



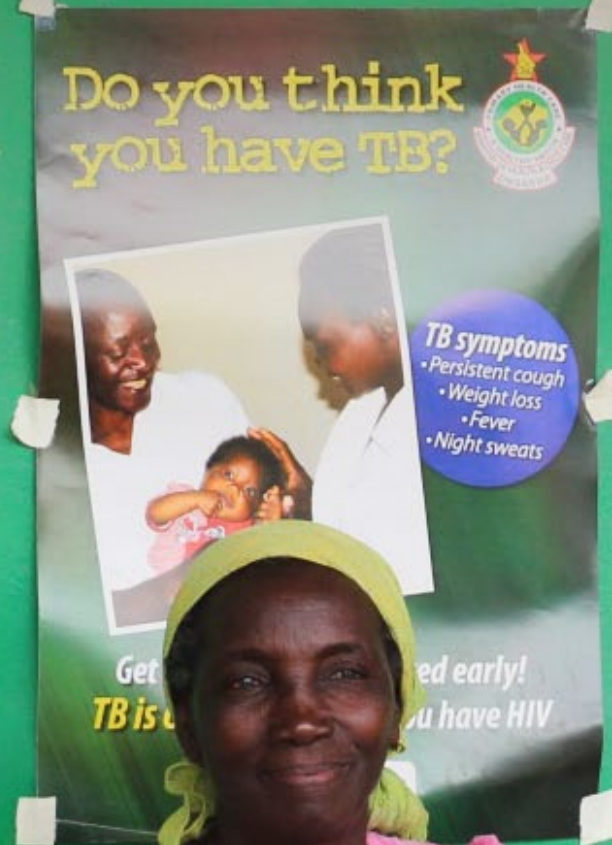
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CHALLENGE > **TB**



Challenge TB Year 2 Performance Monitoring Report 1

October 1 - December 31, 2015



About Challenge TB:

Challenge TB is USAID's flagship TB control program. 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:

A six year old TB patient gets support from his grandmother at St. Luke's Hospital, Lupane, Matabeleland North Province, Zimbabwe where he has been admitted and is receiving treatment and care. The photograph was taken during a routine supportive supervision visit. (Credit: Shepherd Machekera).

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Disclaimer

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

ART	Antiretroviral Therapy
CB-DOTS	Community-Based DOTS
CCM	Country Coordinating Mechanism
C/DST	Culture/Drug Susceptibility Testing
CPLT	Provincial TB and Leprosy Coordination Departments
CTB	Challenge TB
DM	Diabetes Mellitus
DOT	Directly Observed Treatment
DOTS	Directly Observed Treatment Short Course
DQA	Data Quality Assessment
DRC	Democratic Republic of the Congo
DR-TB	Drug-Resistant TB
DST	Drug Susceptibility Testing
ECH	Empowerment Community for Health
EQA	External Quality Assurance
FDC	Foundation for Community Development
GDF	Global Drug Facility
GF	The Global Fund to fight AIDS, Tuberculosis and Malaria
GLC	Green Light Committee
HC	Health Center
HIPA	Health Information, Policy and Advocacy
IC	Infection Control
IPAC	Portuguese Institute of Accreditation
IMNCI	Integrated Management of Newborn and Childhood Illness
INH	Isoniazid
IPT	Isoniazid Preventive Therapy
JATA	Japan Anti Tuberculosis Association
LTBI	Latent TB Infection
KIT	Royal Tropical Institute (Amsterdam)
KNCV	KNCV Tuberculosis Foundation
MDR-TB	Multi Drug Resistant Tuberculosis
M&E	Monitoring and Evaluation
MoH	Ministry of Health
MSH	Management Sciences for Health
MTB+	Mycobacterium Tuberculosis detected (Xpert)
NAP	National AIDS Program
NSP	National Strategic Plan
NTP	National TB Program
NRL	National Reference Laboratory
OR	Operations Research
PCA	Patient-centered Approach
PLHIV	People Living with HIV
PMDT	Programmatic Management of Drug-resistant Tuberculosis
PMU	Project Management Unit
PPM	Private Public Mix
QHS	Quality Health Services
QICA	Quarterly Interim Cohort Analysis
RH	Regional Hospital
RIF	Rifampicin
RR-TB	Rifampicin-resistant TB
SLD	Second Line Drug
SRL	Supranational Reference Laboratory
SOP	Standard Operating Procedures
TA	Technical Assistance
TB	Tuberculosis
TB IC	TB Infection Control
TB CAP	Tuberculosis Control Assistance Program
TRAC	TB Research Annual Conference
TOR	Terms of reference
TOT	Training of trainers
UNDP	United Nations Development Programme
USAID	United States Agency for International Development
WHO	World Health Organization
WTD	World TB Day
XDR-TB	Extensively-Drug Resistant Tuberculosis
Xpert	GeneXpert MTB/RIF

Executive Summary

Challenge TB (CTB) is the global flagship mechanism of the United States Agency for International Development (USAID) to prevent and control tuberculosis (TB). The project completed the first year of implementation in September 2015, and has started on the second year of implementation. This performance monitoring report summarizes program progress, achievements and challenges between October and December 2015 across the 20 country projects, the East Africa Region project, and six approved core projects. The program's most significant achievements from the reporting period and challenges for the next quarter are highlighted below.

Main Achievements:

- **Afghanistan** - DOTS was expanded to densely populated areas in the cities of Kabul, Herat, Kandahar, Jalalabad and Mazar-i-Sharif; in total, ten new public and private health facilities are engaged in Urban DOTS. TB case notification for all forms of TB increased by 6.6% (from 5,007 in 2014 to 5,336 in 2015) in Kabul, and by 53% (from 669 in 2014 to 1,021 in 2015) in Kandahar, Herat and Jalalabad.
- **Bangladesh** - A full inventory of the 39 Xpert machines in the country was conducted. CTB, in collaboration with the NTP and Cepheid, conducted field visits to assess the condition of these machines and took steps to ensure their functionality. In just one quarter of CTB support, the number of functional Xpert machines increased from 29 (74%) to 36 (92%) between October and December 2015.
- **Botswana** - A GxAlert landscape analysis was completed. Based on evaluation of the TB information system, software used, and infrastructure in place, a number of operational recommendations were developed, which will guide the national roll-out planned for next quarter.
- **Cambodia** - CTB provided technical assistance to five provincial referral hospitals to improve TB case identification and reporting. During the reporting period, 37,782 clients presented at these hospitals. Out of these patients, 2,861 (7.6%) were identified as having presumptive TB and were referred for diagnosis. Out of the referred, 2,662 (93%) patients were received at the TB unit for diagnosis. Of these, 661 (25%) were diagnosed with TB, - a 14% increase compared with the previous quarter.
- **Democratic Republic of the Congo (DRC)** - Active TB case finding activities in the community were continued by four local partner NGOs. A total of 4,065 sputum samples from presumed TB patients were tested and 740 (18%) were diagnosed with smear-positive TB and initiated on treatment.
- **India** - "Mission TB-Free Haryana" by Medanta the Medicity (a well-known large corporate sector multi-specialty hospital) was launched. Two 'TB-Free Haryana' mobile vans equipped with digital X-ray machines were launched on November 20, 2015. The mobile vans will visit the government's peripheral health centers where X-ray facilities are not available to further evaluate presumptive sputum-smear negative TB patients identified at these facilities.
- **Indonesia** - The TB accreditation guideline for Public Health Centers (Puskesmas) was finalized and submitted to the Basic Medical Service Unit of the Ministry of Health (MoH) and the Accreditation Commission for First Level Health Facilities to be introduced as national guideline. This guideline is intended to provide Puskesmas accreditation assessors with a tool and benchmarks to measure TB service performance in health facilities.
- **Kyrgyzstan** - CTB supported the development of the national plan for the introduction of new TB drugs and shortened regimens for MDR-TB treatment. The MoH is expected to endorse this plan in March 2016, which will be followed by the implementation of activities.
- **Malawi** - CTB contributed to the development of a national research agenda. CTB's input ensures that CTB's innovations (e.g. active case finding approaches) are embedded within the research agenda and address important gaps in TB case detection among high-risk populations.
- **Namibia** - In October 2015, CTB spearheaded the data cleaning and validation for the recently completed second national drug resistance survey (DRS) co-funded by CTB and TB CARE I. The cleaned data were analysed and the results were presented at a WHO multi-country DRS workshop in Geneva from November 16-18, 2015.
- **Nigeria** - CTB enrolled a total of 64 DR-TB patients on second-line treatment at the community level. Cumulatively, support is being provided to a total of 184 MDR-TB patients who are receiving treatment in the community, including those discharged from treatment facilities during the quarter.
- **South Sudan** - CTB supported the NTP to improve access to TB treatment by integrating TB services into the general primary health care facilities. Between October–December 2015, an additional nine TB treatment centers were established in Central Equatoria State, bringing the total number of TB treatment centers to 31.
- **Tanzania** - In preparation for the decentralization of PMDT services in the country, CTB finalized the revised comprehensive PMDT training package. The package consists of a training curriculum, facilitators' guide, participants' manual and PowerPoint presentations, which are in line with the current WHO guidelines and the NTP's decentralization framework.

- **Ukraine** - In an effort to improve MDR-TB treatment outcomes, CTB selected and trained three local NGOs to provide psychosocial support to 170 MDR-TB patients at the ambulatory phase of treatment in Poltavska and Mykolayivska Oblasts.
- **Vietnam** - CTB provided technical support to install and operationalize 20 new Xpert machines purchased with the Global Fund (GF) financial support. This was followed by technical assistance to facilitate the cartridge supply including quantification, forecasting, ordering and distribution.
- **Zimbabwe** - With support from CTB, a childhood TB desk guide was developed for the MoH. The development process included the adaptation of The Union Desk Guide for Management of TB in Children for Health Care Workers. Childhood TB training materials were also developed using the desk guide, which will be distributed during the GF-supported provincial childhood TB trainings planned for next quarter.

Core projects:

- **Transmission** - In Tanzania, outlines for three studies were developed, of which the main community-wide study applying whole genome sequencing was selected for further development. The first meeting of the Strategic Advisory Group of Experts was held in Cape Town, during which 12 scientific experts provided critical input on study methodologies, particularly on the main community-based protocol for Tanzania.
- **Bedaquiline coordination** - Since the approval of the project, CTB has provided technical assistance to Ukraine, Tajikistan, Kyrgyzstan, Vietnam, and Nigeria through CTB country funding, laying the groundwork for introduction of new drugs and regimens to provide life-saving treatment to MDR-TB patients. In addition, a meeting on the introduction of new drugs and regimens in Kazakhstan took place during the Union Conference in Cape Town.

Main Challenges:

- In Tanzania, Malawi and DRC, the setting up new of offices and the recruiting of staff has delayed full project implementation. The CTB Project Management Unit (PMU) continues to work closely with the country teams and backstops to support rapid implementation of activities in these countries.
- As is typical in the last quarter of the calendar year, activities and expenditures slowed due to holidays. The PMU is working with country teams to develop action plans for increasing the speed of implementation in countries with significant pipelines.
- While CTB reports official WHO data on MDR-TB, we also strive to collect current PMDT data at country level. Poor monitoring of MDR-TB patients on treatment hampers our ability to collect and report on the number of confirmed RR-TB and MDR-TB patients (Xpert and C/DST) diagnosed, and number of unconfirmed and confirmed MDR-TB patients started on treatment. CTB will continue to address PMDT quality and reporting as part of our ongoing work in countries where this is a priority.
- Progress has been slow on core Transmission and Prevention projects. This is due to a large extent to the intrinsic complexity of these projects and challenging institutional arrangements with a new set of stakeholders outside the consortium. In addition, prolonged discussions between CTB technical partners and USAID technical backstops on geographic scope and methodology of these projects have slowed implementation. CTB will continue to work with our USAID counterparts to speed decision-making and implementation.



Lab Officer Su Hlaing Tint conducting a monitoring visit with officials from NTRL to Kayin Chaung Station Hospital, Burma (Photo: FHI 360)

Introduction

Challenge TB 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 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, 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.

Aligned with the USG strategy to prevent and control TB, Challenge TB 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 country, regional and international/global level with the majority of the program's work being done through country-specific projects. As of December 31, 2015, 21 countries were implementing CTB, 20 countries are in full swing and Uzbekistan is initiating activities and in the process of establishing an office.

At the regional level, CTB continued implementation of the East African Region project, with more information on this project available on page 32. As for core projects, during this quarter CTB continued implementation of three projects: Transmission (page 33), Stigma (page 33), and Global Fund Hub (page 33). Three other projects were officially approved last quarter: (1) UN Special Envoy for Tuberculosis (page 33), (2) Bedaquiline Coordination (page 34); and (3) Catastrophic Costs (page 34).

Global Fund

Although CTB's involvement with and support to The Global Fund (GF) varies from country to country, there is a common theme of collaboration, information sharing, leveraging of resources and technical support across CTB projects. A snapshot of CTB's support to and collaboration with GF efforts this quarter is presented below:

- **Afghanistan** - CTB coordinated with the principal recipient (PR), sub-recipient (SR), the NTP and the MoH through a TB taskforce and the Country Coordinating Mechanism (CCM) to ensure that planned GF activities are implemented as per schedule and to propose an amendment to the GF implementation plan. CTB assisted the NTP in the SR selection process and conducting provincial and national quarterly review workshops. The CTB country project director is chair of the CCM.
- **Bangladesh** - CTB participated in a meeting with the NTP and the GF team visiting Bangladesh under the leadership of Fund Portfolio Manager to discuss re-programming of GF grants. The contribution of CTB to routine and emergency maintenance support of 39 Xpert machines was acknowledged at the meeting.
- **Botswana** - The grant making process has been completed during this quarter. CTB worked together with NTP's GF manager on the completion and submission of key documents to the GF country team, including the performance framework, a list of health products, quantities and costs, a detailed budget and summary budget, and an M&E plan was done. CTB has worked together with NTP's GF manager in the completion and submission of the above key documents.
- **Burma** - GF TB grant has recently been downgraded to A2. One of the primary reasons cited for this issue is that active case finding (ACF) targets were not met. CTB attended a meeting organized by Save the Children Foundation, during which grant sub-recipients presented the results of their ACF activities. CTB provided input by discussing issues concerning ACF activities in Burma, planning for the GF Joint Concept Note development, and providing an overview of CTB's work plan.
- **Cambodia** - The country faced serious challenges with GF-supported supervision activities in 2015, which led to rapid decreases in bacteriological testing and case finding. As a result, the CTB team conducted and supported supervision in many CTB and non-CTB areas, including supervision that was combined with an operational research for assessing quality of diagnosis of childhood TB in about 25 operational districts.
- **DRC** - A meeting of the GF delegation and CTB was held on November 27, 2015 at the CTB country office. The GF team was informed of the CTB support, with a particular emphasis on the need to improve activity implementation in the field. CTB stressed the problems encountered in TB diagnostic and treatment centers in supply chain management of TB medicines and other essential consumables, and the funding delays that had a negative effect on the capacity building of the actors involved in supervision. The GF delegation requested to be regularly appraised by the CTB team of any delays experienced in the implementation of activities on the ground.
- **Ethiopia** - CTB identified the gaps in GF grant implementation, which were addressed in the CTB Year 2 work plan by focusing on supportive supervision, review meetings and capacity building of the NTP staff.
- **India** - A joint TB-HIV concept note to be funded under the GF New Funding Mechanism (NFM) from October 2015 to December 2017 was approved and the grant was signed during this quarter. The Union is one of the PRs for the GF TB grants in India, and CTB is in regular contact with the GF country team. CTB will identify opportunities for collaboration when the GF-NFM becomes operational in the next quarter.
- **Indonesia** - Currently, the GF is launching the NFM, which is expected to commence in January 2016. However, the framework agreement has not been signed yet. CTB assisted the GF PRs to complete all required documents for the Grant Agreement process on time. In addition, CTB assisted PRs with implementation of the GF TA Plan: translating the TA Plan into specific TORs, selecting consultants, supervising TA work, and providing technical support to selected consultants in implementing the TA. By December 2015, one TA was completed, two TAs are in the final stage.
- **Kyrgyzstan** - The work plan and budget for the first six months of the GF-NFM grant was approved by GF in November 2015. CTB provided technical support to the PR in calculating the need of second line drugs (SLD) as well as new and companion drugs (clofazimine, imipenem and linezolid) needs based on the estimated number of M(X)DR-TB cases, which will be included in the GF procurement plan.
- **Mozambique** - CTB provided technical assistance to the GF supported trainings on the new M&E tools. First, the CTB team (M&E officer, TB/HIV officer and Technical Director) supported the national level training of trainers (TOT) of NTP provincial supervisors on the revised M&E instruments. Later, CTB provided TA to the training of district and provincial M&E staff in the use of these instruments in all four CTB provinces.
- **Namibia** - CTB worked closely with the MoH and partners in supporting the preparation, write-up and submission of the reprogramming application to GF. The Country Director is a member of the CCM and the resource mobilization subcommittee of the CCM and was involved in various meetings during the reprogramming process. CTB procured the services of an external consultant through KNCV who worked closely with the writing team to submit the reprogrammed application to the GF.

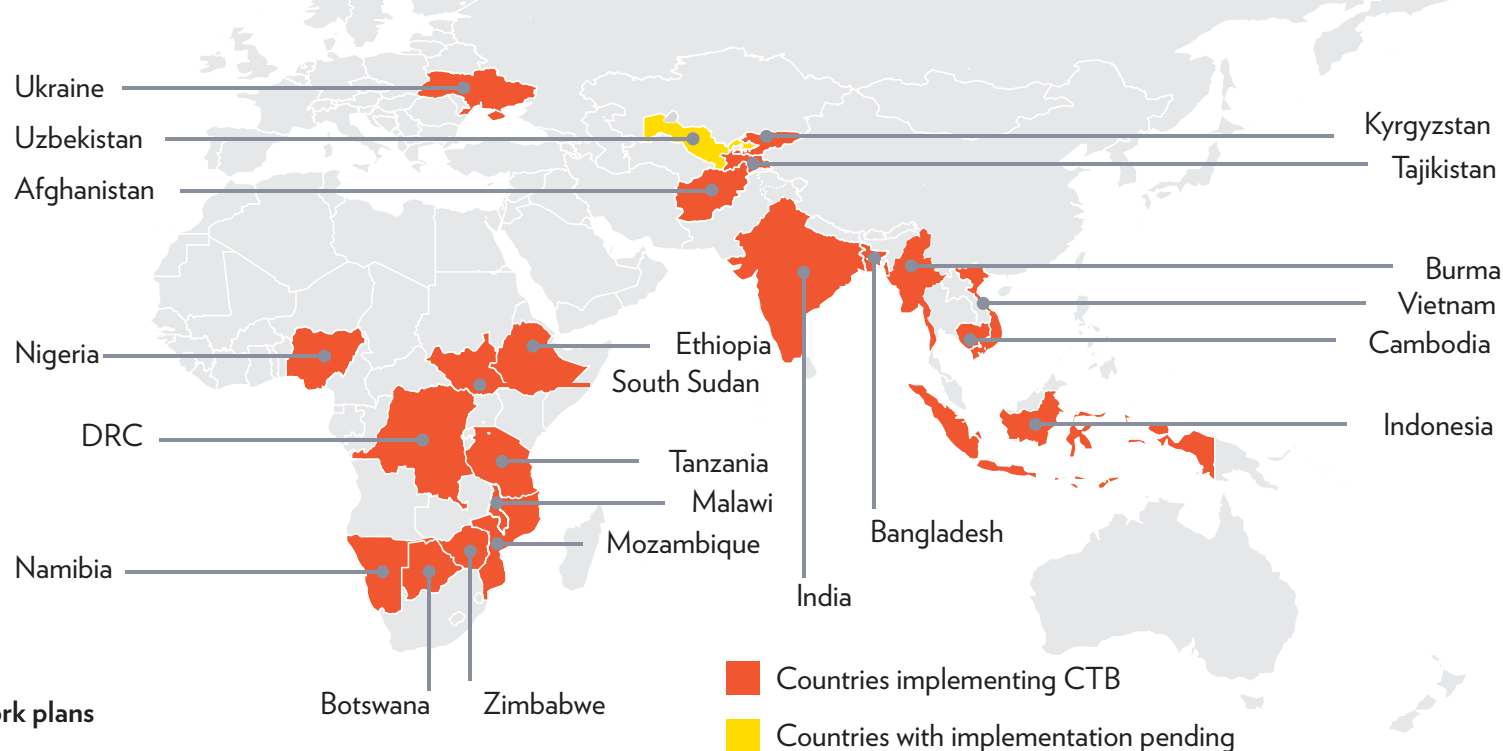
- **Nigeria** - CTB continues to participate in PR/SR meetings where grant progress is discussed and action plans developed. This also provides an opportunity to update PRs and SRs on CTB activities to avoid duplication of effort and ensure coordinated action in 12 co-located States. In collaboration with the GF, CTB also supported the NTP with the Green Light Committee (GLC) mission as well as the immediate interventions to respond to the findings of the mission.
- **South Sudan** - The GF-NFM grant was due to start in July 2015 but there was delay in the signing of the Letter of Agreement by the MoH and UNDP, thus activity implementation started in October 2015. CTB is involved in the quantification of TB drugs as well as the development/review of the annual procurement plan for use by the country partners. CTB supports this process including creating linkages with the NTP in Kenya and South Sudan.
- **Tajikistan** - The GF-NFM grant-making process is about to be finalized and will start in January 2016. The duration of the NFM is 27 months until March 2018. According to the work plan of the NFM, the grant will cover the procurement of new and re-purposed drugs during the two-year grant period. SLDs are planned to cover treatment of 1,200 MDR-TB patients countrywide, including XDR-TB cases. CTB will provide technical support for the implementation of new drugs and short regimens.
- **Tanzania** - With support from the GF, CTB and NTP collaboratively conducted an expert panel review of 18 complicated DR-TB patients and a cohort review of 139 DR-TB patients, supported by ATS. This collaboration enabled representatives from all regions with DR-TB patients in the specified cohorts to attend a week-long workshop where TB coordinators from different regions of the country got a chance to learn from a panel of experts.
- **Ukraine** - Ukraine is currently implementing a joint TB and HIV grant for 2015–2017, which is covering MDR-TB treatment. CTB supported the GF grant in capacity-building and training of TB providers, through development of the CTB MDR/XDR-TB training curriculum that is being used by the GF grant for training of TB providers.
- **Vietnam** - A joint TB program review 2011-2015 was conducted from October 19-30, 2015 by an independent group of international consultants and experts from WHO, Global Drug Facility (GDF), USAID and the GF. CTB (WHO) staff was a member of the review team. The results were disseminated to the MoH and all partners of the Vietnam Stop TB Partnership, focused on key challenges and recommendations for NTP in 2016-2020.
- **Zimbabwe** - CTB continued to support TB interventions in liaison and partnership with the NTP teams implementing GF activities through joint routine GF/CTB technical meetings and monthly activity review meetings to track progress in implementation of both CTB- and GF-supported activities. CTB also provided technical support in the national laboratory TB SOP review workshop, which was a GF activity. This activity resulted in the development of updated laboratory TB procedures and forms, which will be used in the next two years for the analysis of all TB specimens.



Assistant NTP Director interviewing TB patient and family members, Bangladesh (Photo: MSH)

Country Projects

As of December 31, 2015, 20 countries were implementing CTB (see map)¹. The table below summarizes the technical reach of the approved Year 2 CTB country work plans.



CTB sub-objectives covered in Year 2 country work plans

Technical Areas	Challenge TB Countries																				# Countries working in technical area
	AF	BA	BO	BU	CA	DRC*	ET	India	Indo**	KR	MA	MO	NA***	NI	SS	TJ	TN	UKR	VT	ZM	
1. Enabling Environment	X	X		X	X		X		X		X	X	X	X	X		X	X		X	14
2. Comprehensive, high quality diagnostic network		X	X	X	X	X	X	X	X		X	X		X	X		X		X	X	15
3. Patient-centered care & treatment	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	20
4. Targeted screening for active TB		X	X	X	X		X				X		X	X			X			X	11
5. Infection Control	X	X		X	X	X	X		X		X	X			X		X	X	X		13
6. Management of latent TB infection					X	X	X		X		X	X			X		X		X		9
7. Political commitment & leadership	X	X		X	X	X	X	X	X			X	X	X	X		X	X	X	X	16
8. Comprehensive partnerships and informed community involvement			X	X	X	X	X	X	X				X		X				X	X	13
9. Drug and commodity management systems		X	X	X		X	X		X							X	X				8
10. Quality data, surveillance and M&E	X	X	X	X	X	X	X		X		X	X	X	X	X		X		X	X	16
11. Human resource development		X		X	X	X	X	X			X	X			X		X	X		X	12

* Based on Global Health work plan, ** Based on Oct-Nov 2015 interim work plan, *** Based on Oct-Dec 2015 approved activities and budget

1. Uzbekistan has not started implementation yet, pending KNCV registration in the country.

Programmatic Management of Drug-Resistant TB

CTB is monitoring MDR-TB diagnosis and treatment data quarterly to track progress in PMDT scale-up and to inform project activities at country and global levels. CTB relies on data reported officially to WHO (i.e. before 2015), and also gathers data directly from NTPs for the most recent quarters in each country. The table below summarizes the number of MDR-TB (including RR-TB) patients diagnosed and the number of patients (unconfirmed and confirmed) started on treatment from 2011 through 2015. The totals per year are then summarized in the graph on page 12 to capture the overall trend across CTB countries.

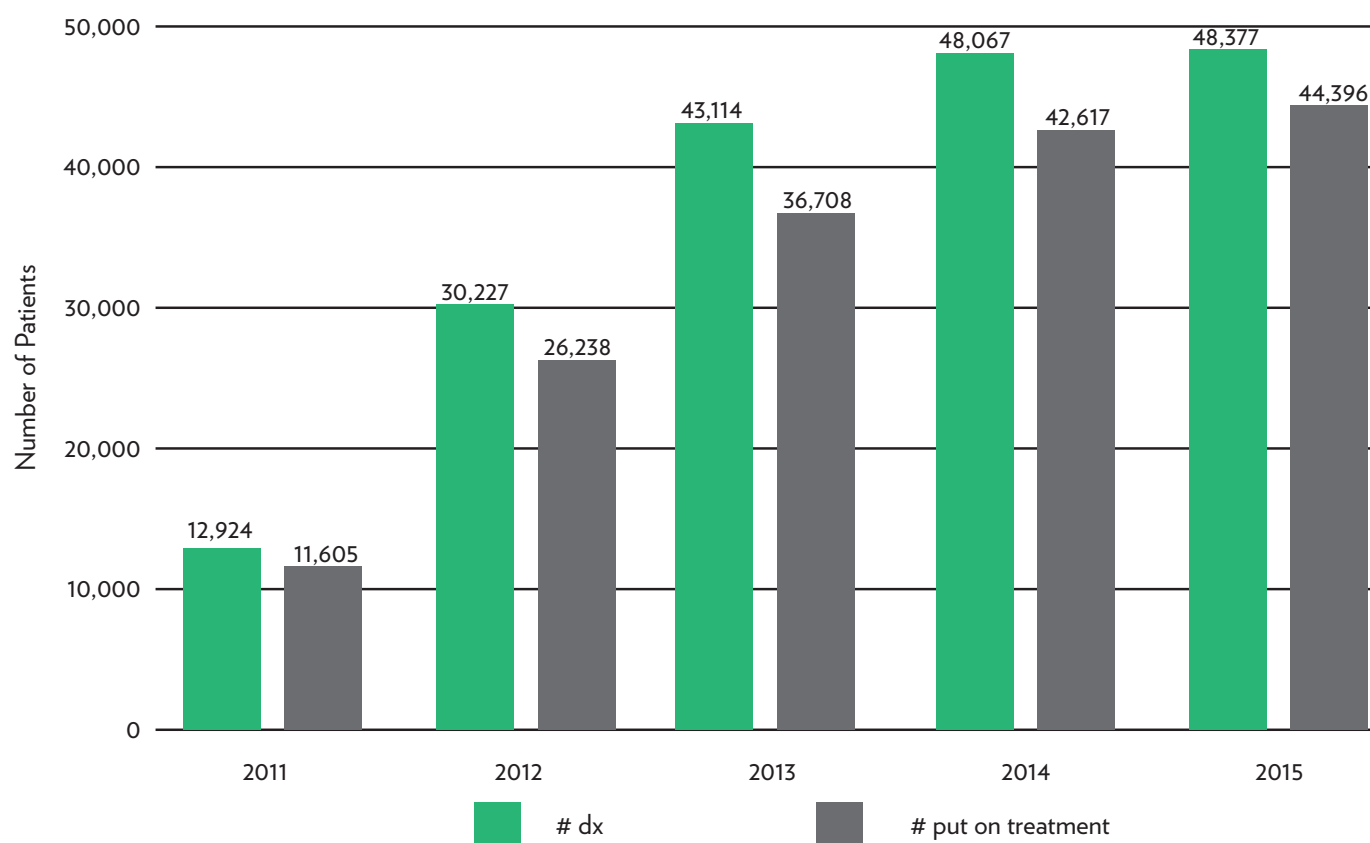
Diagnosis of confirmed RR-TB and MDR-TB (Xpert and C/DST) as well as treatment initiation for unconfirmed and confirmed MDR-TB, 2011-2015 in 20 CTB countries* (2010-2014: WHO Global TB Report 2015; 2015 data reported from the NTP via CTB; data that are not yet available have been extrapolated based on available data and appear in red)

Countries	WHO Data								NTP data via CTB									
	2011		2012		2013		2014		Jan-Mar 2015		Apr-Jun 2015		Jul-Sep 2015**		Oct-Dec 2015		2015	
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Afghanistan	22	22	38	38	49	48	88	88	14	13	22	22	18	18	26	26	80	79
Bangladesh	612	390	701	505	807	684	994	945	237	229	230	244	199	196	215	217	881	886
Botswana	46	71	52	67	59	59	41	73	22	22	20	20	16	16	24	24	82	82
Burma	690	163	778	442	1,984	1,537	3,495	1,537	644	467	644	467	644	467	644	467	2,576	1,868
Cambodia	56	83	117	110	131	121	110	110	20	17	21	18	24	27	12	12	77	74
DRC	88	138	133	269	261	359	442	436	82	82	71	71	102	84	85	79	340	316
Ethiopia	216	199	294	289	558	413	503	557					648	597	216	199	864	796
India	4,221	3,384	17,253	14,059	23,289	20,763	25,748	24,073	6,437	6,018	6,437	6,018	6,437	6,018	6,437	6,018	25,748	24,073
Indonesia	466	255	818	432	1,074	819	1,812	1,284	397	382	497	399	497	388	388	386	1,779	1,555
Kyrgyzstan	679	804	958	958	1,590	1,160	1,267	1,157	350	355	322	315	258	257	236	202	1,166	1,129
Malawi	26	15	27	19	28	19	106	64	27	16	27	16	27	16	27	16	106	64
Mozambique	184	146	283	215	359	313	544	482	155	155	131	131	143	143	143	143	572	572
Namibia	194	194	216	216	225	218	350	327	90	84	59	57	82	78	53	51	284	270
Nigeria	95	39	107	225	669	432	798	423	270	110	304	164	287	137	287	137	1,148	548
S. Sudan	7	0	3	0	1	0	6		2	0	4	0	4	0	7	0	17	0
Tajikistan	598	380	780	536	1,065	666	902	804	140	113	169	166	191	172	154	185	654	636
Tanzania	36	32	83	44	95	95	516	143	63	34	74	23	62	30	73	37	272	124
Ukraine	4,530	4,957	7,615	7,672	10,585	9,000	7,735	8,201	2,172	2,035	2,198	2,158	2,292	2,278	2,416	2,398	9,078	8,869
Vietnam	601	578	774	713	994	957	2,198	1,532	550	379	550	514	550	529	550	608	2,200	2,030
Zimbabwe	118	64	149	105	393	315	412	381	90	90	122	104	128	125	113	106	453	425
Total	12,924	11,605	30,227	26,238	43,114	36,708	48,067	42,617	11,762	10,601	11,902	10,907	12,609	11,576	12,106	11,311	48,377	44,396

*Uzbekistan data is not included as MDR-TB reporting via CTB had not yet started this quarter

**Ethiopia data reported for Jul-Sep 2015 cover the period of Jan-Sep 2015

Number of confirmed RR-TB and MDR-TB patients (Xpert and C/DST) diagnosed, and number of unconfirmed and confirmed MDR-TB patients started on treatment, 2011-2015 in 20 CTB countries*



The rapid increase in diagnosis and treatment initiation (a nearly three-fold increase) is notable from 2011 to 2014. The data for 2015 need to be interpreted with some caution as the data from nine countries are based on projections of (equal level) 2014 or incomplete 2015 data. Based on these conservative initial projections, a 0.4% increase in the number of patients diagnosed, and a 4% increase in the number of patients started on treatment is anticipated across CTB countries in 2015. More pronounced increases are anticipated in Ethiopia (72% in #dx and 43% in #trt) and Nigeria (44% and 30%, respectively).

The approximate gap between diagnosis and treatment initiation has narrowed from 2013 (15%) to 2015 (8%) - technical assistance under CTB in 17 countries (i.e. the countries with active CTB project in Year 1) likely contributed to closing this gap. However, there are still several countries with major work to be done to initiate MDR-TB patients on appropriate treatment (including S. Sudan, Tanzania, Nigeria, and Malawi); CTB is working in each of these countries to introduce, expand or improve PMDT services.

On the following pages the progress and achievements from October through December 2015 are summarized for the 20 CTB country projects that were active during the quarter (Uzbekistan does not yet have results to report).

Afghanistan

CTB-Afghanistan, led by MSH and with KNCV as a collaborating partner, aims to assist the NTP to reach its strategic objective of increasing TB case notifications by at least 6% annually through provision of quality TB services to all communities. The project works in 15 of the country's 34 provinces.

DOTS expanded to remote and hard to reach area - CB-DOTS was extended to 14 out of 15 provinces through sub-contracts with basic package of health services implementing organizations. The CB-DOTS contracts with NGOs were signed mid-October 2015, and during this quarter the NGOs completed the staff recruitment and training of health care providers and community health workers (CHWs). CTB-DOTS implementation resulted in 223 basic health centers (BHCs) being covered and in the identification of 4,335 presumptive TB patients who were referred for diagnosis to health facilities. Of those referred, 200 (4.6%) were diagnosed with bacteriologically confirmed pulmonary TB. Community health workers are providing daily treatment to 260 TB patients in their villages. In addition, 163 community awareness events were conducted in all 14 provinces. Additionally, 140 billboards with TB messages were installed in communities and radio messages were broadcasted through local radios in 14 provinces.

DOTS expanded to densely populated area - CTB assisted the NTP with the expansion of DOTS implementation to densely populated urban areas in the cities of Kabul, Herat, Kandahar, Jalalabad and Mazar-i-Sharif. In total, 10 new public and private health facilities engaged in Urban DOTS (two public, one prison and seven private hospitals). Additionally, 131 health care staff (lab technicians, nurses and doctors) of the five cities was trained on the SOPs for case detection/diagnosis, treatment, TB-IC, contact investigation and laboratory diagnosis. TB case notification in Kabul for all forms of TB has increased by 6.6% (from 5,007 in 2014 to 5,336 in 2015 - a huge jump from only 1,834 cases in 2009). The Urban DOTS expansion in Kandahar, Herat and Jalalabad resulted in a 53% increase in notification of TB cases (all forms) in these three cities from 2014 (669) to 2015 (1,021).

Safer health care settings - During Year 1 of the project, TB-IC activities were implemented in 196 health facilities (strengthening TB-IC in health facilities started within the framework of TB CARE I and continued under CTB). During the first quarter of Year 2, TB-IC activities were implemented in an additional 10 health facilities. Namely, these 10 health facilities were assessed for TB-IC, their re-design was planned and TB-IC committees were established. A TB-IC pocket guide was developed and translated into local languages.

Health care staff capacity increased - During the reporting period, 279 (237 male, 42 female) public and private health care staff from five provinces of Bakh, Herat, Kandahar, Nangerhar and Kabul who were initially trained on DOTS, were given refresher trainings.



Billboard with TB message installed in Ali Sher district, Khost province, Afghanistan (Photo: MSH)

Bangladesh

CTB-Bangladesh is being led by MSH in close collaboration with KNCV. CTB is supporting the NSP 2020 targets: (1) Increase annual case detection of all forms of TB to 230,000 (from baseline of 184,507 in 2013); (2) Ensure universal access to DST; (3) treat 100% of detected MDR-TB cases and achieve a treatment success rate of at least 75% in detected MDR-TB cases; and (4) Decrease TB mortality from 51/100,000 to 40/100,000.

Functionality of Xpert machines improved - A full inventory of all 39 Xpert machines available in the country was conducted between October–December 2015. CTB, in collaboration with the NTP and Cepheid, undertook field visits to assess the condition of these machines and took steps to ensure their functionality. In just one quarter of CTB support the number of functional Xpert machines increased from 29 (74%) to 36 (92%) between October and December 2015.

Strengthening external quality assurance (EQA) for microscopy - To improve the quality implementation of microscopy EQA and in continuation of the trainings conducted in Year 1, CTB conducted the final trainings of 35 EQA coordinators, first controllers and second controllers on EQA for TB microscopy laboratories. CTB has now successfully trained all the relevant staff of 40 EQA centers to be covered by the project.

A Public Private Mix (PPM) working group formed - A PPM working group was formed at a meeting of the National TB-PPM working committee held on November 22, 2015. The PPM working group has been created to accelerate the PPM activities in country and consists of the NTP PPM focal person and GF MDR-TB national consultant as well as PPM representatives from other partner agencies and NGOs. The PPM committee will focus on policies and interaction with higher authorities while the PPM working group is more action-oriented. The TOR of the working group includes pursuing all recommendations made by the National PPM committee and the formulation of a draft of the national PPM operational plan. The PPM working group will liaise with partners and professional bodies for follow-up of the implementation of the PPM activities incorporated in the PPM operational plan.

Childhood TB capacity improved - CTB with the technical support of pediatricians of the Bangladesh Pediatric Association, the leading professional society for pediatricians in the country, conducted two training workshops in November 2015 for doctors belonging to NGOs working under the umbrella of National Health Service Delivery Project (NHSDP), a USAID-funded consortium in Dhaka City. A total of 39 doctors (5 Male, 34 Female) were trained. NHSDP provides MCH care through 38 clinics and this training will enhance the capacity of their doctors to identify and treat children with TB more effectively.



Successful contact investigation with a vulnerable tea garden worker's family, Bangladesh (Photo: Zakia Siddique)

Botswana

CTB-Botswana led by KNCV, aims to assist the NTP in strengthening the laboratory services and planning for novel intervention strategies by providing regular and routine support through long-term TA both at NTP and National TB Reference Laboratory (NTRL).

GxAlert national rollout - A GxAlert landscape analysis was completed during this quarter. Based on this analysis, a number of operational recommendations were developed including keeping the installation process uniform across sites in order to minimize training, labor & maintenance costs. It was also recommended to finalize Government Data Network approval and mobile network operator agreements prior to setting a launch date. GxAlert national roll-out for all Xpert machines (34) in the country is planned for next quarter.

Laboratory support - CTB provided support to the NTRL and conducted a brief survey of current laboratory network activities and challenges with regard to Xpert. Progress was assessed towards restoration of the NTRL's TB containment lab ventilation system for the re-establishment of routine culture and DST services. Data captured and analyzed during this effort support earlier data indicating sub-optimal utilization of Xpert machines in the country; the assessment also highlighted the urgent need for increased numbers of site visits and the need for a national maintenance program or establishment of Cepheid service contracts.

Mentoring and supportive supervision to MDR-TB sites - Mentoring and supportive supervision were conducted in three MDR-TB sites (Nyangagbwe Referral Hospital, Sekgoma Memorial Hospital and Letsholathebe II Memorial Hospital). The key challenge identified at Nyangagbwe Referral Hospital is that the MDR-TB clinic is only one room and is within the outpatient unit with other clinics next to each other. Infection control is a challenge as MDR-TB patients are seen in the same outpatient department as the patients not infected with TB. There has been a delay in moving to the new MDR-TB clinic I due to management-related issues. The visiting team has met with hospital management and recommended to speed-up the opening and functioning of the new MDR-TB clinic.



On-site mentoring of lab staff performing GeneXpert test, Botswana (Photo: Dr Gladys)

Burma

CTB-Burma led by FHI 360 and with KNCV as a collaborating partner prioritizes reaching key populations, strengthening the laboratory network, strengthening TB-IC, and helping the NTP in the analysis of and strategic planning for novel intervention strategies. With approval of the Year 2 work plan arriving at the end of the quarter, mainly Year 1 activities were implemented this quarter.

Laboratory network reviewed - CTB completed a review of the laboratory network focusing particularly on the reference laboratories and peripheral network (peripheral evaluations of the microscopy and Xpert network are still pending completion). The main findings of this review show that presently there are four algorithms in use that are directed by various indications for rapid Xpert MTB RIF testing - this is overly complicated and can be confusing for clinicians. Extensive observations and recommendations were provided to the laboratories based at the NTRL in Yangon, Upper Myanmar TB Center, and the Taunggyi Regional TB Center.

TB-IC assessed - CTB conducted an assessment of TB-IC in Burma, providing recommendations to the NTP, which should help guide a process to improve national TB-IC efforts at all levels. Namely, these recommendations are addressing the following key findings of the assessment: (a) The TB-IC manual and the PMDT guidelines are not completely aligned; (b) Although the TB-IC Manual was published only one year ago, it misses important recent developments, such as the FAST strategy (FAST stands for Finding cases Actively in health facilities, Separating them safely and Treating them effectively) and upper-room ultraviolet germicidal irradiation (UR-UVGI); (c) The manual also misses SOPs and practical tools on monitoring TB-IC implementation and compliance with TB-IC standard practices including respirator use. The CTB team is awaiting formal approval from the MoH and the NTP before disseminating the reports and taking action on the aforementioned recommendations.

PMDT technical support - The project technical backstop conducted a TA mission in the country focused on PMDT. The main recommendation provided to the NTP is to optimize the country's diagnostic algorithm to ensure patient triage and early treatment initiation based on DST results. CTB will continue working to address this recommendation during subsequent quarters.



MDR-TB patient is receiving evening DOT from the community volunteer, Ms. Tin Tin Myint, Burma (Photo: FHI 360)

Cambodia

Led by FHI 360 and with KNCV, and WHO as collaborating partners, CTB-Cambodia provides TA to the NTP to develop strategies for TB control in rural and urban settings with the primary goal to improve case detection and to close the “diagnosis gap” by targeting specific risk groups. The rural strategy focuses on comprehensive CB-DOTS, to include key populations such as children and the elderly. The urban strategy prioritizes engagement of large hospitals, public-private mix and prisons.

Childhood TB - While childhood TB is estimated to make up 10-20% of total TB cases in high-burden settings², this proportion ranges from 1% to 39% throughout Cambodia’s 25 provinces, suggesting potential under- and over-diagnosis of childhood TB. To better understand potential over-reporting of childhood TB, CTB with the NTP conducted a cross-sectional study at referral hospitals and villages in the 26 “high case-finding” operational districts. Based on the results of the assessment it was recommended: (a) To improve the national guidelines and algorithms for diagnosing childhood TB; and (b) To build capacity of clinicians to diagnose childhood TB, including the ability to perform a systematic clinical examination, and accurately interpret laboratory and radiology test results. These recommendations will be addressed during subsequent quarters.

Referral hospitals engaged - In collaboration with the NTP and the Cambodia Preventive Medicine Department, CTB provided TA to improve case identification and reporting at five provincial referral hospitals (Battambang, Maung Rusey, Sampove Meas, Kampong Speu and Korng Pisey). During the reporting period, there were 37,782 clients presenting to these hospitals, out of which 2,861 (7.6%) presumptive TB patients were identified at those settings and referred for diagnosis, of which 2,662 (93%) were received at the TB unit for diagnosis. Of these, 661 (25%) were diagnosed with TB, which is a 14% increase compared with the previous quarter. In addition, a cough triage strategy has been developed and implemented within those five hospitals. The CTB team has discussed with Quality of Health Services, a separate USAID’s grant, to include TB symptoms in the triage medical form as a way to remind physicians to screen every patient for TB.

Improved case finding among the elderly - In close collaboration with provincial health departments and local health centers, CTB conducted an enumeration exercise of elderly individuals, defined as age 55 and above, in two operational districts - Prey Chhor and Tbong Khmum. The objective of the exercise was to obtain a more accurate denominator for tracking the coverage of TB services among elderly people. Approximately 41,311 elderly people (female: 21,778; 53%) were identified - accounting for approximately 9% of the total population (442,027). In these two districts, 126 pagodas and 19 mosques were identified, where TB screening will be implemented in Year 2. This will be followed by an intervention that includes the development of a follow-up system for those who are identified as presumptive TB patients to ensure they complete diagnostic work-up and get treatment as needed.

2. WHO/TheUnion/Unicef/CDC/USAID/TAG. (2013). Roadmap for childhood tuberculosis: towards zero deaths. Geneva: World Health Organization.



Semi-Active Case Finding among elderly in Ptas Check Pagoda, Pursat province, Cambodia (Photo: Ngo Menghak)

Democratic Republic of the Congo (DRC)

The Union is leading the CTB project in DRC while working closely with MSH and KNCV on TB/HIV activities in PEPFAR-supported provinces. The project focuses on increased TB case finding, expanded PMDT, integrated TB-HIV Care, and increased capacity of the NTP, health care workers and community workers.

Technical support to private healthcare providers - Technical support was provided to 13 private health facility structures in December for the implementation of TB care and prevention activities in the following four provinces: Maniema, Kasai Occidental Est, Kasai Occidental Ouest and Kasai Oriental Sud. This support was provided jointly by the NTP and CTB staff members. The smooth running of these structures will extend the NTP scope to provide better access to TB diagnosis and care for patients and strengthen public-private partnership.

TB diagnostic network strengthened - Three CTB-funded Xpert machines were supplied in the following provincial coordination areas (Coordination Provinciale Lèpre et Tuberculose [CPLTs]): Equateur Est (Lisala), Kasai Occidental Ouest (Tshikapa) and Sankuru (Lodja). Sputum samples were transported by motorcycles with CTB support from several diagnostic centers to CPLTs to be tested by Xpert. In the seven CTB-supported CPLTs, 691 sputum samples of presumed TB patients (including samples of 348 presumed MDR-TB) were transported, of which 665 (96%) were tested by Xpert; 175 (26%) were confirmed TB, including 11% (20/175) confirmed RR-TB.

Childhood TB services strengthened - Post-training supervision visits for childhood TB services were conducted by the NTP and CTB in three hospitals (Hopital de Kansele, Centre Hospitalier Presbyterien Methodiste and Hopital de Lukalaba) in Kasai Oriental Sud province. This supervision aimed to strengthen implementation of clinical practices through on-site training. The key findings included: (a) The need for strengthened integration of TB services to general health services at the centers; (b) The need to expand use of sputum microscopy; (c) The need to expand access to Xpert testing and X-ray; and (d) The need for better use of TB data collection tools. The lessons learnt will be used in the nationwide scaling-up and improvement of childhood TB services.

Active TB case finding implemented by local NGOs - Active TB case finding activities in the community were continued by the four local partner NGOs. A total of 4,065 sputum samples from presumed TB patients were tested and 740 (18%) were diagnosed with smear-positive TB and initiated on treatment.



Supervision visit to a private facility "Polyclinique El Rapha" in Kasai Occidental Ouest, DRC (Photo: Dr Stéphane Mbuyi)

Ethiopia

CTB is led by KNCV in Ethiopia with WHO and MSH as collaborating partners. The Year 2 work plan touches upon every CTB technical area with the greatest emphasis on patient-centered care especially targeting MDR-TB, community TB, and TB/HIV services. Strengthening data quality and M&E also is a cornerstone of the work plan. The project is concentrating efforts at the regional level, in Southern Nations and Nationalities (SNNPR) and Tigray regions. National-level TA is targeting only specific technical areas while support for Urban TB activities is focused in Addis Ababa, Dire Dawa and Harari. Jointly with the USAID Mission and in close consultation with the MoH/NTP, CTB-Ethiopia team has been working on the development of the new 18-month (1 April 2016 to 30 September 2017) work plan, besides supporting the national level providing more support to the peripheral echelons by expanding CTB to an additional seven regions and respective zones. Emphasis will be on ensuring basic TB programming especially at district level and assisting the NTP and regional health offices to ensure a continuum of care addressing the gaps in providing TB, DR-TB and TB/HIV services.

National childhood TB training curriculum and tools developed - CTB provided TA to the NTP in developing a national childhood TB training curriculum, job aid and monitoring tools. The training materials were pretested and 57 trainers from all regional health bureaus were trained. This training will be further cascaded to the lower level, mainly targeting the primary health care units and the child health service in Ethiopia. This is expected to improve the care and prevention activities on childhood TB in the country.

Technical and financial support to regional TB teams provided - During this quarter, CTB provided technical and financial support to SNNPR and Tigray regional TB teams in conducting joint supportive supervision and review meetings in each of these regions.

Data quality improvement tools developed - CTB provided technical support to regional TB programs in SNNPR and Tigray to develop a routine data quality assurance tool (RDQA), which was pilot tested and integrated in the supervision checklist to be used during the regular supportive supervision. In addition, 66 M&E staff in both CTB regions was given a three-day training focusing on data quality and RDQA tool.



Challenge TB team giving technical assistance in Alamata hospital, Ethiopia (Photo: KNCV)

India

The Union is leading CTB efforts in India with close collaboration from KNCV, PATH, and FIND. The project has been contributing to TB control efforts in India primarily through a Call to Action to End TB in India. This advocacy campaign aims to mobilize a wide range of stakeholders to demand and sustain high-level domestic commitment to end TB in India. The other important component of the CTB-India project is addressing the gaps and limitations in childhood TB.

Private health sector engaged in the Call to Action - Advocacy efforts with the private health sector resulted in the launch of “Mission TB-Free Haryana” by Medanta the Medicity (a well-known large corporate sector multi-specialty hospital) in partnership with USAID, CTB, The Government of Haryana and Mr. Amitabh Bachchan, a TB champion and Bollywood celebrity. Two ‘TB-Free Haryana mobile vans’ equipped with digital X-ray machines and staffed by a doctor, nurse and an X-ray technician were launched by the dignitaries present on 20 November 2015 at the premises of the Medanta Hospital in Gurgaon, Haryana. The mobile van pilot will be scaled-up from one district to five districts this year and to 21 districts in the coming years. The mobile vans will visit the government’s peripheral health centers where X-ray facilities are not available to further evaluate presumptive sputum-smear negative TB cases identified at these facilities. This initiative provides X-ray services to patients closer to home and is expected to increase overall case detection and notification by the NTP in the targeted state.

Political commitment to fight TB ensured amongst Members of Parliament (MPs) - CTB was able to build political commitment amongst MPs by partnering with the Indian Association of Parliamentarians on Population and Development (IAPPD). CTB successfully brought together 14 MPs and legislators from different political parties at an event called “Parliamentarians Meet towards a TB-Free India” on 21 December 2015 in New Delhi. The participating MPs were sensitized on the TB situation in India and the urgent need for action to end TB. The event was extensively reported in the media, with around 40 articles. In the coming months, the CTB team will work closely with the MPs to translate some of these commitments into action.

Improving the diagnosis of children with TB - CTB through FIND continued supporting a project offering upfront access to Xpert testing for the diagnosis of pediatric TB in four major cities of India. In the first year of the project, the approach emerged as a successful model with the potential for replication to other cities. The focus of the second year of the project is to broaden the provider base, thereby extending the benefits of the project interventions to a larger population of children.

The following results were achieved during this reporting quarter:

- The number of providers and hospitals linked to the Xpert laboratories increased from 267 to 349, representing a 31% increase.
- A total of 5,184 presumptive pediatric TB and RR-TB patients were investigated using Xpert testing and a total of 396 (8%) children were diagnosed with TB including 41 (10%) RR-TB cases.
- The project has successfully demonstrated the utility of Xpert testing for diagnosis of TB in non-sputum specimens. In the reporting quarter, of the total 5,907 specimens tested, 59% (3,507/5,907) were non-sputum specimens, including 2,529 (43%) gastric aspirate/lavage, 384 (7%) cerebrospinal fluid, 176 (3%) pleural fluid, 121 (2%) broncho-alveolar lavage and 101 (2%) pus specimens.



Mr. Amitabh Bachchan, Ambassador Mr. Richard Verma, and Dr. Naresh Trehan mark the launch of TB-Free Haryana, India (Photo: The Union)

Indonesia

CTB-Indonesia is led by KNCV and implemented in collaboration with WHO, FHI 360, MSH and ATS. During this quarter, the implementation of CTB-Indonesia was guided by an October - November 2015 interim work plan, covering all intervention areas with the exception of targeted screening of active TB and human resource development. The largest investment is in patient-centered care and treatment (specifically for MDR-TB and TB/HIV).

TB accreditation guideline finalized - The TB accreditation guideline for Public Health Centers (Puskesmas) was finalized and submitted to Basic Medical Service Unit of the MoH and the Accreditation Commission for First Level Health Facilities (FKTP) to be introduced as national guideline. This guideline is intended to provide Puskesmas accreditation assessors with a tool and benchmarks to measure TB service performance in health facilities. Furthermore, Puskesmas can use this guideline to prepare themselves to meet accreditation standards for TB services. The guideline was field tested by the commission during the FKTP accreditation surveyor training.

Xpert coverage expanded - Between November and December 2015, the NTP installed 21 new Xpert machines in 17 provinces. CTB provided TA on site selection for Xpert placement, and supported the NTP in the installation and configuration of Xpert machines at four health facilities in CTB areas. The total number of Xpert machines in country is now 63, which are distributed in 33 out of 34 provinces. The Xpert roll-out is expected to enhance TB laboratory confirmed diagnosis of PLHIV who are sputum-smear negative as well as early diagnosis of patients with DR-TB. New uses will include the diagnosis of TB among inmates in detention centers, as well as 10% of new TB cases (as per NSP target - starting from health services with Xpert machines available) including those who first tested sputum smear negative and/or have a chest X-ray suggesting TB, TB-Diabetes Mellitus (piloting), TB in children (piloting), and extra-pulmonary TB specimens (piloting).

A National TB patients' groups network established - With CTB facilitation, a National TB patients' groups network (for DR-TB patients), named Perhimpunan Organisasi Pasien TB Resistan Obat (POP TBRO), was established this quarter through a workshop on 'the role of TB patients' groups on TB control in Indonesia'. It was attended by seven patients' groups, from six provinces, the NTP and local civil society organizations. Budi Hermawan from PETA (a patient group in DKI province) was selected as the leader. The new POP TBRO team will be in charge of developing the charter, organization rules, announcing and advertising the existence of the newly established network, and creating a media communications strategy. The purpose of the patients' groups is to function as educators (to share information regarding transmission prevention and TB treatment), motivators (to support patients in enrolling on treatment and staying the course), facilitators (bridging between patients and health care providers), and investigators (assisting in case finding).

Referral linkages with ART services improved - Referral linkages between ART hospitals and the Xpert facility in North Sumatera province were established this quarter. The referral linkage utilizes both a sputum sample transportation system and patient referral system. All PLHIV with presumptive TB will have access to this diagnostic test through either system.



A patient consulted about drug side effects on his vision during an MDR-TB treatment monitoring visit, Indonesia (Photo: Ania Maharani)

Kyrgyzstan

CTB-Kyrgyzstan is led by KNCV, and this project is mainly focused on strengthening patient-centered care and treatment.

National plan for new TB drugs and shortened regimens developed - CTB supported the development of a national plan for the introduction of new TB drugs and shortened regimens for MDR-TB treatment. The pharmacovigilance component of the plan for active monitoring of adverse events was adjusted during a CTB/WHO joint workshop in December 2015. The MoH is expected to endorse this plan in March 2016, which will be followed by the implementation of the planned activities.

M/XDR-TB diagnostic algorithm drafted - In December 2015, CTB provided TA to the NTP for the development of the diagnostic algorithm for the detection of MDR- and XDR-TB patients and patient's selection for new drug/shortened regimens treatment. The draft criteria and procedures for patients' inclusion and exclusion into shortened MDR-TB regimens and regular XDR-TB regimens with new TB drugs (Bedaquiline) were elaborated, and will be finalized in the coming months.

CTB-Kyrgyzstan experience shared among international stakeholders - CTB-Kyrgyzstan team members made two presentations at The Union Conference on Lung Health in Cape Town, South Africa in December 2015. During an oral session the diagnostic barriers among newly diagnosed pulmonary TB patients in Kyrgyzstan were presented and a poster presentation showed the risk factors of not following-up on TB patients on second-line treatment.

Malawi

KNCV is the sole implementer in Malawi. The project's primary focus is on increasing case detection through intensified case-finding in all health facilities, targeted active case-finding (e.g. mobile teams and digital chest X-ray screening), and contact investigation. Another key focus of the project is on strengthening the NTP leadership at central, zonal and district levels. In Year 2, CTB will be implemented at National Level, in all five zones, and in 15 scale-up districts within these zones.

Laboratory assessment conducted - CTB conducted a laboratory assessment covering the NRL and 25 peripheral sites. Findings were discussed and a summary mission report was shared with the NTP, which included recommendations regarding infrastructure, biosafety, supply management, equipment maintenance, sample collection, regulatory documentation, data management and quality assurance. The full report, including a strategic plan, is to be shared with USAID the next quarter.

Drug resistance survey (DRS) protocol developed - The KNCV Regional Senior Epidemiologist led a workshop to elaborate the protocol of the second national DRS planned for Year 3 (the first DRS was conducted with support from TB CAP from 2009-2010). The workshop was attended by the NTP core team as well as CTB country project staff.

National TB and TB/HIV Research Agenda developed - CTB provided important contributions to the development of a national research agenda. CTB's input will ensure that the CTB's innovations (e.g., ACF) are embedded within the research agenda and address important gaps in case detection among high risk populations.

Planning for ACF - Recruitment of ACF staff (Coordinator, Nurse, Community Mobilisers and Laboratory Officer) was initiated in this quarter. It is anticipated that these positions will be filled in January 2016. The ACF coordinators will join CTB earlier and will contribute to laying the groundwork for this key activity (protocol and SOP development, mapping the selected urban intervention sites, etc.).

Mozambique

CTB-Mozambique is led by FHI 360 and has KNCV as the sole collaborating partner. In Year 2, CTB will work closely with NTP in the following technical areas: improving case detection (community engagement, quality assured lab network expansion), improving quality of care for all categories of patients (TB, TB/HIV, MDR-TB and childhood TB), strengthening the TB surveillance system with a view to have an electronic individual TB register in place that is interoperable with other health information systems (MoH and HIV), and conducting the first TB prevalence survey and national drug resistance survey. The project will be implemented in four provinces of Nampula, Zambézia, Sofala and Tete, by gradually covering all districts in these four provinces.

Childhood TB case notifications increased - CTB-supported Nampula Province has recorded a significant increase in the number of pediatric TB cases notified from October to December 2015 compared to the same period in 2014. In the past quarter, pediatric TB represented 19% (241/1,266) of cases notified compared to 12% (104/846) in October to December 2014. CTB and the NTP trained 371 maternal and child health nurses in pediatric TB screening and diagnosis during Year 1 and this training likely contributed to this increase, as more cases reported were being referred from different entry points than before to health facilities. An assessment of the retention of those who benefited from pediatric TB training showed that 100% continue to work in their designated health facilities in Tete and Nampula provinces.

Performance of microscopy labs improved - CTB supported a provincial meeting on microscopy EQA in Sofala Province. The meeting aimed to evaluate performance of microscopy labs based on defined quality standards. In Year 1, Sofala had lab enrollment of 100% (28/28) out of which 79% (22/28) achieved acceptable performance (>90% concordance). In first quarter of Year 2, the number of labs enrolled and participating in EQA dropped to 27 and of these 93% (25/27) achieved acceptable performance levels, which is an increase of 15% from the previous year.

TB services in prisons strengthened - CTB has been leading the establishment of a Technical Working Group (TWG) for TB in prisons. The TWG is composed of partners from the National Prisons Services (SERNAP), the NTP, the HIV program, and other stakeholders. This quarter, the TWG defined its TOR, developed an agenda based upon priorities, and performed a mapping exercise to identify where each partner currently works to avoid duplication of efforts. The TWG will support national efforts in implementing TB control activities in prisons. CTB also developed a TOR for the Information, Education and Communication (IEC) materials for TB/HIV in prisons. A TB/HIV pamphlet was drafted by the TWG and was submitted to SERNAP and the NTP for approval. The TB/HIV pamphlet and other IEC materials developed by the TWG will be used in prisons settings countrywide.

Support for professional development - CTB supported the participation of four people (two CTB and two NTP staff) at the 46th Union World Conference on Lung Health held in Cape Town, South Africa. During the conference, the Mozambique CTB Chief of Party (COP) gave an oral presentation on “Assessment of costs related to community based DOTS services in identification, referral and treatment follow-up of TB cases: The FHI 360/TB CARE I experience in Mozambique”.



Pediatric TB Training for HCWs in Tete Province, Mozambique (Photo: Maria Jose Pires Machai)

Namibia

CTB-Namibia commenced in October 2015 and has been implementing activities approved for the period October - November 2015 and pre-approved activities for December 2015 while awaiting approval of the work plan covering January - September 2016.

Completed TB/HIV treatment and prevention integration facility assessment - CTB conducted a TB/HIV assessment from 16-27 November 2015. A total of 37 health care facilities from four target districts (Engela, Katima Mulilo, Oshakati and Windhoek) were assessed, of which 12 were clinics, 9 were DOT points, 8 were health centers, and 8 were hospitals. The findings revealed that a total of 543 new cases of TB were recorded in October 2015. In the month preceding the assessment, 423 HIV cases and 210 TB/HIV patients were newly registered in these 37 facilities. The data obtained provide the beginning of a mapping exercise of all health facilities in the CTB-supported project areas, and identify sites which need to be supported by direct service delivery or targeted assistance.

Improved quality of DRS data - In October 2015, CTB Namibia spearheaded the data cleaning, validation and analysis for the recently completed second national DRS with the assistance of a KNCV Data Management consultant. The preliminary results presented at a WHO multi-country DRS workshop in Geneva from November 16-18, 2015 (percent of TB cases with MDR-TB 4.5% and 5.7% among new and previously treated patients, respectively). Issues noted were the relatively high discordance on RR between Xpert and conventional culture/DST (137 cases with RR (Xpert) with rifampicin susceptibility on MGIT, out of 280 RR (Xpert) cases). To address this problem, CTB audited the Xpert printouts, laboratory management information system and the DRS forms to validate the rifampicin resistance. Printouts were attached to the forms and the database updated where inaccurate entries had been made; as a result, discordant RR result went down to 62. CTB also planned for an external TA from CDC (CDC is supporting the laboratory system) to follow-up on the laboratory issues, including resolving the remaining discrepancies, which will be conducted next quarter. Another issue identified was the relatively low prevalence of RR among both previously treated and new patients when compared to the first DRS 2009-2010, which may point to misclassification. Validation with registers was done in November and December 2015; in addition, re-interviewing patients started in December, which is currently ongoing. The DRS final report is expected in the next quarter.

Strengthened TB/HIV collaboration - In October 2015, CTB supported the second Namibia international TB/HIV symposium, which was attended by 186 registered participants (113 female and 73 male) from different sections of the medical community and many other unregistered participants. This symposium focused on issues of TB and HIV care and prevention (such as the WHO End TB strategy; Directions and priorities for the integration of TB/HIV services; Updates from the IAS-Vancouver 2016 Conference, Preventive treatment for TB, Role of the Community in TB and HIV management, Diagnosing TB/HIV in children, local TB/HIV epidemiology, and local TB/HIV abstracts). During the symposium, participants got the latest development in the literature, updates on local guidelines and an opportunity to ask for clarifications from the experts. This type of capacity-building made it easier to introduce CTB-supported interventions in areas where these participants have influence.

National TB research evidence shared with international community - CTB provided TA to regional health staff to prepare and submit abstracts to The Union conference in Cape Town. To this end CTB supported two participants to attend the Union conference, thus strengthening information sharing with the rest of the world. These staff presented one oral presentation (Topic: Ambulatory versus hospital based treatment for MDR-TB: A comparison of treatment outcomes under programmatic conditions in Tsumkwe, Otjozondjupa Region) and one poster presentation (Topic: TB mass screening among inmates in the police holding cells and police officers in Opuwo district, Namibia). CTB was affiliated with both presentations.

Nigeria

KNCV is currently the lead and sole implementer in Nigeria. The project was launched in August 2015, and the combined Year 1 and Year 2 (June 1, 2015 – September 30, 2016, 16 months) work plan covers the following technical areas: patient-centered care and treatment, comprehensive high quality diagnostics, enabling environment, political commitment and leadership as well as quality data, surveillance and M&E. CTB will work towards universal access to TB diagnosis and treatment in 12 priority states, focusing heavily on increasing case notification in a country with an estimated case detection of only 15%. CTB will do so by revitalizing facilities with existing TB services, emphasizing private sector engagement, and strategically expanding diagnostic capacity using Xpert.

Demand creation and outreach - During this quarter, CTB-Nigeria continued to improve the awareness and utilization of the Call Center established last quarter. CTB was represented several times on Abuja's most popular radio talk-show, "Brekete Family" to inform the audience about TB and broadcast the Call Center number. The very popular program is aired weekday mornings and has thousands of listeners in Abuja and the surrounding States. The calls to the toll-free number increased six-fold from 179 monthly calls when the center opened in October 2015 to 1,071 calls in December 2015. As part of the case-finding strategies, the CTB team at the state level embarked on community outreach visits in four states of Akwa Ibom, Benue, Cross Rivers and Osun. Using existing community gatherings such as market days and festivals, awareness was created in the communities by engaging former TB patients as spokespeople. In all, 753 persons were sensitized, 153 samples from people with symptoms (20%) were examined using AFB microcopy, and 22 smear-positive TB cases (14% of symptomatic) were detected and started on treatment. Future outreach and case-finding activities will incorporate Xpert testing to further increase yield.

Improving program quality through rigorous supervision - CTB, the NTP, and state TB program staff visited six supported states (Benue, Niger, Cross River, Rivers, Ondo and Kano) to assess the implementation of CTB activities and review program data to identify potential areas of performance improvement. These visits demonstrated the potential of effective supervision to improve program performance rapidly. For example, supervision at a high-HIV-burden general hospital revealed that they were not making use of the Xpert machine at the facility. The supervisory team conducted on-the-job training for seven of the laboratory staff on the operation and use of Xpert as well as the R&R tools.

Expanding access to diagnosis and TB care services - The availability of diagnostic services is central to finding TB cases. Leveraging on the pool of laboratory experts in-country, visits were conducted to identify states for site assessments and installation of Xpert during the quarter. In total, 29 sites were assessed and 22 Xpert machines were installed across the 12 CTB-supported states. To complement this process, visits were conducted to existing microscopy laboratory sites to assess their functionality. In all, 75 non-functional microscopic sites were identified during the quarter and 33 (44%) were re-activated (i.e., minor restorations, repaired microscopes, distributed supplies, and assurance of staff on site to perform AFB screening). Similarly, 35 DOTs sites were visited and reactivated during the quarter.

Expanding community-based care for DR-TB - CTB enrolled a total of 64 DR-TB patients (46 Male, 18 Female) on second-line treatment at the community level during the quarter. Cumulatively, support is being provided for a total of 184 patients receiving treatment in the community including those discharged from treatment facilities during the quarter.



Community outreach in Akure South, Nigeria (Photo: Chidubem Ogbudebe)

South Sudan

CTB-South Sudan is led by MSH and has KNCV as the sole collaborating partner. In Year 2, CTB will strategically focus on increasing case notification and improving treatment outcomes by supporting the expansion of quality and sustainable TB care services in the three states of Central, Eastern and Western Equatoria, which have high populations and a high burden of TB and HIV. In addition, CTB will support the provision of TB services to the displaced population and expansion of quality-assured TB diagnostic services beyond the three states.

Contact investigation initiated - Contact investigation was initiated in July 2015 in Lainya, Yei River and Morobo counties in Central Equatoria state, and was continued in Year 2. From October-December 2015, a total of 149 smear positive index cases were identified, of whom 52 were visited at home by trained community mobilizers. The contacts were screened using standard tools and forms and presumptive TB patients were referred for diagnosis. Over 15% (62/416) of contacts screened were referred for TB microscopy out of which 19% (12/62) were bacteriologically confirmed through smear microscopy. This activity was interrupted by insecurity especially in Lainya County, which prevented community mobilizers from moving around the community.

Development of job aides to support community TB services - CTB continued to support the revision of the Home Health Promoters (HHP) manual, flip chart and brochure. On December 8, 2015, CTB conducted a one-day Behavior Change and Communication TWG meeting chaired by the Director of Health Education and Promotion in the MoH to review and finalize these documents. The purpose of the manual is to deliver a basic TB and TB/HIV package to families and communities through community health action. HHPs will be trained on the use of this manual as a reference tool. The flip chart is designed to support the HHPs to effectively deliver information on TB and HIV to the community through health education sessions.

Integration of TB services into general health care facilities - CTB supports the NTP to improve access to TB treatment by integrating TB services into the general primary health care facilities. By September 2015, CTB expanded TB treatment centers from 10 to 22 in Central Equatoria State. During October-December 2015, an additional nine TB treatment centers were established, bringing the total number of TB treatment centers to 31. In order to ensure that the patients are well managed and monitored closely, 17 health care workers from these health facilities were trained on-the-job and provided with job aids. As a result 40 (23 male, 17 female) TB patients were linked to newly established TB treatment centers to receive TB treatment and support. This linkage has reduced the distance, cost and time for the patients to access TB care, and will enhance adherence and reduce the number of patients lost to follow-up.

Involving the private sector in the delivery of TB services - The 2015-2019 South Sudan TB NSP underlines the importance of involving the private sector in the delivery of TB services. CTB, in collaboration with the NTP, State TB program in Central Equatoria State and County Health Department in Juba County, mapped 26 private health facilities in Juba City during the reporting period. The key issues include a lack of awareness on TB among the health workers in the private sector and a lack of information on how the private sector can approach the NTP for support. CTB has developed a roadmap to ensure that the private sector is involved in the delivery of TB services. A consultative meeting will be conducted in the coming quarters and will be followed by training on TB prevention, diagnosis, treatment, care and support for health providers in the private sector.

Utilization of Xpert technology - CTB has continued to support the transportation of sputum samples from the peripheral health facilities to the Xpert site in the Juba Public Health Laboratory using motor bikes locally known as 'boda boda'. Samples collected from the three laboratories in Juba are collected in a cool box with ice packs, placed in the transportation box mounted on the motorbikes, and delivered to the TB Reference Laboratory. During the period of October-December 2015, 491 samples were transported from which 146 specimens were identified as MTB+ (30%) including eight with RR (5%). Since January 2015, cumulatively, 892 samples have been tested, out of which 858 had valid tests. Among the valid tests, 35% (297/858) were MTB positive with 5% (15/297) identified as RR.

Initiation of LED fluorescent microscopy in South Sudan - CTB procured 30 LED microscopes and starter kits during the first year of implementation. Training of laboratory technicians on the use of LED microscopy has been ongoing and was followed by microscope distribution and on-the-job mentoring. A total of 19 lab technicians (16 male, 3 female) have been trained on the use and maintenance of LED microscopes. Currently, 13 laboratories are using LED microscopes for smear microscopy. Training will continue in the second quarter of Year 2 and any improvement in case finding will be measured in the subsequent quarter.

Tajikistan

CTB-Tajikistan is implemented by KNCV. In Year 2, CTB-Tajikistan continues working to improve quality of care for patients with M(XDR)-TB by building the NTP's capacity to manage and implement a shortened treatment regimen and regimens containing new TB drugs. In line with this, CTB will also build the NTP's drug management capacity and support the implementation of an early warning system (QuanTB) for all supply chain levels.

The National Plan on Introduction of New Drugs and Shortened Regimens developed - CTB established the national working group at the MoH, consisting of key specialists from MoH, State Pharmaceutical Control Agency (SPCA), the NTP and international partners working in the framework of the NTP Tajikistan - MSF, Project HOPE, who all contributed to the development of the document. The National Plan was translated into Tajik and approved by the NTP. The next step will be the submission of the plan to the MoH for their approval followed by countrywide introduction of the plan.

Introduction of pharmacovigilance (PV) system - Active TB drug-safety monitoring and management (aDSM) was discussed during the first PV Workshop organized by CTB in Dushanbe, December 15-16, 2015. From the three options of the aDSM proposed by the WHO, the participants selected an intermediate aDSM package for Tajikistan, which will include the registration of serious adverse events and adverse events (AE) of special interest, including AEs leading to change in drug, regimen or dose. In addition, three sites were selected for the introduction of aDSM (Machiton Hospital, Dushanbe TB center and Rudaky district TB center). Further it was agreed to use the operations research approach proposed by KNCV for all new drugs and regimens. The national regulation on collection, analysis and monitoring of adverse drug events was revised with TA from CTB. The document was finalized and submitted to the MoH for approval, which is expected next quarter. The document will ensure proper implementation of the PV system within the NTP.

Training in logistic management information system (LMIS) - In November 2015, 37 TB health providers (nurses and TB managers) responsible for the management of anti-TB drugs in Sughd region were trained in LMIS including forecasting and quantification of first-line and second-line anti-TB drugs. With the aim of improving drug management, CTB is planning to continue on the job training as well as monitoring visits during next quarters.

CTB-Tajikistan experience shared to international stakeholders - The Tajikistan KNCV Country Representative participated in the Union Conference in Cape Town in December, 2015 and presented experience in introducing outpatient care for DS-/MDR-TB patients in Tajikistan, implemented under the TB CARE I Project. The presentation included interventions implemented in the project pilot sites that contributed to successful achievements such as establishing patient support teams at community level, the development of patient selection approach for psychological-emotional support, and the provision of social support at district level.



DOTS exercise during the LMIS Training in Khujand City, Tajikistan (Photo: Saodat Qosimova)

Tanzania

Led by KNCV, with collaborating partners PATH and ATS, CTB-Tanzania is focused on all CTB technical areas apart from the management of LTBI, and drug & commodity management systems. CTB-Tanzania began the Year 2 implementation, continuing to focus efforts in the seven regions of Arusha, Dar es Salaam, Geita, Kilimanjaro, Mwanza, Pwani and Zanzibar.

Quote TB light assessment - CTB conducted the Quote TB Light assessment in three districts in Mwanza, Dar es Salaam and Arusha regions. The assessment aimed to assess patients' perspectives of quality of TB services based on nine quality dimensions: communication and information, professional competence, availability of TB services, affordability, patient provider interaction and counseling, support (transportation, food and money), TB/HIV relationship, infrastructure, and stigma. In-depth interviews and focus group discussions were conducted with TB patients currently on treatment. Respondents ranked professional competence as the most important dimension of TB care followed by availability of TB services; stigma was identified as the least important dimension. The results of this assessment will be used to determine and address any necessary improvements.

Central Tuberculosis Reference Laboratory (CTRL) accreditation advancing - As part of CTB's support towards the ISO 15189 accreditation of the CTRL, and with TA from the Royal Tropical Institute, Amsterdam (KIT), an assessment of the laboratory was conducted and CTRL staff were trained on Quality Management System (QMS). The assessment covered the 12 QMS essentials, based on the GLI tool. The laboratory was found to have most systems in place and an action plan was set to address gaps identified in agreement with the laboratory's management. The areas of improvement identified included specification in the QMS documents, arrangement of equipment in the laboratory to create more space and the need for further practical training for both the quality and biosafety officers.

Decentralization of PMDT services - In preparation for the decentralization of PMDT services in the country, CTB together with the NTP and other stakeholders finalized the revision of a comprehensive PMDT training package. The package consists of a training curriculum, facilitators' guide, participants' manual and Power Point presentations which are in line with the current WHO guidelines and the NTP's decentralization framework. The package will be used by the MoH to train health care workers from the health facilities where PMDT services will be decentralized. A new tool for enhanced cohort reviews at regional level was also adapted with TA from ATS.

Supportive supervision and mentorship conducted - CTB supported 42 district and regional health management teams to conduct monthly and quarterly TB, TB/HIV supportive supervision visits respectively at selected facilities. A total of 169 TB and TB/HIV officers participated in these visits where service providers were mentored on various aspects of TB and TB/HIV patient-centered care as well as M&E. This effort is reflected in increased TB case notification during this reporting period where 6,069 TB cases were notified compared to 5,704 in the previous quarter (6% increase). HIV testing among TB patients improved from 94% in the previous quarter to 97% this reporting period. Out of 6,069 notified cases, 1,215 were referred from HIV care and treatment clinics with known HIV-positive status; the remaining 4,854 were offered counseling for HIV testing of which 4,712 (97%) were tested for HIV; 784 (17%) tested HIV-positive of whom 631 (80%) were started on ART and 725 (92%) were started on Co-trimoxazole preventive therapy.



CTB and NTP staff during a home visit for DR-TB supportive supervision, Manyara Region, Tanzania (Photo: DTLC)

Ukraine

PATH is the lead partner in Ukraine, working closely with KNCV. In Year 2, CTB-Ukraine will continue supporting the NTP and oblast TB programs to expand and improve a model for a patient-centered approach to MDR-TB care based on ambulatory treatment and quality improvement of MDR-TB control services.

ACF among close contacts of TB cases - To ensure the timely diagnosis and treatment initiation of potentially missed TB cases, the project conducted an assessment of the current system of ACF among close contacts of TB cases. The assessment revealed that the current system is fragmented, not consistent, and not effective in TB case detection: only 0.2% of TB cases are detected annually through the contact investigation system nationwide, and 0.3% and 0.5% are detected in the project oblasts, Poltavaska and Mykolayivska. Based on the assessment results, the CTB will lead the development of the strategy for TB contact investigation and follow-up in Mykolayivska and Poltavaska oblasts during the following quarters of the year and further recommend it to be adopted by the NTP.

MDR-TB patient psychosocial support approach strengthened - CTB led the development of the MDR-TB patient psychosocial support strategy to ensure treatment adherence at the ambulatory phase in Mykolaivska and Poltavaska oblasts to address treatment adherence barriers. On October 26–28, 2015, CTB conducted a workshop for developing a patient-support strategy to address structural barriers to treatment adherence identified during the situation analysis. Three local NGOs were selected and were subsequently trained to provide psychosocial support to 170 MDR-TB patients at the ambulatory phase of treatment in Poltavaska and Mykolayivska oblasts. This activity will be implemented from December 1, 2015, through November 30, 2016, to contribute to the improved outcomes of MDR-TB treatment in the project oblasts.

Introduction of new drugs and shorter regimens for DR-TB assessed - CTB assessed the readiness and capacity of the NTP to introduce new drugs and shorter regimens for DR-TB treatment. The assessment was focused on clinical pathways and access to DR-TB diagnosis and treatment for adults and children, national data collection tools, data reporting and information flow as well as estimated numbers of DR-TB patients eligible for new drugs and shortened regimens. Kyivska Oblast was preliminarily selected for implementation, which has to be approved by the USAID Mission. The next steps are: creating an operations research protocol; conducting an introductory workshop; calculating the number of patients involved; designing the shortened and pre-XDR/XDR treatment regimens and enrollment/exclusion criteria based on international evidence/ recommendations; taking into consideration the local situation (DR-survey results, access to tests, available drugs, etc.); and “preparing the ground”—that is, providing TA to Kyivska Oblast to improve the utilization of existing resources.



Discussion of MDR-TB diagnostic results, Mykolayivska oblast, Ukraine (Photo: Aleksey Bogdanov)

Vietnam

CTB-Vietnam is led by KNCV and works closely with WHO as a collaborating partner. The overall strategy of CTB in Vietnam is to develop, pilot and evaluate TB control innovations that are planned under the NSP (2015-2020), in close collaboration with the NTP, the USAID mission and partners. The project works in all CTB technical areas with the exception of enabling environment, targeted screening for active TB, and drug & commodity management systems.

Improved access to rapid drug resistance testing - In this quarter, 20 new Xpert machines were purchased with financial support from the GF-NFM grant, installed and made operational with technical support from the CTB country team. CTB contributed to training of the 16 new Xpert sites on Xpert operations and maintenance (training for remaining four new sites will take place in January 2016); TA on cartridge supply including quantification, forecasting, ordering, distribution was also provided.

New TB drug Bedaquiline (BDQ) introduced in the country - The NTP/MoH and CTB jointly organized the launching session of a new TB drug and regimen for treatment of drug-resistant TB in Vietnam on November 25, 2015. The event was attended by about 100 participants including high-ranking officials from MoH, NTP, representatives of other national health institutions and TB hospitals, as well as international organizations and agencies including USAID, WHO, CHAI, etc. The new drug and regimen will be implemented in three provinces of Hanoi, Ho Chi Minh City and Can Tho for a total of 100 patients. As of December 31, 2015, three XDR-TB patients have been screened and enrolled on a BDQ-containing treatment regimen.

Improved TB-IC measures in health facilities - This quarter, training on TB-IC for TB and HIV national programs staff was conducted for 199 participants (87 male and 112 female) in three provinces (Dong Nai, Ba Ria-Vung Tau and Thai Nguyen), where TB and HIV services will be integrated at district level. After the training, participants were asked to do a TB-IC assessment in their health facilities and develop TB-IC improvement plans based on the TB-IC assessment results.

TB/HIV reporting and recording systems - In collaboration with the Vietnamese Administration on AIDS Control (VAAC) and the NTP, a needs assessment and situational assessment regarding functioning of the HIV, TB/HIV reporting and recording systems was conducted by CTB from October 5-9, 2015. This surveillance system assessment is a follow-up step after the recent assessment of TB/HIV collaboration and identification of barriers to care and the identification of strategies for further development and strengthening of comprehensive TB/HIV case management and control. Three noteworthy models for the further development of the TB/HIV and HIV recording and reporting were presented and discussed as a basis for VAAC decisions and implementation planning. A technical working group comprising NTP and HIV program will deliberate on the most appropriate choice which will largely depend on the extent of their functional integration. If their services remain largely separated, both systems can be made interoperable for ensuring data exchange.



Dr. John Eyres, Director of the Office of Public Health, USAID Vietnam announces Bedaquiline is now available in Vietnam (Photo: KNCV)

Zimbabwe

The Union is leading the project in Zimbabwe with collaboration from IRD, KNCV and WHO. The Year 2 work plan prioritizes the following areas: improving access to and quality of diagnostics, increasing case finding, integrated TB/HIV care, PMDT, childhood TB, and M&E/surveillance. The Union has been awarded a GF grant for TB under the NFM as sub-recipient for community systems strengthening. In addition, the World Diabetes Foundation recently awarded the country office a 2-year grant to pilot the feasibility of integrating TB and Diabetes Mellitus Care in selected primary health facilities. These two grants will be implemented in close coordination with the CTB project, by creating synergy and leverage between the related projects.

Implementation of HAIN LPA at the Bulawayo Reference Lab - HAIN LPA testing was successfully installed and validated at the Bulawayo Reference Lab. Routine testing became operational the last week of December 2015. Utilization and testing will be measured in the next quarter. LPA testing is being used to analyze specimens (both sputa and isolates) for MDR-TB. HAIN test kits were provided by the NRL Harare. A total of five laboratory scientists were trained on HAIN LPA testing by the supplier (Diagnostic Laboratory Supplies).

Childhood TB desk guide developed - With support from CTB, a childhood TB desk guide was developed for the MoH. The development process included the adaptation of The Union Desk Guide for Management of TB in Children for Health Care Workers. Two thousand copies of the desk guide and wall charts were printed to cover all the facilities in the country. Childhood TB training materials were also developed using the desk guide. These materials will be distributed during the provincial childhood TB trainings planned for in quarter 2 under the GF support. These interventions are to strengthen screening, diagnosis and management of childhood TB which will result in improved TB case finding and treatment outcomes.

First postgraduate course on innovative TB data management - The NTP, WHO and The Union technical officers were supported by CTB to lead the first postgraduate course on innovative TB data management at the 46th World Conference on Lung Health in Cape Town, South Africa. The course introduced the CTB-supported user-friendly guide (*Data Collection, Analysis and Use Guide*) on the use of routine TB data for program management and decision-making. In the evaluation analysis, participants suggested strengthening staff relations and supportive supervision; analysis of data at peripheral levels to inform decision-making, reporting data for childhood TB and putting in place mechanisms to follow-up recommendations of the previous supportive supervision visits. Participants' reflections on the course were positive and the majority showed an interest in adapting the guide for use in their countries.



A six-year old TB patient, Lupane, Matabeleland, North Province, Zimbabwe (Photo: Shepherd Machechera)

East Africa Region Project

CTB East Africa Region (EAR) Project is implemented by KNCV as the lead and MSH and The Union as collaborating partners. It builds upon the successes of the previous TB CARE I regional projects while also leveraging those partnerships for greater reach and results. CTB-EAR technical focus areas include: cross-border TB control and cross-country collaboration for improved TB control and surveillance; supporting National TB reference laboratories; strengthening PMDT to improve access to second-line TB drugs including new drugs and shorter regimens and M/XDR-TB case-holding and palliative care; building capacity on childhood TB; and creating a regional training corridor by linking training institutions and earmarking them for specific trainings in TB. Sub-agreements with three implementing partners (Supra National TB Reference Laboratory - Uganda (SNRL); the East, Central and Southern African Health Community (ECSA); and Center of Excellence - Rwanda (CoE)) have been signed after they were approved by USAID Washington, and implementation of the planned activities started accordingly.

Operational guide for cross-border TB control drafted - A draft operational guide for cross-border TB control was finalized in December 2015. This guide will be shared with the NTPs for input before it is finalized for implementation during next quarter.

Bio-safety measures in laboratories ensured - The translation of the SOPs on TB-IC for Somalia was conducted and a first draft developed in December 2015. This was sent to the Somalia laboratory teams who were involved in the development of the SOPS for their review and input. Their comments will be consolidated and finalized before the next quarter.

Qualified staff available and supportive supervisory systems in place - An advertisement for a consultancy firm to develop a business plan for the Rwanda CoE for PMDT was posted, applications were received and one consultancy firm was selected in December; work will commence next quarter. The Union developed a framework for the online course on MDR-TB in children as well as a draft facilitators' guide for face-to-face training on "Childhood TB for Healthcare Workers."



Patient focus group discussion on quality of care, part of a Quote TB Light Assessment, Tanzania (Photo: Rose Oluto)

Core Projects

CTB is working on priority projects that have implications for TB prevention and control globally. Progress and achievements from October through December 2015 are summarized below.

Transmission

The Transmission Project aims to evaluate to what extent USAID-supported interventions will have an impact on transmission of TB. The project will be conducted in Tanzania and probably Indonesia. The initial idea was to investigate transmission reduction in specific facilities, among high-risk populations such as urban dwellers, miners, prisoners and within communities at large. In Tanzania, outlines for three studies were developed, of which the main community-wide study applying whole genome sequencing (WGS) was accepted by USAID for further development. The first meeting of the Strategic Advisory Group of Experts (SAGE) was held in Cape Town on December 1, 2015 during which critical input was given on the main community-based protocol for Tanzania by 12 scientific experts. A second site visit to Tanzania is planned for January 2016 to finalize the protocol for submission to necessary ethics committees.

In Indonesia, a request for proposals (RFP) has been developed for tendering the subcontract to potential local partners (research institutions), and was approved by USAID. The RFP process (not content) is currently awaiting NTP approval.

Stigma

The Stigma Project aims to develop valid, feasible, and efficient methods for measurement of TB stigma within the community, patient, and health worker populations. Two sub-agreements under this project have been signed; University of Antwerp will support a systematic literature review of strategies to reduce TB stigma. KIT will provide technical expertise on two parts of the project:

- Correlates of anticipated TB stigma in the general population.
- Correlates of enacted TB stigma in health care settings.

The expert meeting originally scheduled for February 11-12 has been postponed (the new date is not set yet).

Unrelated to the measurement of stigma, but included in this project, two national TB prevalence survey assessments were funded and completed (one in Ghana by MSH, one in Cambodia by KNCV).

Global Fund Hub

Recruitment process of a GF Officer took place in December 2015 and is expected to be final in early 2016.

Some small events were funded through the GF Hub during the last quarter:

- Three persons were funded to attend the Union Conference in Cape Town to present on GF achievements: NTP Manager (Uganda), MDR-TB Focal Point (Uganda) and ECSA Representative (Tanzania) to present on the Regional GF lab grant.
- STTA by an external consultant was supported by the GF Hub funds to Namibia. The 11 days in-country TA assisted the Namibia CCM in finalizing its reprogramming application for the Global Fund.

UN Special Envoy for Tuberculosis

The goal of the UN Special Envoy for Tuberculosis is to promote and garner high level support for the dissemination and implementation of the global End TB Strategy and its targets for TB prevention, care and control. Officially approved on November 10th, 2015 and running through December 2016, the project is subcontracted to the University of California/ San Francisco with Dr. Eric Goosby as the appointed UN Special Envoy. Jane Coyne also joined the team as Director of TB Programs. Activities included numerous interviews related to the release of the WHO Global TB Report 2015 in October 2015, and participation in the Stop TB Partnership board meeting, the launch of the Global Plan to End TB, the Global TB Caucus meeting, the End TB Summit (plenary speech), and the Global TB Summit (plenary speech) in Cape Town, South Africa around the Union Conference. Dr. Goosby participated in the WHO-organized consultative workshop in Addis Ababa, Ethiopia that focused on the need for community and civil society engagement in the End TB Strategy. This event brought together civil society leaders and organizers from numerous countries. In addition, Dr. Goosby has engaged with experts and policy makers on addressing the challenges with Pediatric TB, as highlighted in his recent editorial published in

The International Journal of Tuberculosis and Lung Disease:

<http://www.ingentaconnect.com/content/iuatld/ijtld/2015/00000019/A00112s1/art00001;jsessionid=11t4d91xqgfyd.alice>

The Office of the UN Special Envoy has supported the work done to conceive and release the White House National Action Plan to Address MDR-TB. The White House released this document on December 22, 2015. In addition, the office is following the Anti-Microbial Resistance work of others to ensure that TB remains in the forefront of resistance discussions to ensure continued and increased research funding for TB.

Bedaquiline Coordination

The Bedaquiline (BDQ) core coordination project (approved in November 2015) is supporting the introduction of BDQ in the CTB countries. This is done by the development of an implementation strategy, generic training modules and protocols to be rolled out and implemented in CTB countries with CTB country project funding. This core project can also provide TA for the implementation of BDQ and actually also of any other new drugs and shortened MDR regimens. Since the approval of the project, the introduction of new drugs and regimens started in Ukraine, Tajikistan, Vietnam, Kyrgyzstan and Nigeria through CTB country funding. Furthermore a meeting on the introduction of new drugs and regimen in Kazakhstan took place during the Union Conference in Cape Town.

Catastrophic Costs

The Catastrophic Cost project, implemented by WHO and officially approved on December 14, 2015, builds on efforts undertaken in both TB CAP and TB CARE I to estimate TB patient costs; namely, intends to measure to what extent patients and their families experience these costs as catastrophic. In 2015, a protocol and instruments were developed on how to conduct a patient survey to measure at a national level the proportion of TB patients experiencing catastrophic costs. These tools will be field tested in Mozambique. The project will leverage with other countries (Nigeria) that perform the same study, using country funding.

Prevention

The work plan, with KNCV as lead partner, has not yet been approved. The project is a randomized, pragmatic, open-label trial to evaluate the effectiveness of three months of high dose rifapentine and isoniazid (3HP) administered as a once-weekly dose (12 weekly doses) against a regular six month isoniazide preventive therapy course; and compare the effectiveness (pragmatic trial) of one course of 3HP to a pulsed annual repeat course of 3HP. A 3HP Trial Steering Committee Meeting took place on December 4th in Cape Town. Attendees were the Aurum Institute, WHO, USAID/W and KNCV. Contacts were established with Sanofi South Africa in order to issue a donation contract; Sanofi South Africa will donate the isoniazid needed for the study.



TB patient receiving his treatment at the new TB treatment center in Pageri PHCC, Eastern Equatoria State, South Sudan (Photo: Lodu Moses)

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.

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