99% increase in the number of TB patients diagnosed. The WoW truck was utilized for TB outreach activities in Abuja's busiest motor park during the

Nigeria TB Week and five TB cases were diagnosed and referred for treatment. The truck commenced activities within communities in Lagos State during this quarter. During the next quarter, the WoW truck will strategically be deployed to the urban slums of Kano and Lagos as well as being stationed in tertiary and secondary health institutions to provide a one-stop service at the various service delivery points, including HIV clinics. Next steps will include a review of the target population so that more presumptive cases can be screened, and more TB patients can be diagnosed.

Zimbabwe - CTB conducted active screening for TB among the participants of the World TB Day commemorations in Harare on March 24, 2018. A total of 239 people were screened using a TB symptom screening tool. Among these, 211 (89%) were also screened using a chest X-ray. This resulted in 32 presumptive TB cases all of whom had a spot specimen collected and sent to the nearest laboratory for Xpert MTB/Rif testing; two people were diagnosed with TB and linked to care at their local clinic. In addition, HIV and Diabetes Mellitus (DM) screening were offered on-site. A total of 12 people were screened for DM and 59 for HIV. Among these, one was diagnosed with DM and one with HIV, both of which were linked to care.





Nazira, Magira, and Ainura are fighting multidrug-resistant tuberculosis (MDR-TB) together side-by-side in their small room in the National TB Center of Kyrgyzstan. These three girls all aged 26 have different life stories, but one single unwavering goal: to defeat TB, go back to their loved ones and get on with their lives.

They welcome their case manager in their pajamas and wooly socks, they laugh and try to forget their illness for a while. In a few hours, they will have to take their pills, and they know how sick they will get. It's especially hard for Ainura as she has just started treatment. She suffers from terrible side effects – the drugs make her dizzy and nauseous and she's lost a lot of strength. Sadly, she's lost a lot of hope too, and her eyes fill with tears when she talks about the road ahead.

Drug-resistant strains of TB develop when treatment is stopped, interrupted or not taken correctly, and they can be transmitted from person-to-person. MDR-TB is a very hard form of TB to cure, under the usual treatment it can take up to two years to recover and over that time the patient will have swallowed nearly 15,000 pills and suffered through 240 painful injections.

The USAID-funded Challenge TB project is turning this situation around by introducing new, more efficient, shorter, and less toxic drugs and regimens, to treat patients with MDR-TB both in Kyrgyzstan and across the world.

"You have to take your pills until the end," says Begimai Tilek Kyzy, a TB survivor now working as a treatment supporter for Challenge TB. *"I know how difficult it is. I wanted to give up every day during my treatment. But I had a real-life example of what it means to stop taking your drugs – my mother died of MDR-TB. So I fought until the end and now I've been healthy for six years and I have a daughter."* Begimai came with Damira Egemberdieva, the girls' case manager, to bring them some much-needed support and motivation.

Magira has been sick since 2014 and has given up on treatment twice already. Her father also died of TB because he stopped taking his treatment. *"I understand him, it's so hard,"* she says. *"Sometimes the side effects are so bad that it feels like you are dying."*

When Magira was diagnosed with TB, she refused to believe it and asked to be tested a second time. At the beginning she was also put on the wrong sort of treatment: despite being in contact with someone infected with MDR-TB, she was treated for drug-susceptible TB.

After two months she felt better and stopped the treatment. But then her health got worse and she was hospitalized again, *"I ran away, I couldn't take it anymore,"* she says. Now, though, on her third course of treatment and under the guidance of Challenge TB, she's determined to fight the disease, she's enthusiastic and smiles from ear to ear.

Although Nazira knew about TB and its tough treatment before she fell ill, she had no idea just how hard it was. She fell sick in Moscow where she was working 12 hours a day seven days a week for two years and eating poorly. *"I heard that patients with TB had to be treated for many months, but I thought, what's so hard about taking pills? Now I understand just how bad it is."* She suffered from a lot of side effects when she was on the standard treatment. She was always sick immediately after taking her pills, but she just picked them up and swallowed them again, that's how determined she was to get better. She also suffered from restlessness and pain in her legs and had difficulty sleeping or even sitting still.

Under the Challenge TB project, both Nazira and Magira have been put on treatment designed specifically for them and including the new drug Bedaquiline. With this new treatment, they both feel much better, there are still side effects, but they are nothing like what they went through before. Ainura is on a regimen with Delamanid, another new TB drug, she is struggling with the side-effects, but Magira and Nazira are doing their best to try and cheer her up, after all, they are in this together.

There's a small TV hanging high on the wall in their room, but apart from that, they don't have much to distract them. *"Now we are just trying to kill time,"* says Nazira. They chat, joke, or play games, it doesn't matter what, they force themselves to feel good every day and to forget about TB. Magira shows us some of her paintings, and Nazira gets up and dances. *"We need to help Ainura find something she likes doing. It's important to keep busy,"* they say, *"Otherwise it's too easy to fall into depression."*

IN IT TOGETHER

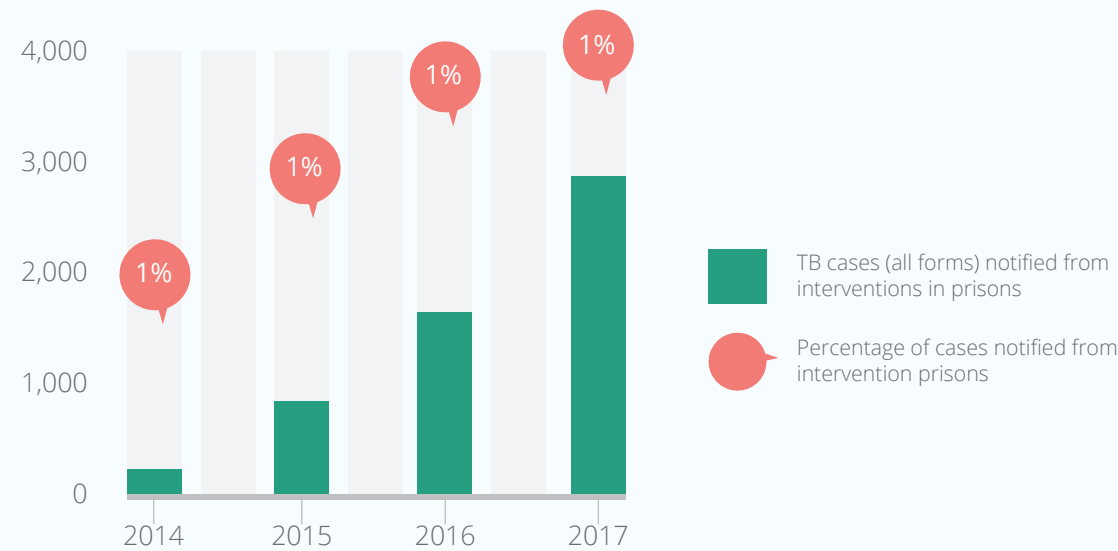


IMPROVING CASE DETECTION IN PRISONS

CTB continues investing/implementing activities in this area in seven countries. Six CTB countries reported data on cases detected in prisons for 2017, but only three (Afghanistan, Indonesia, and Mozambique) reported for the first quarter 2018, and data from both national level and CTB areas for 2018 are also incomplete. The total notifications in CTB-supported areas increased between 2014 and

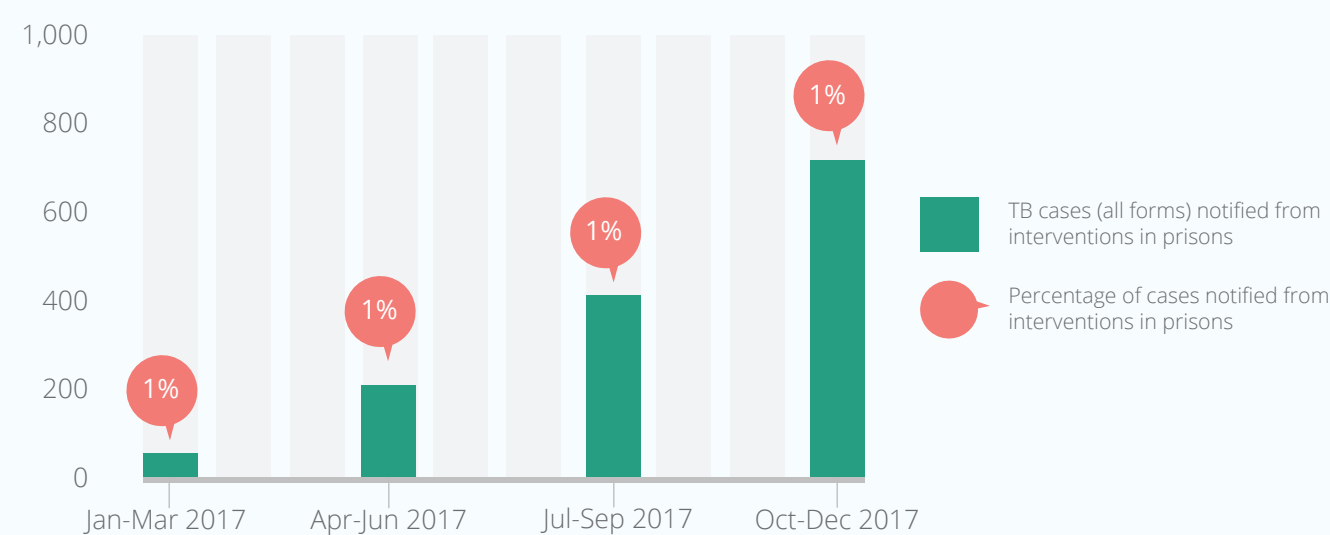
2017. The proportion of notifications from prisons remains low at 1% in 2017 due to the relatively small prison population and only partial coverage of prison populations by the NTP and CTB with periodic screening and basic DOTS. The highest number of cases from prisons were reported in Indonesia and Mozambique from Oct-Dec 2017.

THE NUMBER AND PERCENTAGE OF CASES (ALL FORMS) NOTIFIED IN PRISONS
(CTB AREAS COMBINED, CTB DATA 2014-2017*)



* 2014 – one country; 2015 – four countries; 2016 and 2017 – seven countries.

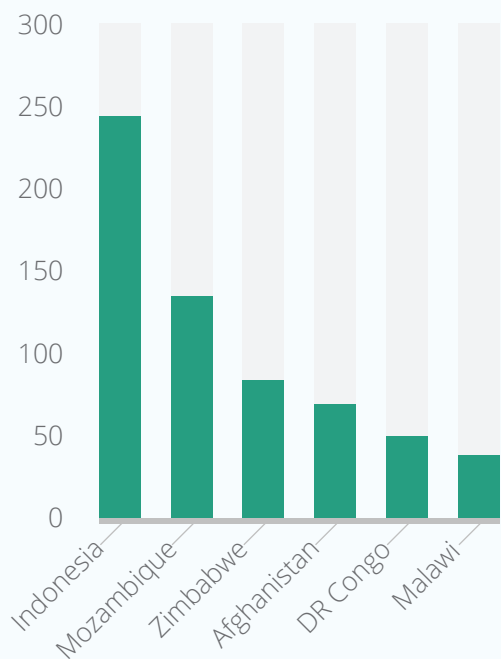
THE NUMBER AND PERCENTAGE OF CASES (ALL FORMS) NOTIFIED IN PRISONS
(CTB AREAS COMBINED, CTB DATA 2017-2018*)



* Seven countries.



THE NUMBER OF CASES (ALL FORMS) NOTIFIED IN PRISONS
(CTB DATA OCT-DEC 2017*)



COUNTRY HIGHLIGHTS

DR Congo - In this quarter, an ACF campaign took place for the first time in the Muene Ditu prison in Lomami province, in which 145 inmates were tested using GeneXpert after symptom screening; four DR-TB patients were diagnosed and put on treatment. The results of ACF in the 16 prisons in CTB-supported areas are as follows: 5,704 prisoners (100% of prison inmate population) were taught about TB symptoms. Of those, 632 (11%) prisoners with presumptive TB were identified; 604 (96%) persons were investigated, and 43 (7%) were bacteriologically confirmed TB, of whom 5 (11%) were DR-TB cases and were started on treatment. In the next quarter, ACF campaigns, systematic screening of prisoners, and the involvement of

health zone teams in these activities are expected to increase the number of TB cases found.

Malawi - CTB expanded support from six to nine prisons by adding Chikwawa, Nkhotakota, and Dedza prisons. In collaboration with the NTP, CTB conducted a TB Infection Control assessment in these prisons combined with on-site training of prison staff. In February and March 2018, CTB conducted mass-screening in these three prisons. Out of a total of 1,295 prisoners, 340 (26%) were identified as presumptive TB patients, of whom 30 (9%) were diagnosed with TB (22 clinically diagnosed and eight bacteriologically confirmed) and initiated on treatment.

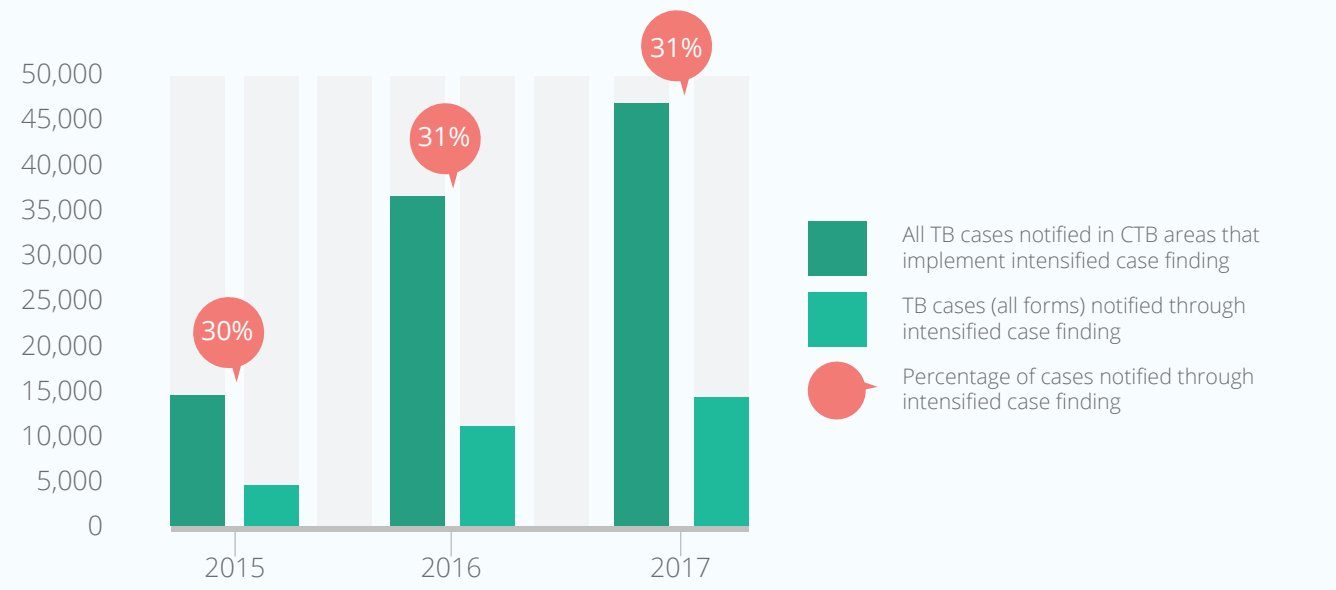
INTENSIFIED CASE FINDING (ICF)

CTB continues investing/implementing activities in this area in five countries; all five reported data on ICF in 2017 (Bangladesh, Cambodia, Malawi, South Sudan (Jan-Sep 2017 data only), and Tanzania); and only three countries reported data for Jan-Mar 2018, with Bangladesh as a first-time reporter in 2017. The overall percentage contributed by this intervention remained stable at 30% from 2015-2017, although to increased to 37% from Oct-Dec 2017 and remained at the same level from Jan-Mar 2018. The intervention does not exclusively focus on People Living with HIV (PLHIV) but includes

all interventions at health facility level aimed at improving case-finding (triage). From Jan-Mar 2018, the highest number of cases through ICF were reported in Tanzania, followed by Cambodia and Bangladesh. In Tanzania, CTB conducted specific ICF focused mentoring activities at high volume health facilities, which contributed to a 34% increase in the overall proportion of cases notified in the past two quarters. CTB Cambodia has implemented hospital engagement in five facilities in three provinces, and Bangladesh implemented ICF in seven public hospitals.

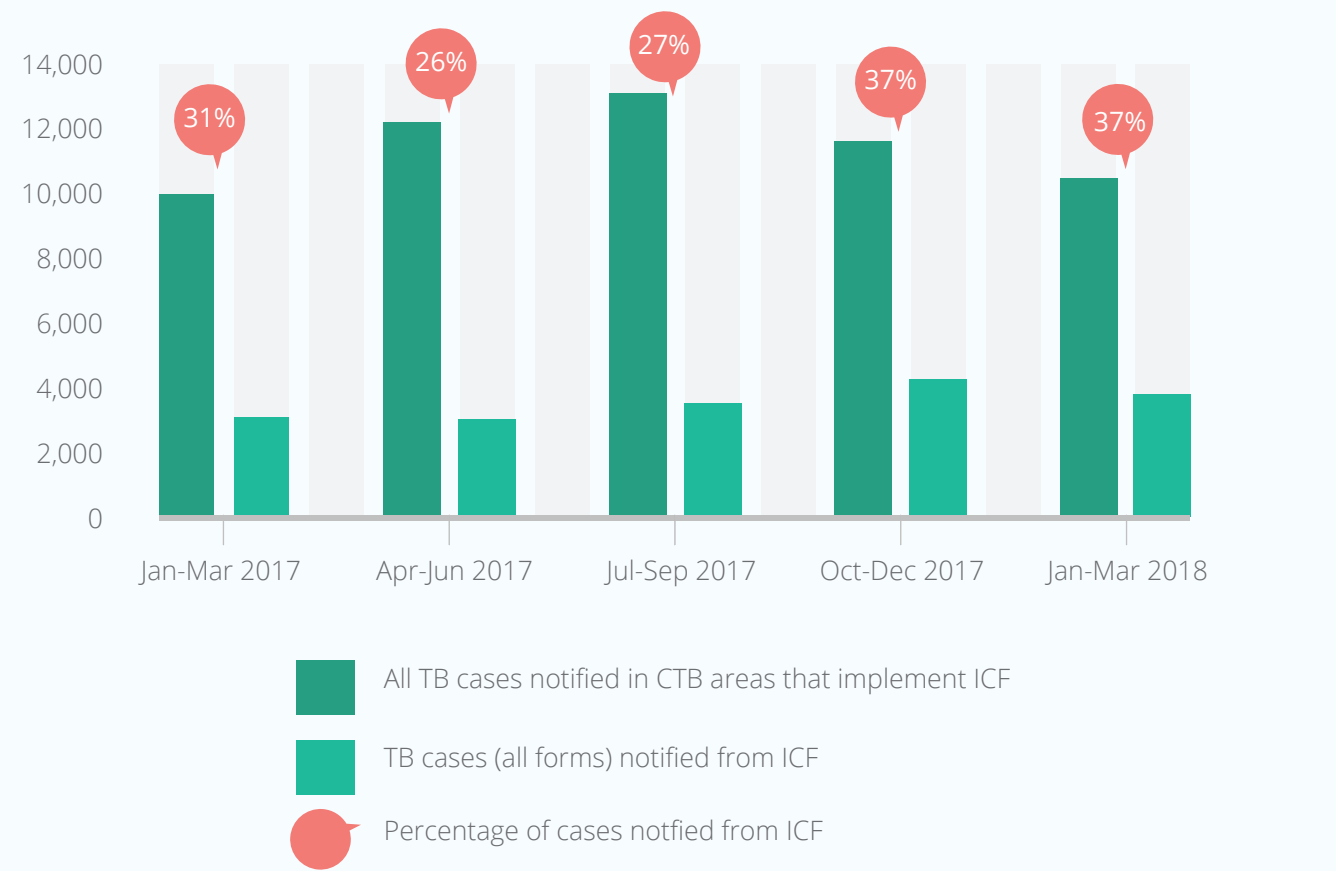


THE NUMBER AND PERCENTAGE OF CASES (ALL FORMS) NOTIFIED THROUGH ICF AMONG PLHIV (CTB AREAS COMBINED, CTB DATA 2015-2017)



* 2015 – two countries; 2016 – four countries; 2017 – five countries.

THE NUMBER AND PERCENTAGE OF CASES (ALL FORMS) NOTIFIED THROUGH ICF (CTB AREAS COMBINED, CTB DATA 2017-2018)



* 2017 – five countries; 2018 – three countries.

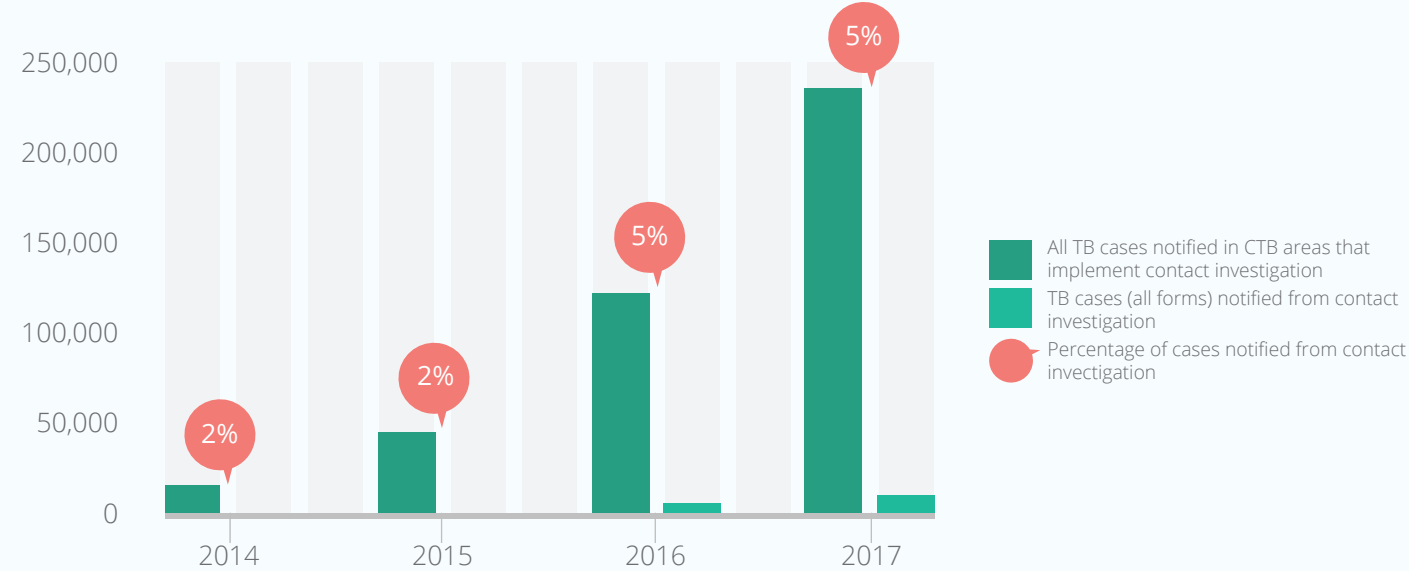


SCALING-UP CONTACT INVESTIGATION (CI)

CTB is investing/implementing activities in this area in 14 of the 22 CTB countries; all 14 countries reported data on CI for 2017 and only 7 countries reported it for Jan-Mar 2018. In 2017, cases notified through CI in Burma, Ethiopia, Indonesia, Namibia, and Ethiopia contributed to the overall case notifications in CTB areas for the first time. The overall percentage of contribution by CI increased from 2% in 2014 to 5% in 2017, maintaining the

same 5% across all 2017 quarters. In terms of CI contributions to all case notifications, in Oct-Dec 2017, Cambodia (16%) and Burma (0.2%) are outliers. In Cambodia this high percentage might be explained by the fact that CI is performed in the community, and not only the contacts of TB patients have been screened, but also other members of the community.

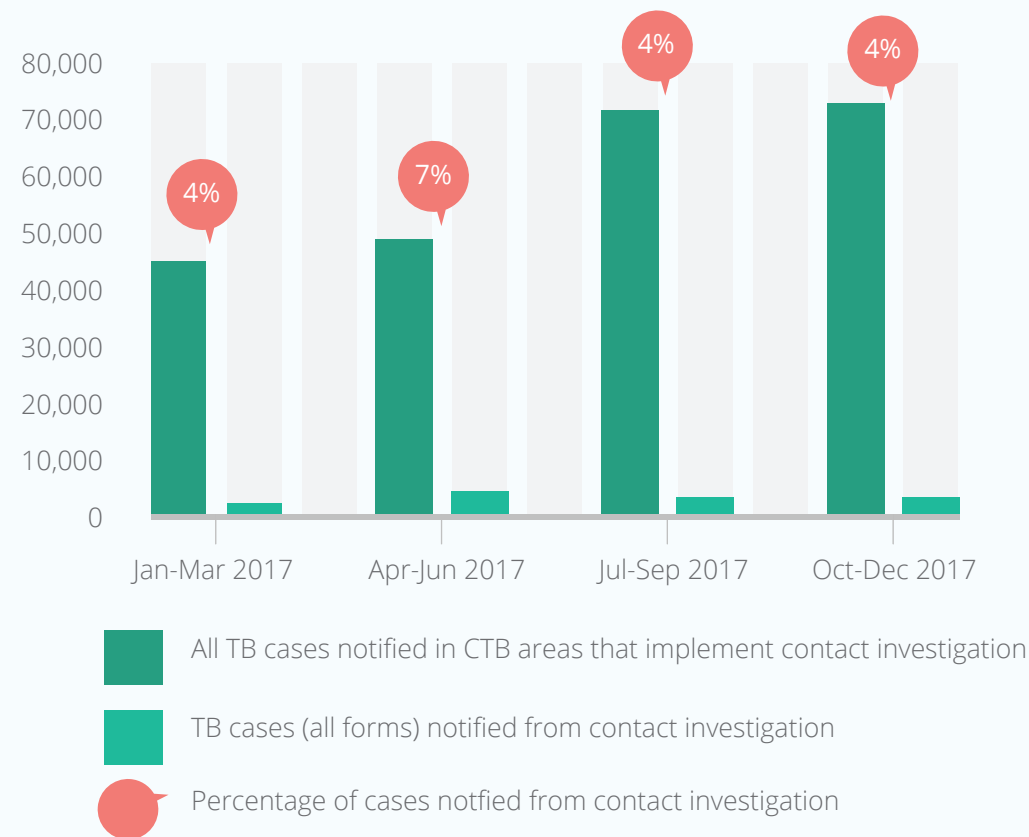
THE NUMBER AND PERCENTAGE OF CASES (ALL FORMS) NOTIFIED THROUGH CI
(CTB AREAS COMBINED, CTB DATA 2014-2017*)



* 2014 – two countries; 2015 – five countries; 2016 – eight countries; 2017 – 14 countries.

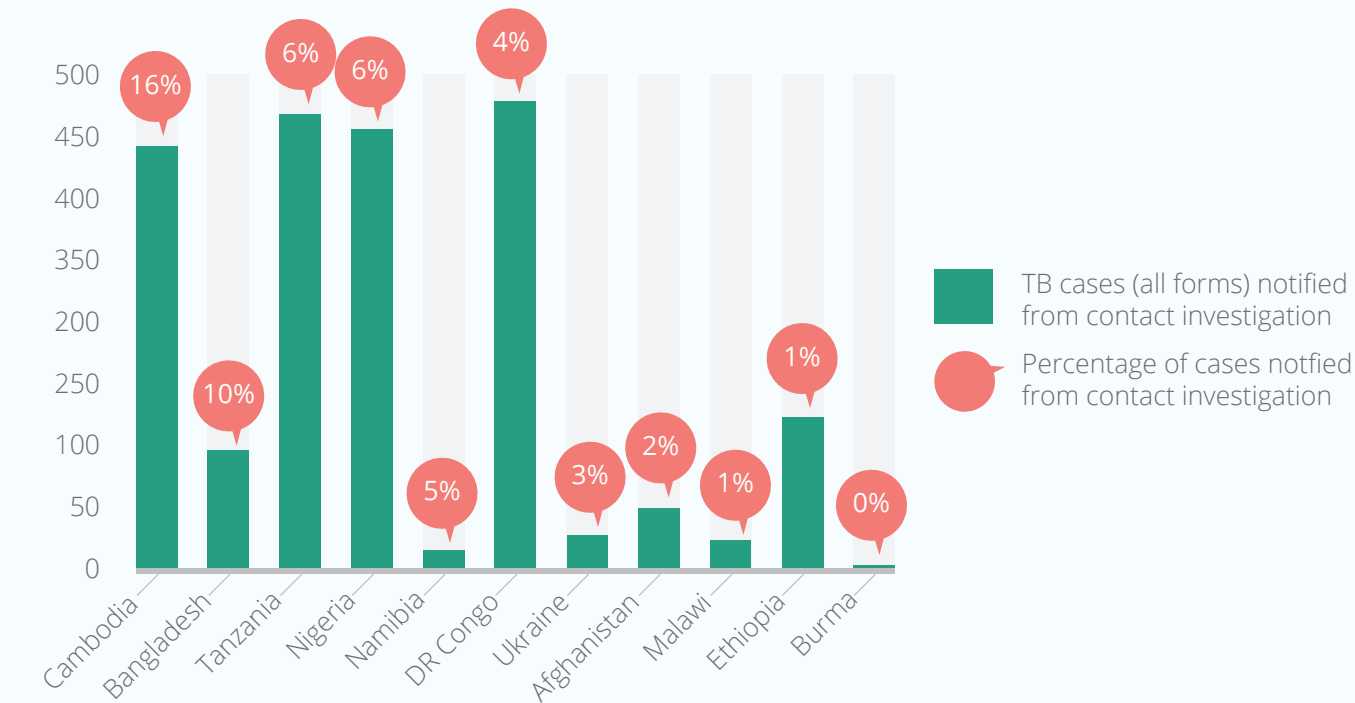


THE NUMBER AND PERCENTAGE OF CASES (ALL FORMS) NOTIFIED THROUGH CI (CTB AREAS COMBINED, CTB DATA 2017*)



* 2017 – 14 countries.

THE NUMBER AND PERCENTAGE OF CASES (ALL FORMS) NOTIFIED THROUGH CI IN CTB AREAS (CTB DATA OCT-DEC 2017)



* 2017 – 14 countries.



COUNTRY HIGHLIGHTS

Bangladesh - CTB started implementing CI interventions in Zones 3, 4 and 5 of the Dhaka South City Corporation in this quarter; 392 pulmonary index TB patients were listed and 1,388 household contacts from the families of these index patients were counted. Counselors advised 638 (46%) household contacts to visit the designated health care facilities for verbal screening and clinical evaluation. CTB completed verbal screening and clinical evaluation among 451 (71%) household contacts, tested 427 (95%) and identified 6 (1.4%) household contacts with active TB, all of whom were started on treatment.

Ethiopia - CTB is engaged in retrospective CI by assessing the yield amongst contacts of TB patients who have been treated in the past two years. In four towns (Shakiso, Woldia, Dire Dawa, and Harar), lists of patients were compiled and used

by community health workers to trace household contacts for screening. This retrospective screening included 1,136 contacts of 534 TB cases. A total of 369 presumptive cases were identified, and 65 (6% of screened) TB cases were detected. The same approach was implemented in Benishangul Region where 1,813 contacts of 112 index TB cases were identified in four health facilities; 1,748 (96%) of these contacts were screened, out of which 204 presumptive TB patients were identified. Sputum samples were collected from 166 (81%) and tested by GeneXpert. The remaining 38 contacts (19%) were assessed clinically; nine TB cases were detected (six by Xpert and three extra-pulmonary TB cases clinically). This innovative approach has shown a much higher yield than the routine practice (5,721 per 100,000 for retrospective and 599 per 100,000 for routine CI) and will be further explored.

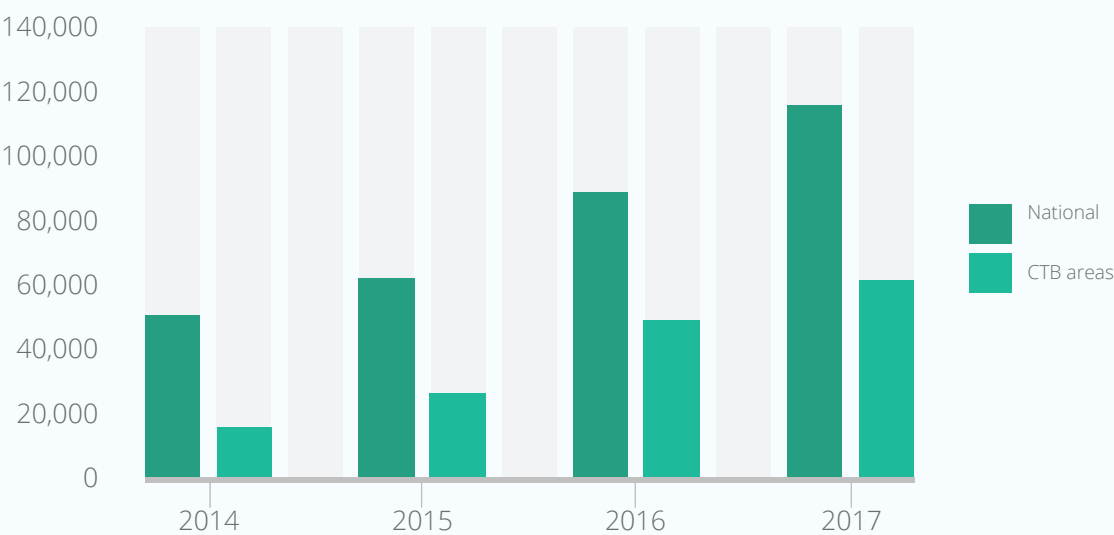
SUB-OBJECTIVE 6: MANAGING LATENT TB INFECTION

INTERVENTION AREA 6.1 INCREASING THE UPTAKE OF LTBI TREATMENT AMONG ELIGIBLE CHILDREN

CTB is investing/implementing activities in this area in 17 countries. Fifteen countries reported data on number of children under the age of 5 who initiate IPT in 2017, though not all reporting is complete; and only eight countries reported for Jan-Mar 2018.

Overall, there is increasing trend between 2014 and 2017 as well as across all quarters of 2017. The highest numbers were reported in CTB areas in Mozambique, Ukraine, and Afghanistan from Oct-Dec 2017.

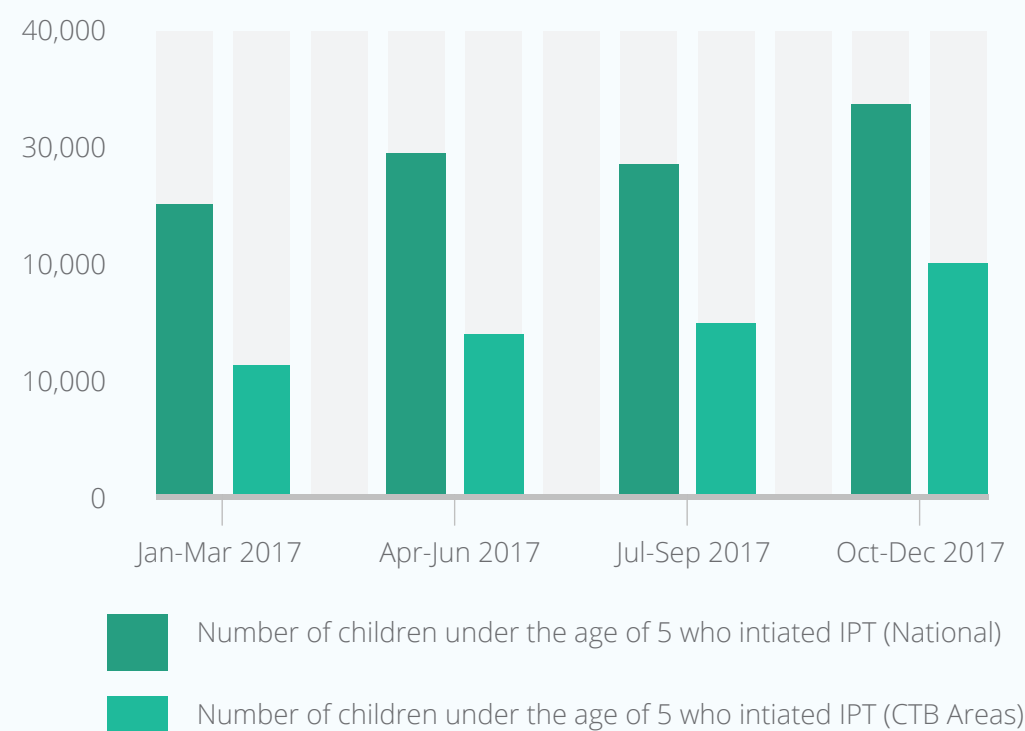
THE NUMBER OF CHILDREN UNDER THE AGE OF 5 WHO INITIATED IPT
(NATIONAL LEVEL AND CTB AREAS COMBINED, CTB DATA 2014-2017*)



* 2014 – eight countries; 2015 – 13 countries; 2016 – 16 countries; 2017 – 15 countries.

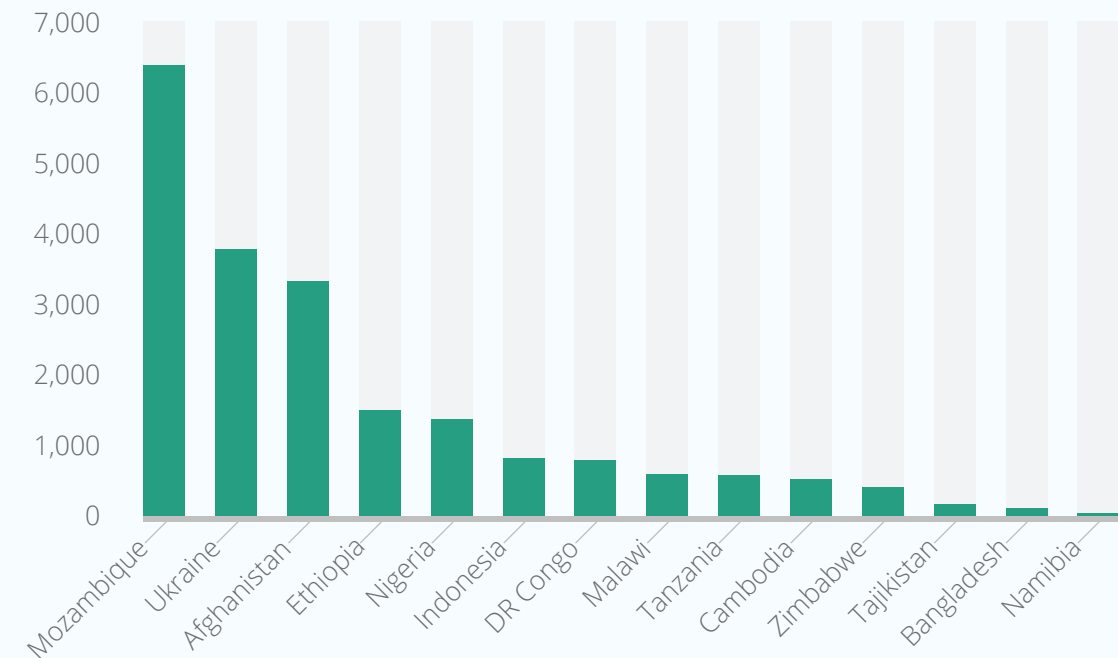


THE NUMBER AND PERCENTAGE OF CHILDREN UNDER THE AGE OF 5 WHO INITIATED IPT (NATIONAL LEVEL AND CTB AREAS COMBINED, CTB DATA 2017*)



* 15 countries.

THE NUMBER AND PERCENTAGE OF CHILDREN UNDER THE AGE OF 5 WHO INITIATED IPT IN CTB AREAS (CTB DATA 2014-2017)



Isoniazid Tablets BP

100 mg

"Supplied through the Global TB Drug Facility - Not for Sale"

KUPIN

Stop TB Partnership
GLOBAL DRUG
FACILITY

COMMEMORATION OF WORLD TB DAY 2018

An important event this quarter was the commemoration of World TB Day (March 24) - with the theme “Wanted: Leaders for a TB-free world”. The majority of CTB countries facilitated or participated in national activities and events to raise awareness about TB. Kyrgyzstan used World TB day to have a contest on “How did TB change my life?” aimed at decreasing stigma and raising awareness. All the essays, drawings, and photos received, were published in a booklet and published online. Additionally, a race was organized that was attended by over 450 people. Both events attracted a high level of media coverage. Other creative events were organized in Ukraine and Uzbekistan. In Ukraine a

photo exhibition, titled “TB through Patients’ Eyes” was opened, and in Uzbekistan CTB team jointly organized a painting exhibition “Happy life without TB” in which the paintings of children treated in the hospital were displayed. Ethiopia and DR Congo linked World TB day to a National TB Research Annual Conference and a scientific TB day, respectively. Both events were attended by many stakeholders including researchers, policymakers, and other organizations. Afghanistan, Bangladesh, Indonesia, and Mozambique used this opportunity to raise awareness through media campaigns, SMS-outreach, and educational sessions.



CORE PROJECTS

UN SPECIAL ENVOY ON TUBERCULOSIS

The workplan was only approved on March 20, 2018, so there is nothing to report this quarter.

CORE INDIA

PATH continued targeting seven wards in Mumbai for early linkages of private sector DR-TB patients for treatment initiation in the public sector and further management. PTE and C/DST services continued to ensure early linkages to the public sector to provide a one-stop shop for testing which decreased delays. Post-treatment initiation, patients were supported by treatment coordinators for treatment adherence, nutrition, and social support linkages.

Between October 2017 and March 2018, 317 RR-TB patients were diagnosed. Of these patients, 28 (9%) patients were in the process of going through PTE and C/DST; 241 (75%) patients were linked to a public-sector DR-TB center for treatment initiation and they have been started on treatment; 29 (9%) patients continued in the private sector and

have been initiated on treatment; 17 (5%) patients migrated; and 2 (<1%) patients died.

The most significant achievement has been the institutionalization of patient peer group meetings at seven District TB hospitals. The project team worked with public health officials to create a platform for patients to share their treatment experiences and challenges.

PATH also facilitated the establishment of a DR-TB center in Wadia Hospital (a private sector hospital for children) in Parel district with a special focus on DR-TB pediatric patient management. Under this initiative, the Mumbai Municipal Corporation has signed a memorandum of understanding (MoU) with Wadia Hospital to start a unique model of a Public Private Mix DR-TB center exclusively for pediatric patients.

PREVENTION

The same eight sites actively continue on the study (five in South Africa, two in Ethiopia, and one in Mozambique), with a total of 4,026 participants enrolled (1,234 male and 2,792 female).

There are two committees that meet regularly: the Data Safety Monitoring Board (DSMB) that has scheduled its next meeting for early May, and the Trial Steering Committee (TSC) whose next meeting will be scheduled to follow the DSMB meeting. An endpoint committee whose aim is to adjudicate endpoints is being formed.

The first enrollees have been followed up for 16 study months at the end of this quarter. Eligible participants in the pulsed 3HP arm have initiated their second round of treatment, and a few participants have completed their second round.

Preliminary results show that attendance at the Month 1, 2 and 3 visits is above 90%. More complete

follow-up data will be shared and discussed with the DSMB in early May. Conclusions and recommendations from the DSMB will then be shared with the TSC.

As of the end of the quarter, 38 participants had withdrawn from the study. Of these, 15 (40%) withdrew of their own accord, and another 8 (21%) had died (others had been erroneously randomized (6), left the study area (4), or been withdrawn by the study investigator due risk or actual failure to comply with study procedures (3) and contact was lost with two other participants).

The total number of SAEs is 74, 30 (0.7%) of which fall under the study SAE definition.

The clinical trial insurance policy for Ethiopia has been renewed. Insurance policies for Mozambique and South Africa will not expire before the end of the trial.

MEASURING STIGMA

The CTB Core Stigma project funded a TB Stigma Measurement guidance comprised of 17 chapters, all of which except one are finalized. The full package will be submitted for final sign off in May 2018, with the full manual expected in June 2018. The companion curriculum PowerPoint presentations and exercises are in draft form and are also expected to be released in June 2018.

The pilot of the measurement tool among healthcare workers in Ethiopia has accelerated during this quarter, with Phase 1 (the qualitative

phase) concluded with 70 interviews conducted. The preparations for Phase 2 (to validate the developed scale) are underway, with the full Phase 2 expected to be completed by July 31, 2018. Phase 3 (implementation) is expected to be completed by September 30, 2018.

The planning of the work around the country assessment tool that is to be developed in collaboration with the Stop TB Partnership is underway and is expected to be implemented in the following quarters.



BEDAQUILINE COORDINATION

The Year 4 workplan for the core project was approved in January 2018. The core project has initiated the implementation of a monthly mechanism of monitoring progress in the introduction/expansion of ND&R that includes monitoring of patient enrollment, identification of bottlenecks and challenges and the necessary actions to overcome them. This strengthened monitoring mechanism includes:

1. A monthly online questionnaire which is completed by the country offices and collects mainly qualitative information from the 22 CTB supported countries;
2. Monthly “ND&R Country Follow-Up” calls between the respective KNCV HQ PMDT Consultant and CTB Country Office (CO) counterparts; and
3. Collection and review of quarterly quantitative data reported by countries on the CTB M&E Framework database through their respective Quarterly Monitoring Reports (QMRs).

Based on the information gathered through the above-mentioned processes, the core project team has identified Kazakhstan, Malawi, and Ukraine, as countries that are facing important challenges, for various reasons, and that would benefit from specialized or targeted TA interventions.

By the end of February 2018, the core project had developed a draft “Patient management quality improvement (QI) checklist”. The checklist is based on available tools (e.g. Clinical Audit Tool developed by ERS and ECDC) and incorporates items that reflect the cascade of the Right Diagnosis-Right Treatment framework. Following current country-piloting the final version will be shared with USAID and will then be placed on the CTB website for dissemination to not only the CTB supported countries but to the wider TB care and prevention community as well.

Based on the current needs and challenges of CTB countries, the core project is in the process of defining the guidance/technical document, tools, and supporting job aids to develop in Year 4. In addition to these activities, the core project has continued to update existing documents that were produced under Year 3 as new evidence and policies emerge, particularly from WHO. An updated version (20) of the CTB generic clinical and programmatic guidelines for the introduction

of ND&R for the treatment of MDR-/XDR-TB is now available and has been uploaded to the CTB website and shared with the PMDT consultants and CTB Country Offices.

To showcase the work achieved under CTB and assist similar efforts, the core project will develop printed materials (e.g. scientific journal articles and factsheets) which will highlight the success and challenges of introducing and implementing ND&R. The core team has identified the topics and has assigned consultants to contribute to their development. These materials will show the achievements of the ND&R work implemented under the CTB project and will be utilized for global advocacy and awareness raising through appropriate outlets (e.g. the 2018 Union World Lung Conference, 2018 AIDS Conference, Regional Workshops, and CTB partners’ meetings). In addition, ND&R related abstracts (>15) and a proposal for a ND&R symposia were submitted for consideration to be accepted for the 2018 The Union World Lung Conference (to be held in The Hague in October 2018) to showcase the work achieved under the CTB project.

In January 2018, Gunta Dravniece and Fraser Wares participated in a 2-day workshop in Maryland, USA, at which various stakeholders discussed the results and questions raised by TB programs, partners, technical assistance organizations, patients, advocates and clinical providers on results from the Phase III STREAM Stage 1 and Delamanid Study 213 Clinical Trials.

In February 2018, the Lancet published an article coauthored by Dr. Tommasi, KNCV PMDT consultant, on childhood MDR-TB, highlighting the challenge posed in the management of drug-resistance in this vulnerable population:

Drug-resistant tuberculosis: will grand promises fail children and adolescents? The Lancet; Vol 2, April 2018, accessible at [http://www.thelancet.com/pdfs/journals/lanchi/PIIS2352-4642\(18\)30068-3.pdf](http://www.thelancet.com/pdfs/journals/lanchi/PIIS2352-4642(18)30068-3.pdf)

In March 2018, Gunta Dravniece presented experiences with the introduction of new drugs and strategies in CTB supported countries at the 2nd International Childhood TB Conference in Vilnius, Lithuania, organized by the Pediatric TB Network European Trial Group.

GLOBAL FUND

All countries have reported on the approval and signing of their new grants from 2018. Nigeria and Tajikistan reported that they are currently developing new grants, and Vietnam is awaiting the approval of their 2018-2020 grant documents. The implementation of Zambia's new grant still needs to start.

During the first quarter of Year 4, it was reported that Botswana was the last country to submit a funding request (Feb 2018). Botswana's funding request for a TB/HIV program continuation (2019-2021) was approved during the second quarter of Year 4. The Global Fund Technical Review Panel has

recommended that Botswana proceeds to grant-making; the deadline for the submission of the final documents is July 31, 2018.

CTB provided funds through the core project GF Hub to develop a new funding request for Nigeria with two consultants (lead and co-lead); a first-draft of the request was provided in April 2018; the target for submission is mid-May 2018.

A complete overview of the active grants per country, and the signed, committed, and disbursed amounts per grant, can be found on the Global Fund website.

NINETEEN COUNTRIES SIGNED THEIR NEW GLOBAL FUND GRANTS



NEW PUBLICATIONS

TUBERCULOSIS PATIENT COST SURVEYS: A HANDBOOK

This handbook provides a standardized methodology for conducting health facility-based cross-sectional surveys to assess the direct and indirect costs incurred by TB patients and their households, building on experience gathered using a previous costing tool and an iterated WHO pilot protocol and tool.

https://www.challengetb.org/publications/tools/costing/TB_Patients_Cost_Surveys-Handbook.pdf

GENERIC PROGRAMMATIC AND CLINICAL GUIDE FOR THE INTRODUCTION OF NEW DRUGS AND SHORTER REGIMENS FOR THE TREATMENT OF MULTI/EXTENSIVELY DRUG-RESISTANT TB

This updated document describes the steps necessary to implement the shorter regimen and the new drugs for drug-resistant TB treatment including diagnosis and bacterial confirmation of drug resistance, treatment regimen design, monitoring of treatment efficacy and safety, and programmatic evaluation.

https://www.challengetb.org/publications/tools/pmdt/Generic_programmatic_and_clinical_guide_for_the_introduction_of_new_drugs_and_shorter_regimens.pdf

PHOTOS

Cough Day Community Education, Mozambique - Algy Abdula
Community Pharmacists, Burma - PSI
Medicine Seller and customer, Nigeria - KNCV
First patient on the Shorter Treatment Regimen, Ethiopia - Berhan Teklehaimanot
Toddler Rahat who has been cured of MDR-TB and his mother, Bangladesh - Samuel Murmu
Childhood with TB talking to pediatrician, India - Muktai Panchal
GeneXpert diagnosis at St Peter Hospital, Ethiopia - Berhan Teklehaimanot
GeneXpert Testing World TB Day, Zambia - Robertson Chibumbya
World TB Day, Zimbabwe - Paidmoyo Magaya
TB Patients being initiated on TB drugs, Zambia - Robertson Chibumbya
MDR-TB drugs, Kyrgyzstan - Marion Biremon
Patient receiving psycho-social support, Ukraine - PATH
Community Based DOTS, Burma, FHI 360
Miners in Oromia Zone, Ethiopia - Berhan Teklehaimanot
MDR-TB patient Nazira dancing, Kyrgyzstan - Marion Biremon
Contact Investigation, Cambodia - Tristan Bayly
Isoniazid Preventive Therapy, Cambodia - Tristan Bayly
World TB Day, Uzbekistan - KNCV
TB patient with his wife, Nigeria - Habiba Bello



CHALLENGE>TB

We would like to acknowledge all the people across the world who make Challenge TB possible; our gratitude and thanks go out to all our partners and everyone in the field.

Design, layout and back cover photo - Tristan Bayly

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