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CHALLENGE TB

KNCV
TUBERCULOSISFOUNDATION

Challenge TB
Year 2
Performance Monitoring Report 2

January 1 - March 31, 2016

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:
World TB Day photo booth, Indonesia. (Credit: Glooini).

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Table of Contents

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 flagship global 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 is currently in its second year of implementation. This performance monitoring report summarizes program progress, achievements and challenges during the second quarter of Year 2, January-March 2016, across the 21 country projects, the East Africa Region project, and six approved core projects. The total obligated amount as of March 31, 2016 was $100.6 million, or 19% of the ceiling amount of $525 million. The program's most significant achievements from the reporting period, as well as challenges for the next quarter are highlighted below.

Main Achievements:

Country Projects:

- **Afghanistan** - DOTS has been expanded to densely populated areas in the cities of Kabul, Herat, Kandahar, Jalalabad and Mazar-i-Sharif; this quarter seven new public and private health facilities were engaged in Urban DOTS. TB case notification for all forms of TB increased by 7% (from 1,166 in Oct-Dec 2015 to 1,250 in Jan-Mar 2016) in Kabul, and by 38% (from 1,099 to 1,518, for the same period) in the other four cities. In addition to Urban DOTS, community-based DOTS (CB-DOTS) was implemented in 526 health facilities across 14 provinces (out of 34 provinces in the country), a more than twofold jump from the 223 health facilities engaged during the previous quarter; 8,977 presumptive TB patients were referred to health facilities for diagnosis compared to 4,335 between Oct-Dec 2015 (twofold increase).
- **Bangladesh** - A GxAlert landscape analysis was completed including concrete recommendations for overcoming technical and logistic challenges faced by the NTP regarding GeneXpert MTB/RIF (Xpert) implementation, utilization, and maintenance since the introduction of the technology in 2012. GxAlert implementation is expected to start by September 2016. Linking all Xpert machines to the Ministry of Health (MoH) data management systems will improve reporting of Xpert results, develop routine monitoring of machine use and maintenance needs, keep an overview of cartridge consumption and inventory, as well as support rapid linkage for treatment, particularly for patients identified with rifampicin resistant (RR-) TB.
- **Cambodia** - A list of TB symptoms (cough, fever, weight loss and night sweats) was integrated into general medical triage forms currently in use at referral hospitals across Cambodia. The revised form received approval from the MoH/NTP and will remind physicians and nurses to screen every patient who comes to the hospital – a key step that is designed to improve case finding.
- **Democratic Republic of the Congo (DRC)** - Four CTB-supported non-governmental organizations (NGOs) continued active case finding in their targeted areas – a total of 27,845 persons were screened, out of which 2,151 were identified as TB presumptive cases and tested by smear examination. A total of 409 patients (19%) were diagnosed with TB (all forms) and initiated on treatment.
- **Ethiopia** - A national quantification exercise for anti-TB drugs using the QuanTB tool was conducted, which resulted in cancelation of two shipments of second line drugs (SLD) due to expected overstock, placing an emergency order for isoniazid for both adult and pediatric formulations as well as cancelation of ethambutol-100mg due to overstock.
- **India** - A radio and social media campaign was launched featuring Mr. Amitabh Bachchan, a Bollywood star and TB survivor, and the project secured corporate commitments from five big industry/business houses for a TB Free India. A Facebook page for TB Free India was also launched on World TB Day - https://www.facebook.com/ForTBFreeIndia.
- **Indonesia** - District assessment tools were finalized consisting of questionnaires for all related parties - i.e. local government and local health offices, public health centers, laboratories, and public-private mix (CSOs, professional organizations, prisons, health insurance). The tools also include guidelines and a district advocacy package to inform CTB work and encourage support from local governments towards the program.
- **Mozambique** - CB-DOTS activities were initiated in 15 districts of Tete Province with 336 volunteers, 43 activists and 15 supervisors, selected and trained on the CB-DOTS strategy. A month after training, community health workers referred 295 presumptive TB cases to health facilities in three districts, of which 47 (16%) were diagnosed with active TB and put on treatment.
- **Namibia** - Three districts in the northern part of Namibia (Engela, Katima Mulilo and Oshakati) achieved ART coverage of 97% among TB/HIV patients (up from 88% in 2013/14) compared to a national average of 90% in the reporting period. Strong TB/HIV collaborative activities resulting from introduction of District TB/HIV Coordinators in CTB-supported districts have likely contributed to this result. This initiative is going to be expanded to 10 of the 14 regions of Namibia starting the coming quarter.
- **Nigeria** - An additional 22 Xpert machines were installed in the 12 CTB-supported states. A total of 5,405 samples were transported by the CTB-supported sputum transportation system during this quarter to Xpert sites, which resulted in an 11% increase in the number of notified TB cases (all forms, 10,614) from 9,600 in Oct-Dec 2015.

- **Tanzania** - The National Reference Laboratory (NRL) raised its status under the Strengthening Laboratory Management Towards Accreditation (SLMTA) program from two to three stars, which was done by acting on recommendations offered by the quality systems assessment performed last quarter as well as the assessment done by the East Africa Public Health Laboratory Network Program in 2015 towards ISO15169 accreditation.
- **Ukraine** - Three CTB-supported NGOs (Light of Hope, Initiative for Life, and Vykhid), provided psychosocial support to 133 M/XDR-TB patients during the ambulatory phase of treatment in Poltavska and Mykolayivska oblasts; the influence of this effort on improving the treatment outcomes among these patients will be assessed in the coming quarters.
- **Vietnam** - The new TB drug Bedaquiline (BDQ) has been introduced in the country since November 2015. As of March 31, 2016, a total of 25 pre-/XDR-TB patients in three pilot provinces have been enrolled on a BDQ-containing treatment regimen.
- **Zimbabwe** - By March 31, 741/1,625 (46%) of the study population had been enrolled into the TB drug resistance survey. A mid-term review by CTB on survey implementation highlighted good adherence to the survey protocol, timeliness of scheduled activities, uninterrupted diagnostic services and consumables, as well as TB-DRS results linked to patient care (i.e. access to treatment). The electronic database has been updated and data were highly consistent. Data collection is expected to be completed in August 2016.

Core Projects:

- **Bedaquiline coordination** - A workshop took place in The Hague at the end of March to ensure a coordinated, efficient and effective approach towards the rapid introduction of BDQ in CTB project countries, making best use of resources, the joint experiences of coalition partners and the upcoming CTB Year 3 planning cycle. A draft generic implementation protocol including an M&E plan for the *Evaluation of the feasibility, effectiveness and safety of the MDR/XDR-TB Patient Triaging Approach* has been developed. This generic implementation protocol requires some updating and when ready will need to be adjusted to fit the local epidemiological and country specific situations. Routine/standard indicators are being incorporated into the M&E plan, which will be finalized in April/May 2016.
- **UN Special Envoy (UNSE) for Tuberculosis** – The project refined the strategy for the UNSE focusing on five principal objectives: i) Support efforts to secure international funding (Global Fund, other donor countries, following G7/G20 agenda etc.); ii) Support high burden country engagement; iii) use Anti-Microbial Resistance agenda to secure TB research dollars; iv) Write a Lancet Commission on TB, and v) Participate in key forums (HLM HIV, TB 2016, The Union, etc.). The UNSE has prepared a concept note for review by the Lancet Commission. Numerous press releases and articles were published this quarter related to the release of the National Action Plan for Combating MDR-TB and World TB Day. All of these publications can be found on the newly launched UNSE website: http://www.tbenvoy.org/news/.
- **TB prevention** - The Prevention study core project experienced delays mainly due to challenging institutional arrangements with a new set of stakeholders outside the consortium. These issues have now, to a large extent, been resolved; sub-agreements have been signed and the project can start its implementation.

Main Challenges:

- Due to a variety of different internal as well as external factors, some countries face delays in the implementation of planned activities. The PMU is working with country teams to develop action plans to accelerate implementation in countries with significant pipelines.
- While CTB reports official WHO data on MDR-TB, the project also strives to collect more recent and specific programmatic management of drug-resistant TB (PMDT) data at country level, which are relevant to the project. Issues around adequate monitoring of MDR-TB patients on treatment hampers our ability to collect validated data and to timely report on the number of confirmed RR-TB and MDR-TB patients diagnosed, as well as the 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.
- The Transmission core project is supposed to start in Tanzania. However, the real implementation of the project remains a serious challenge. This has to do with the intrinsic complexity, the specificity of the project and as such challenging institutional arrangements with eligible partner institutes. Alternative approaches may be required to overcome these challenges.
- KNCV's attempts to register as a local NGO in Uzbekistan has again failed. As a result, the implementation of the APA2 work plan has been delayed. WHO has now been contracted to implement a revised work plan.

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 March 31, 2016, 21 countries were implementing CTB (20 countries are in full swing and Uzbekistan is initiating activities and trying to establish an office). At the regional level, CTB continued implementation of the East African Region project, with more information on this project available on page 37. In addition, CTB continued implementation of six core projects this quarter (see page 36 for more details).

Global Fund

A key strategic objective of CTB is to support timely and successful implementation of Global Fund (GF) grants within the 21 countries in which it operates. The approach taken to support GF grant implementation at the country level varies depending on need, but a common theme consisting of collaboration, information sharing, leveraging of resources and technical support is applied across the board.

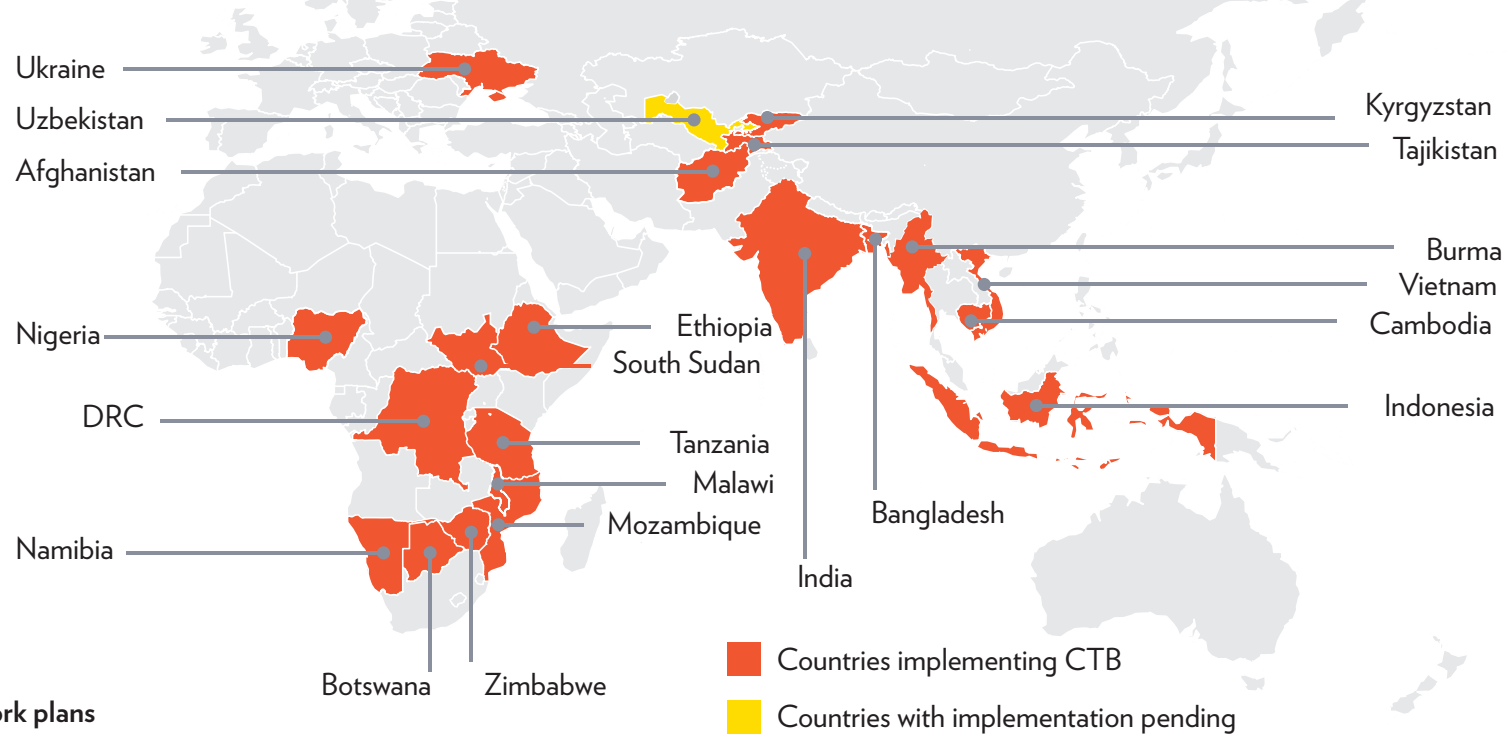
To date, 17 of the 21 CTB countries have signed a grant agreement after a New Funding Model (NFM) GF TB or TB/HIV application and started implementation. Three countries, namely Kyrgyzstan, Tajikistan and Uzbekistan are still undergoing grant negotiations; and Namibia is in the final phase of approval of a reprogramming of its Round 9 grant. Below is a summary of highlights from each country illustrating CTB support to GF-related activities:

- **Afghanistan** - The principle recipient (PR), United Nations Development Programme (UNDP), and the MoH began implementing their activities. The PR subcontracted five categories of GF activities with two local organizations (sub-recipients (SRs)): contact investigation, TB in prisons, TB among children, payment to CHWs, and TB among internally displaced persons (IDPs). CTB assisted the PR, NTP, and SRs with the coordination of activities in the provinces to avoid duplication and to promote cooperation and collaboration, as well as to document the performance of CTB and the GF grant.
- **Bangladesh** - CTB has focused efforts to solve a major challenge of mobilizing resources to finalize installation of the Sylhet containerized laboratory. Following a successful dialogue, the GF approved the required amount to expedite the process of setting up the laboratory. However, the next challenge will be to ensure timely shipment of the lab from South Africa. CTB is working closely with the NTP to ensure any bottlenecks are identified and addressed to avoid unnecessary delays. Furthermore, preparations are being made in-country to submit a GF grant application with the plan to submit by March 2017. CTB will include the needed STTA in its APA3 work plan.
- **Botswana** - With support from CTB throughout the entire process of concept note development and grant making, the NFM TB/HIV grant was signed on February 1, 2016 for the amount of USD 27,043,807. The NTP and GF team organized a workshop (April 14-15) to prepare a detailed implementation plan in which two CTB-Botswana Sr. Technical Advisors will also participate. CTB will continue to actively participate in the GF Technical Working Group (TWG) to closely monitor development of the plan and subsequent implementation of the grant.
- **Burma** - CTB and NTP were primarily focused this quarter on development of a new National Strategic Plan (NSP) and operational plan including a financial gap analysis. The revised NSP and gap analysis were linked to the NSP budgeting process, which is also coordinated by CTB. Additional TA will be supported by CTB to help finalize the new joint TB/HIV concept note for submission in June. In particular, the TA will have a special focus on streamlining the TB/HIV and gender sections.
- **Cambodia** - CTB met with the new GF Fund Portfolio Manager on several occasions to brief her on the progress and challenges of the NTP of Cambodia. The discussions focused on three key issues: 1) The decline of case notifications of both drug susceptible and multidrug-resistant TB (MDR-TB) cases and the need to advocate for the use of the four-symptom and four-risk screening approach followed by X-ray screening and Xpert; 2) Observations that most of the SRs do not understand the concept of the screening approaches that need to be implemented and; 3) A need to decentralize authority to the provincial level on budget management and accountability to reduce some of the bottlenecks of money flow. CTB will continue to follow up on these issues in the coming quarters.
- **DRC** - CTB participated in three GF-supported activity progress assessment meetings conducted in January, February and March, 2016 with the participation of the MoH, GF, WHO, CARITAS and Action Damien. The GF delegation from Geneva participated in the last meeting held on March 31, 2016. It was agreed that CTB would support the printing of the data collection tools and contribute to closing the funding gap in the World TB Day budget under GF (support for community testimonials by children with TB and print the pediatric TB messages).
- **Ethiopia** - CTB has identified several challenges that are leading to slow implementation and fund utilization, such as low GF per diem rates and delays in the submission of technical and financial reports by regional health bureaus. CTB is addressing these problems through general programmatic support such as supportive supervision, review meetings and capacity building of staff including GF seconded staff that will enable the overall NTP goal of addressing the burden of TB, TB/HIV and MDR-TB in the country.
- **India** - Although the NFM grants were approved to start in October 2015, there have been delays in grant signing and the initiation of new activities proposed. However, with CTB technical support, the NTP identified six sites that will implement the BDQ conditional access program (BDQ CAP) with direct donation of 600 treatment courses from Janssen Therapeutics. With CTB support, the NTP also prepared the BDQ CAP guidelines and conducted training of trainers at the National TB Institute in Bangalore in Jan 2016.

- **Indonesia** - The NFM grant was officially launched and started implementation this quarter. The low spending rate, low MDR-TB enrolment, and low TB detection rate of Indonesia are of great concern. CTB assisted the TB PRs (MoH and Aisyiyah) with implementation of the GF TA plan. CTB assisted the PR-TB to translate the TA Plan into specific TORs, consultant selection, supervision of TA work by reviewing consultant reports and deliverables, as well as provided technical support to hired consultants in implementing the TA. The CTB Country Director is in close contact with the GF Portfolio Manager with regard to all critical issues.
- **Kyrgyzstan** - CTB provided TA to the NTP to prepare the request for the BDQ donation program. The request was signed by the NTP manager and submitted by GF/UNDP to GDF at the end of March 2016.
- **Mozambique** - With CTB TA the prevalence study protocol was submitted to the national bioethics committee. The study team is now in negotiations to clarify questions, which is expected to take another two to three months until approval is received. Procurement of the mobile vans is awaiting IRB approval. Piloting is expected to start in August/ September.
- **Namibia** - CTB supported five routine quarterly zonal review meetings. These review meetings are led by national and regional NTP staff, supported by CTB technical staff, and attended by District TB and Leprosy Coordinators, and TB/ HIV District Coordinators. These meetings are important for data review, and planning of all activities funded by the government, GF and partners. The reprogramming application to GF that was supported by CTB during this reporting quarter was submitted on March 14, 2016 and the Country Coordinating Mechanism (CCM) is currently in the grant making process.
- **Nigeria** - A coordinating mechanism was established in January, 2016 to strengthen collaboration between GF, USAID and NTP. Improved coordination in the CTB/GF co-located states was already felt through the partner's forum and joint supervision among implementing partners to three states (Bauchi, Akwa Ibom and Osun). During this quarter CTB also provided upstream support in the printing of the national recording and reporting materials to bridge the gap in the stock out of national tools pending GF printing and distribution. The tools were distributed to the 12 CTB supported states irrespective of coverage area.
- **South Sudan** - CTB continues its role as secretariat to the TWG and is convening monthly meetings where activity implementation has been harmonized and tasks shared among partners. CTB has worked to take stock of slides from health facilities, reallocating slides from locations with a surplus to those with shortages. This has alleviated shortages, which are being experienced in the country.
- **Tajikistan** - The NFM grant making process is still under negotiation, which has caused some delays. The new drugs to be introduced are planned to be procured within this new NFM TB grant. CTB-Tajikistan is closely collaborating with PRs, the GF and USAID to follow up on the situation related to procurement of TB drugs including BDQ within the NFM grant.
- **Tanzania** - Challenges to GF grant implementation were discussed during the Joint TB situation room partners' mission in February 2016. The mission consisted of representatives from WHO, GF, Stop TB partnership and USAID. Areas of focus identified during the mission included: PMDT scale-up, laboratory services support, TB case finding, NGO engagement, community-based activities, procurement and supply management as well as program and grant management. CTB is working with the NTP to address these challenges and will focus on the areas identified while planning for APA 3.
- **Ukraine** - The CTB project team participated in a number of meetings and consultant communications with the MoH, GF and other stakeholders on the development of the transition plan for governmental funding of activities currently funded by GF to ensure sustainability of the provided services. On February 2, 2016 the working group meeting to discuss the suggested plan was conducted; the plan contains a risk assessment of the transition process, strategic prioritization approach, progressive transition plan, and other documents.
- **Vietnam** - CTB provided technical support to the NTP for PMDT implementation and rollout including introduction of BDQ. The CTB PMU has worked with the GF Geneva and US/CDC to mobilize funding for the second national TB prevalence survey in Vietnam in 2016-2017.
- **Zimbabwe** - This quarter a GF audit was conducted and the report is yet to be released. An analysis of the current burn rate for the GF TB Grant for the second semester (Jul-Dec, 2016) was rated as sub-optimal, at 70% against a target of 80%. This has withheld further disbursements for third semester activities that include co-funded CTB-supported targeted screening for TB. CTB supported a workshop that reviewed GF financial and programmatic implementation progress and performance. CTB also facilitated the writing of the second semester report for the country.

Country Projects

As of March 31st, 2016, 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	X	16
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			X	11
5. Infection Control	X	X		X	X	X	X		X		X	X	X		X		X	X	X		14
6. Management of latent TB infection					X	X	X		X		X	X	X		X		X		X		10
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		X		X	X	13
9. Drug and commodity management systems		X	X	X		X	X		X				X			X	X				9
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	X		X	14

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

Programmatic Management of Drug-Resistant TB

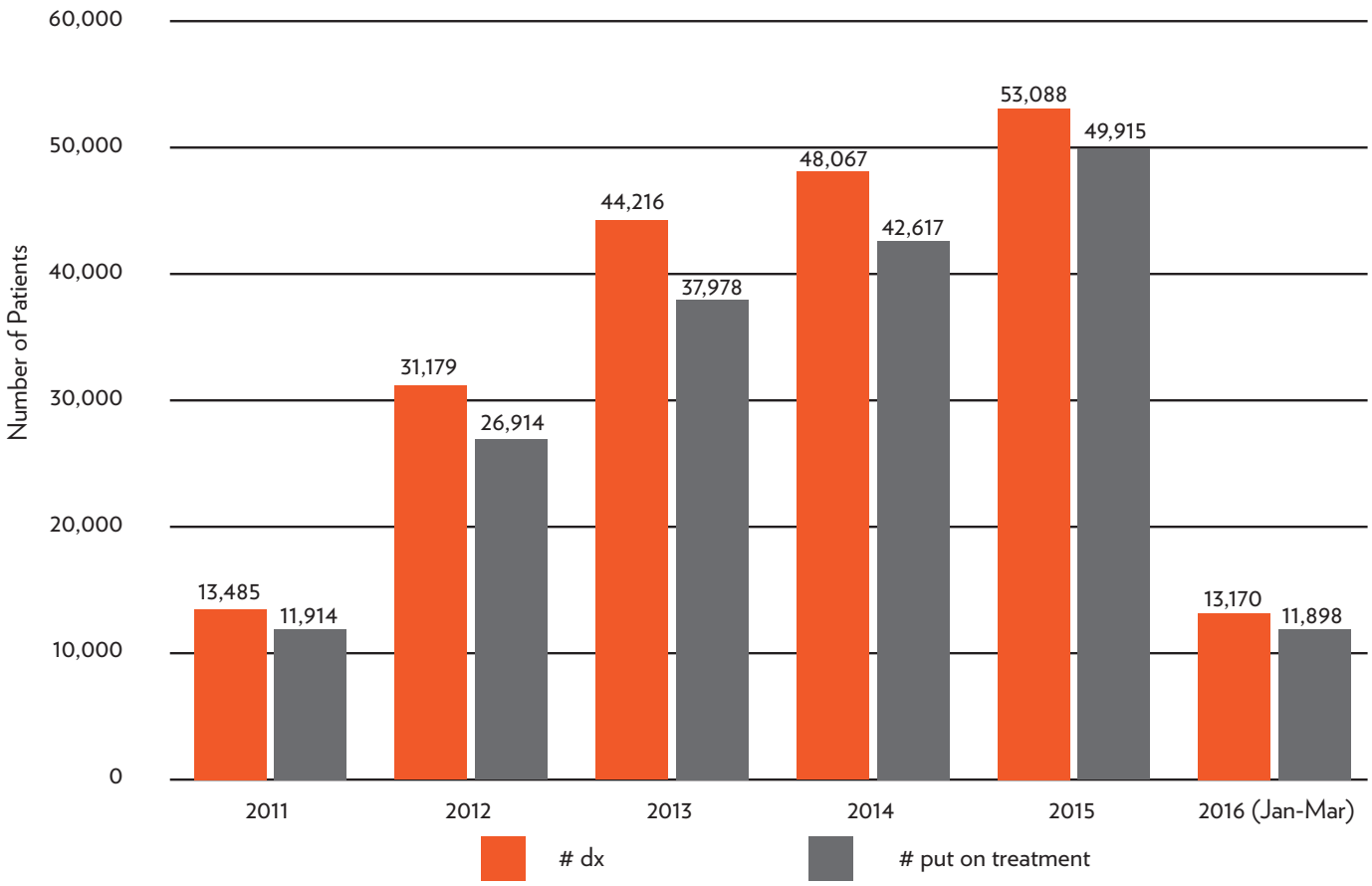
CTB is supporting the implementation of PMDT and the program is monitoring MDR-TB diagnosis and treatment data quarterly to track progress in PMDT scale-up and to inform project activities at country and global levels. CTB relies on data reported officially to WHO (i.e. before 2015), and also gathers data directly from NTPs for the most recent quarters in each country. The table below summarizes the number of MDR-TB (including rifampicin-resistant TB, RR-TB) patients diagnosed and the number of patients (unconfirmed and confirmed) started on treatment from 2011 through 2016. 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, 2011-2016 in 20 CTB countries* (2010-2014: WHO Global TB Report 2015; 2015 and Jan-Mar 2016 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		2015		Jan-Mar 2016	
	#dx	# put on trt	#dx	# put on trt	#dx	# put on trt	#dx	# put on trt	#dx	# put on trt	#dx	# put on trt
Afghanistan	22	22	38	38	49	48	88	88	80	79	20	20
Bangladesh	612	390	701	505	807	684	994	945	896	880	203	225
Botswana	46	71	52	67	59	59	41	73	82	82	20	20
Burma	690	163	778	442	1,984	1,537	3,495	1,537	3,495	1,537	874	384
Cambodia	56	83	117	110	131	121	110	110	77	75	29	29
DRC	88	138	133	269	261	359	442	436	476	429	99	45
Ethiopia	216	199	294	289	558	413	503	557	503	557	126	139
India	4,221	3,384	17,253	14,059	23,289	20,763	25,748	24,073	28,876	26,966	7,219	6,742
Indonesia	466	255	818	432	1,074	819	1,812	1,284	2,167	1,576	590	396
Kyrgyzstan	679	804	958	958	1,590	1,160	1,267	1,157	1,158	1,200	290	300
Malawi	26	15	27	19	28	19	106	64	106	64	27	16
Mozambique	184	146	283	215	359	313	544	482	544	482	136	121
Namibia	194	194	216	216	225	218	350	327	284	270	71	79
Nigeria	95	39	107	225	669	432	798	423	1,279	551	141	241
S. Sudan	7	0	3	0	1	0	6	-	20	-	1	0
Tajikistan	598	380	780	536	1,065	666	902	804	716	638	179	160
Tanzania	36	32	83	44	95	95	516	143	272	124	49	40
Ukraine	4,530	4,957	7,615	7,672	10,585	9,000	7,735	8,201	9,078	8,869	2,481	2,453
Vietnam	601	578	774	713	994	957	2,198	1,532	2,558	2,131	538	538
Zimbabwe	118	64	149	105	393	315	412	381	421	405	105	101
Total	13,485	11,914	31,179	26,914	44,216	37,978	48,067	42,617	53,088	46,915	13,197	12.048

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

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, 2011-2016 in 20 CTB countries*

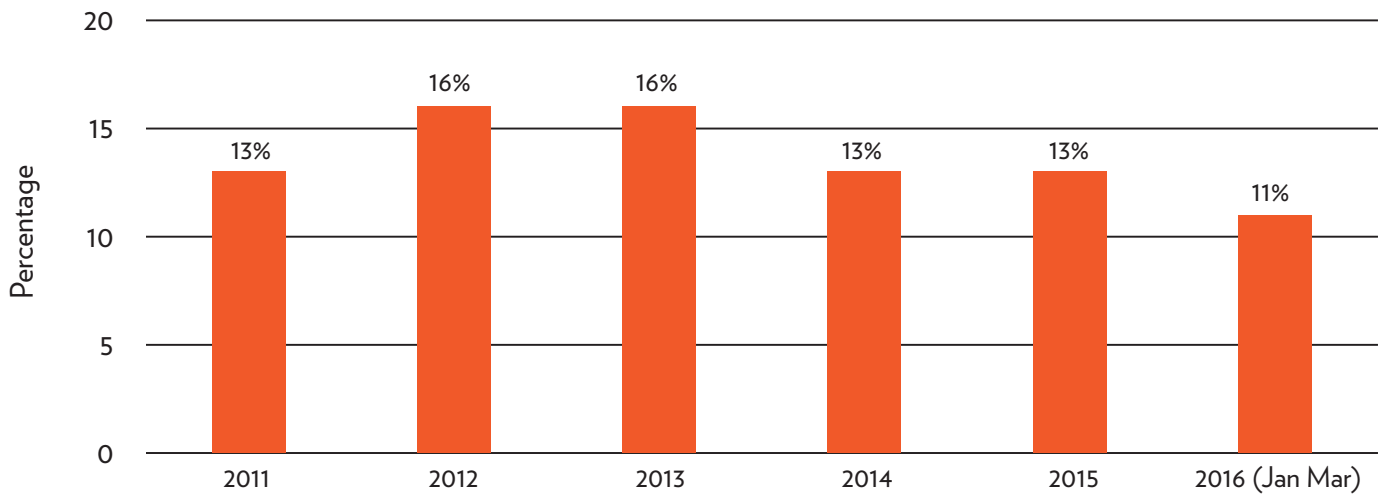


**Uzbekistan data is not included as MDR-TB reporting via CTB has not started.*

The rapid increase in diagnosis and treatment initiation (a nearly fourfold increase) is notable from 2011 to 2015. The data for 2015 need to be interpreted with some caution as the data are reported by NTPs via CTB (i.e., not validated by WHO yet); also for four countries it is based on projections of (equal level) 2014. These initial 2015 data project a 10% increase in both diagnosis and treatment initiation from 2014 (CTB baseline) to 2015. More pronounced increases over this period are noted in Botswana (100% in #dx and 12% in #trt), Nigeria (60% and 30%, respectively), Vietnam (16% and 39%, respectively), and Indonesia (20% and 23%, respectively).

The approximate gap between diagnosis and treatment initiation has remained around 12% over the last five years (see below).

Gap between diagnosis and treatment initiation, 2011-2016* in 20 CTB countries**



**Data from 11 countries are based on projections of (equal level) 2015 or incomplete Jan-Mar 2016 data.*
***Uzbekistan data is not included as MDR-TB reporting via CTB has not started.*

The factors contributing to this continued gap are complex – some are common challenges across all countries and others are country-specific. There are still several countries with major work to be done to initiate more MDR-TB patients on appropriate treatment (including South Sudan, Nigeria, Burma, Tanzania, Malawi and Indonesia); CTB is working in each of these countries to introduce, expand or improve PMDT services.

The quality of PMDT data remains a major challenge in a number of CTB countries – as already mentioned above, NTP 2015 data on MDR-TB diagnosis and treatment were not available in four countries (Burma, Ethiopia, Malawi and Mozambique) by the end of April 2016 (i.e. the time for the submission of the second quarterly report); Jan-Mar 2016 data on MDR-TB diagnosis and treatment were not available in 11 countries (the aforementioned four countries plus Botswana, Cambodia, India, Kyrgyzstan, Tajikistan, Vietnam and Zimbabwe). CTB is working in these countries to improve the quality of PMDT data (e.g., electronic registration and reporting, GxAlert and mHealth) to make sure that quality data are available and used for decision making, a prerequisite for improved PMDT in these countries.

New drugs and novel regimens

Since 2014, eligible patients[2] were started on Bedaquiline (BDQ) in six countries, and on Delamanid (DLM) in only one country (see below). In total, 32 patients were started on BDQ between Jan-Mar 2016 compared with a total of 31 patients started on BDQ between 2014 and 2015 thanks to different donor/project support. In addition, patient enrollment on BDQ treatment is anticipated in an additional five countries with CTB support (Ukraine, Tajikistan, Kyrgyzstan, Kazakhstan and India) over the next two quarters; therefore substantial scale up of BDQ treatment is expected by the end of this reporting year (for more information please see page 36).

Number of eligible patients started on BDQ or DLM (national data), 2014-2016 in seven CTB countries

CTB Country	2014		2015		Jan-Mar 2016	
	# put on BDQ	# put on DLM	# put on BDQ	# put on DLM	# put on BDQ	# put on DLM
Botswana	2		2		0	
Burma					1	1
DRC			2			
Indonesia			16		5	
Tajikistan			5		3	
Tanzania			1		1	
Vietnam			3		22	
Total	**2**	**0**	**29**	**0**	**32**	**1**

Most significant achievements

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

A notable event this quarter was the commemoration of World TB Day (March 24) across all CTB countries. Challenge TB's involvement varied from country to country, but CTB-supported activities included large advocacy events attended by high-level governmental officials and celebrities (India, Botswana and Nigeria), social media campaigns (Indonesia and Burma), engagement of remote regions and disadvantaged youth (Bangladesh and Namibia), national TB conference (Afghanistan and Ethiopia), and a TB screening campaign in targeted communities (Tanzania).

2. Eligibility varies by country but should follow WHO/NTP criteria, which usually entails pre-XDR, XDR-TB and MDR-TB patients with adverse drug reactions and/or poor tolerance to standard second line drugs.

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.

National TB result conference conducted – CTB-Afghanistan assisted the NTP in conducting the first-ever national TB results conference aimed at 1) Promoting evidence-based decision-making and enhancing research within the TB program and health sector at large; 2) Informing policy makers, donors, and partners with updated knowledge on TB; and 3) Sharing new knowledge (research, assessments, and results) with the wider academic and public health community in Afghanistan. In total, 118 participants (9F/109M) attended the conference, and 30 posters and nine presentations were delivered. CTB and the NTP jointly developed an action plan as per conclusions and recommendations of the conference, which includes DOTS expansion to diabetic centers and screening diabetic patients, and CB-DOTS expansion to Paktiya by involving community health workers in contact investigation (CI).

Urban DOTS expanded to densely populated areas - Between Jan-Mar 2016, CTB expanded DOTS to an additional seven public and private health facilities (HF) - two public and five private hospitals - in the cities of Herat, Kabul, Kandahar, Jalalabad and Mazar-I-Sharif; 226 health care providers (lab technicians, nurses and doctors) were trained on TB diagnosis and treatment, TB infection control (TB IC), and CI. TB case notification in Kabul for all forms of TB increased by 7% from 1,166 in Oct-Dec 2015 to 1,250 in Jan-Mar 2016 (4% increase for new bacteriologically confirmed TB cases for the same period). In four other cities - Kandahar, Mazar-i-Sharif, Herat and Jalalabad - all forms of TB cases reached 1,518 cases (38% increase from 1,099 cases in Oct-Dec 2015) and new bacteriologically confirmed TB cases reached 631 (58% increase from 399 cases in Oct-Dec 2015). The treatment success rate in these cities is 85%, whereas in Kabul it is 76%. One of the continued challenges for Kabul urban DOTS is the high transfer rate of 14% (the national rate is 5%). CTB is working on strategies to address this challenge (e.g., engaging in active follow-up of TB patients who initiated their treatment in Kabul and continued treatment in their local provinces).

DOTS implemented in remote and hard-to-reach areas – CTB continued assisting the NTP to implement CB-DOTS in 14 provinces through sub-contracts with NGOs delivering primary health care services to the local population. This quarter, CB-DOTS was implemented in 526 HFs across 14 provinces, a more than twofold jump from the 223 HFs engaged during the previous quarter. This quarter 8,977 presumptive TB patients were referred to HFs for diagnosis compared to 4,335 between Oct-Dec 2015 (twofold increase). Of those referred, 456 (5%) were diagnosed as bacteriologically confirmed pulmonary TB and 689 (8%) all forms. Community health workers (CHWs) provided daily treatment to 644 TB patients in their villages.

Enhanced CI among children – CI is one of the strategies supported by CTB-Afghanistan. This approach resulted in improved access to TB services for children. CTB assisted the NTP in conducting training for health care workers (HCWs) on childhood TB diagnosis and treatment, installation of digital X-ray in two children's hospitals, distribution of tuberculin skin tests, and conducting regular supervision and monitoring to children's hospitals. Compared to 2014, in 2015 there was a 30% increase in the identification of children under the age of 5 in contact with index TB cases (5,586 in 2014 and 7,246 in 2915) and a 59% increase in numbers of children completing IPT (3,767 in 2014 and 5,983 in 2015).

Safer health care settings – Between Jan-Feb 2016, CTB assisted the NTP in conducting a cross-sectional baseline assessment of HCWs' knowledge, attitudes, and practices of TB-IC and hand hygiene (HH). In total, 230 (40% nurses, 35% physicians, and 25% laboratory technicians) HCWs were interviewed from 80 HFs in 15 provinces. Only 7% of HCWs reported regularly performing HH prior to patient contact while 49% reported performing HH after patient contact; 76% of HCWs reported that barriers to HH included a lack of soap and running water; only 15% of HCWs regularly wore respirators when caring for TB patients. Limited access to masks and the poor design of HF buildings to isolate infectious TB patients and maximize ventilation were the main limitations against TB-IC implementation noted at the HFs studied. CTB is going to provide TA to the NTP to train HCWs on TB-IC including HH and respirator use as well as on (re)designing health care settings to ensure the proper application of TB-IC measures.

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.

Advocacy, communication and social mobilization (ACSM) – CTB supported NTP by organizing a strategic planning workshop with 28 participants from the NTP and partner NGOs, members of the ACSM Working Group, as well as two TB patients. The organizational framework and scope of work for the ACSM Working Group and ACSM Committee were discussed and endorsed by the NTP. Available information, education and communication (IEC) materials were presented and systematically reviewed by the participants, and areas of improvement were noted. After final endorsement by the NTP the ACSM strategic plan will be printed and launched nationwide in the fourth quarter.

GxAlert introduction – To introduce GxAlert in the country, CTB carried out the landscape assessment, and provided concrete recommendations for overcoming significant challenges faced by the NTP regarding the introduction of Xpert technology in 2012 (e.g., inadequate operational use of the machines due to poor coordination, no regular maintenance program, a lack of quality assurance, poor device management, no monitoring tools, etc). GxAlert implementation is expected to start by September 2016.

CTB Grantees fully implementing activities – CTB-Bangladesh grantees were able to accelerate the implementation of their activities following CTB's successful registration with the NGO Affairs Bureau in January 2016. The Bangladesh Pediatric Association (BPA) has rolled out its childhood TB training package in the Sylhet division. CTB facilitated the rollout by conducting a local level planning workshop to involve the health managers of the division. The Bangladesh Diabetic Association (BADAS) developed a pool of 11 master trainers who have conducted orientation for 80 data collectors from affiliated centers. They also commemorated World TB Day through events such as press conferences, radio and TV talk shows, etc.

Mural painted by school students to commemorate World TB Day, 2016, Bangladesh (Photo: Dr. Zakia Sultana Siddique)

Botswana

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

National TB prevalence survey protocol updated - CTB-Botswana provided technical support in organizing a 3-day stakeholder's consultation workshop from 19–21 January, 2016 to review and update the existing TB prevalence survey protocol. Based on the input from the workshop, the prevalence survey protocol was revised and shared with the in-country TB prevalence survey core-team for further review and finalization.
New drugs and shortened treatment regimens – CTB supported a one-day national workshop on indentifying priority actions for the introduction of new drugs and shortened regimens for M/XDR-TB treatment. This was done based on the analysis of the current MDR-TB situation, including the NRL, two potential clinical pilot sites, the central medical store, the drug regulatory base, and pharmacovigilance. The most important recommendation was to have a functional NRL in terms of its capacity to provide adequate culture and drug susceptibility testing (C/DST) services for the introduction of new drugs and shortened MDR-TB regimens.

Xpert Training-of-Trainers (ToT) workshop - CTB in collaboration with the NTP and Cepheid supported a national Xpert ToT workshop held from 29-31 March, 2016 in Gaborone. The focus of the training session was to assure a reduction of errors/issues with the Xpert system by emphasizing the importance of preventive maintenance, annual calibration and the correct processing of cartridges to reduce the costs for the NTP. In attendance were 19 participants (11F/8M) from the NRL, NTP and MDR-TB treatment initiation sites. These participants will further cascade training exercises in the future.

World TB Day, Botswana

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.

National TB Spending Assessment completed - CTB-Burma completed a National TB Spending Assessment and provided the draft report to the NTP. This is the first spending assessment for TB that has ever been conducted in the country. The assessment tracked trends in spending from 2011- 2015. After review by the NTP, key findings and results will be shared with all stakeholders. This baseline assessment will support the requirements for a successful GF concept note.

TB NSP and related documents developed - CTB contributed to the development of the NSP and related documents, which will serve as the foundation for the GF joint TB and HIV concept note. This work combined with the existing NSP budget that was created by the NTP using the WHO budget tool allowed for the development of the concept note financial gap analysis that will be the basis for the funding request to GF when the concept note is complete. This quarter, CTB has also initiated translation into English of the NTP documents such as training manuals and guidelines, which was necessary before the GF joint concept note could be finalized.

Talking about the Challenge TB project with the new vice president on World TB Day, 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 the engagement of large hospitals, public-private mix and prisons.

TB symptoms included in general medical triage form - The general medical triage forms are currently widely used at referral hospitals in Cambodia. CTB, the USAID/Quality Health Service project, and the NTP have jointly revised this documents to include four TB symptoms (cough, fever, weight loss and night sweats). The revised medical triage forms have been approved by the MOH. The inclusion of TB symptoms in the triage form will remind physicians or nurses to screen every patient who comes to the hospital for TB – a key step in improving case finding.

Educational Tools Developed - During this reporting period CTB developed and field-tested two patient-education posters. The first poster aims to instruct presumptive TB patients on how to produce good quality sputum. The second one aims to increase knowledge and awareness of having symptoms suggestive of TB. After the NTP approval is obtained, these posters will be printed and displayed in local communities, health centers, referral hospitals and pagodas in CTB targeted areas to increase the TB awareness of communities and also promote the health seeking behavior of community members for early TB diagnosis and treatment.

Contact investigation among close contacts at household level, Cambodia (Photo: Ngo Menghak)

Democratic Republic of the Congo (DRC)

The Union is leading the CTB project in DRC while working closely with MSH (conducting TB/HIV activities in PEPFAR-supported provinces) and KNCV. 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.

TB case notification from private health facilities increased - Following the training of providers from 70 private HFs CTB conducted in previous quarter, the number of TB cases notified from these HFs significantly increased from 266 cases in Oct-Dec 2015 to 467 in Jan-Mar 2016. The majority of TB cases were detected in Kasai Oriental Sud (364) and in Kasai Occidental Ouest (49) provinces. During next quarter, CTB and the NTP will visit the private HFs with the highest number of TB cases to provide supportive supervision focusing on adherence to diagnostic algorithms and good quality TB treatment and care.

TB diagnostic network strengthened - CTB continued supporting sputum samples transportation by motorcycle from the diagnostic treatment centers "centre de diagnostic et de traitement" to the provincial coordination areas "coordination provinciale de lutte contre la lèpre et la tuberculose" (CPLT) to be tested by Xpert, and from CPLTs to the NRL to be tested by C/DST. This quarter, a total of 462 samples were transported: 288 samples for Xpert examination were transported to seven CTB-supported CPLTs, and 174 samples were transported from these seven CPLTs to the NRL (98 for culture and sensitivity test and 76 for culture for MDR patients treatment monitoring). Among the 288 samples transported for Xpert testing, 267 (93%, 267/288) were actually tested - 122 (46%, 122/267) were confirmed MTB+, of which 29 (24%, 29/122) were confirmed with RR-TB and 17 (6%, 17/267) were errors/invalids/no results.

The number of TB cases notified in children increased - Following the training of providers in childhood TB in eight HFs as well as post-training supervision visits by the NTP and CTB, 119 pediatric TB cases (all forms) were identified this quarter compared with 61 in previous quarter (95% increase). The increase is for all the forms of TB including smear-positive TB cases. However, the highest increase was related to smear-negative and extra-pulmonary TB as expected in children. Regular supervision of these HFs will continue in order to maintain the improved diagnosis of childhood TB and quality of care.

Active TB case finding implemented by local NGOs - During this quarter, four CTB-supported NGOs continued active case finding in their targeted areas – a total of 27,845 persons were screened, out of which 2,151 were identified as TB presumptive cases and tested by smear examination. A total of 409 patients (19%, 409/2,151) were diagnosed with TB and initiated on treatment.

Strengthening TB/HIV coordination - Implementation of collaborative TB/HIV activities requires coordination between the TB and HIV programs at all levels as well as with PEPFAR implementing partners. This quarter, CTB organized four coordination meetings, one with USAID PEPFAR partners at the central level and one in each of the three PEPFAR areas covered by the project (Kinshasa, Lualaba and Haut Katanga). These meetings provided a well-established framework for all stakeholders to coordiante their activities in response to HIV-related TB. The meetings focused on collaborative activities that address the interface of the TB and HIV epidemics and that should be carried out as part of the health sector response to HIV/AIDS in the three provinces.

TB/HIV Roadmap updated - The project facilitated a workshop from March 23-25 to update the roadmap (previously from 2015-2017) on TB/HIV activities at national level. Participants included the NTP, the national AIDS program, USAID, PEPFAR implementing partners and CTB. The roadmap will stipulate the pragmatic principles of effective efforts in TB/HIV and must be looked at as the way forward to achieve real progress in TB care, control and prevention. In addition, it will serve as a guiding document that seeks to outline the activities that need to be implemented to accelerate progress. An action plan will be developed as the first step of the roadmap, which will be used to identify and document linkages between policy and programmatic indicators.

Ethiopia

CTB is led by KNCV in Ethiopia with WHO and MSH as collaborating partners. The new 18-month (April 2016-September 2017) work plan that CTB-Ethiopia developed jointly with the USAID Mission and in close consultation with the MOH/NTP has been approved. It 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 is also 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. In addition, CTB-Ethiopia will provide more support to the peripheral echelons by expanding CTB to an additional seven regions. 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.

TB prevention and care in prisons - CTB carried out a TB situation assessment in prisons in the SNNPR and Tigray regions. The findings were presented at a sensitization workshop; this venue was also used to strengthen linkages between 45 regional health bureaus and prison administration staff, and provide comprehensive TB and TB/HIV training for 24 prison health workers (6F/18M) to better serve around 23,000 prisoners in the 20 prison facilities in both SNNPR and Tigray regions. Action points developed as a result of the situation assessment are now being implemented, and CTB will incorporate the newly updated national TB and TB/HIV guidelines, which specifically address TB control in prisons in the country.

Quality Acid-Fast Bacilli (AFB) Microscopy - From February 21-March 11, CTB conducted an external quality assurance (EQA) onsite assessment in a total of 40 HFs in the two CTB-supported zones of SNNPR. The major gaps identified were a shortage of proper rooms, power interruption, lack of water supply, low training coverage of lab personnel especially for Auramine Fluorescence Microscopy (AFM), weak EQA participation of health facilities, and underutilization of Xpert. CTB will continue to provide technical and financial support in monitoring progress during regular supportive supervision including needs-based mentoring and onsite trainings on the gaps identified during previous supervisions. Supplies, job aids, registers will also be distributed alongside the supportive supervision visits.

TB microscopy network - CTB provided TA on the utilization of the Global Laboratory Initiative (GLI) TB microscopy network accreditation tool from March 13-19 in the two CTB-supported regional laboratories in Tigray and SNNPR – namely, 18 (3F/15M) regional staff were trained on the appropriate use of the tool. The training comprised both theoretical and practical simulation on the assessment checklists designed for assessing the National, intermediate (Regional laboratories and EQA centers) and peripheral laboratories as recommended in the four areas of the AFB microscopy network accreditation tool: 1) Policies, guidelines and support for the network; 2) Implementation of policies and technical execution of tests by quality services; 3) External quality assurance procedures; and 4) Guidelines on linkage to a referral system for more advanced tests. The next step is to conduct assessments using the tool by first selecting sites to be included in the assessment and then use the tool to guide national developments toward meeting the 11 GLI standards within CTB-supported regions. Once this goal is attained, it is hoped that the MoH will expand the program nationally to establish universal standards throughout the country.

National capacity on culture and DST - To build the national capacity on C/DST and establish a center of excellence, CTB supported four laboratory staff (two from the Ethiopian Public Health Institute, one from ALERT Hospital, and one from CTB country team) to participate in a hands-on training on first- and second-line DST at the Uganda Supranational Reference Laboratory for two weeks. The team will make use of lessons learned in improving the NRL performance in providing second-line DST services by sharing their knowledge with their peers. The NRL is under validation with SRL Milan for second-line DST for which the knowledge acquired through this training will be useful.

Community TB care (CTBC) - CTB, in collaboration with SNNP regional health bureau, conducted a ToT on TB and TB/HIV for a total of 48 (2F/46M) staff from the zonal health departments and Woreda health offices from February 23-28. The training will be further cascaded to all health extension workers and their supervisors in the region. The NTP places emphasis on CTBC using the opportunity of a strong Heath Extension Program in the country by setting a target as high as 80% contribution from the community.

Drug and commodity management systems - From March 8-12, CTB contributed to a national quantification exercise for anti-TB drugs using the QuanTB tool, which was conducted by the MoH in collaboration with a GLC/GDF mission. Six staff from Tigray and SNNPR regional health bureaus participated in the event. This resulted in the cancelation of two shipments of second line drugs (SLDs) due to an expected overstock, the placing of an emergency order for isoniazid for both adult and pediatric formulations, and the cancelation of Ethambutol-100mg due to overstock. Moreover, 35 (15F/20M) pharmacy professionals and MDR-TB focal persons from all treatment initiating centers in Tigray were trained from March 3-5, in order to improve SLD management at HF level.

National TB research conference - The 11th annual national TB research conference and World TB day were successfully commemorated in Dire Dawa City Administrative, from March 21-24. The events were organized by the NTP/MOH, Dire Dawa regional health bureau, Dire Dawa University and Haromaya University with technical and financial support from CTB and other partners working on TB and TB/HIV. CTB will continue technical and financial support to TB Research Advisory Committee for enhanced TB research, and support the dissemination of results and use of the generated evidence to improve TB control efforts in the country.

World TB Day Celebration in Haromaya University, 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 components of the CTB-India project is addressing the gaps and limitations in childhood TB as well as providing universal access to HIV counseling and testing for TB patients diagnosed in the private sector.

Call to Action for a TB-Free India - CTB continued implementing the Call to Action to mobilize a wide range of stakeholders to build political will and leadership to end TB in India and to increase the visibility of TB. In this quarter, the project was successful in launching a radio and social media campaign featuring Mr. Amitabh Bachchan, a Bollywood star and TB survivor and raising corporate commitments from five big industry/business houses for a TB Free India.

- Amitabh Bachchan lent his voice to the radio campaign by sharing his personal story as a TB survivor and giving messages on recognising symptoms, completing treatment to prevent drug-resistant TB, and urging stakeholders to join the TB-Free India campaign. The radio messages are playing nationally across India on Radio Mirchi, Radio City, Radio One, Fever, AIR FM Gold and AIR Rainbow through the first week of April. The Government of India spent $350,000 to promote this campaign in March- April and plans to take this further.
- A Facebook page for TB Free India was also launched on World TB Day - https://www.facebook.com/ForTBFreeIndia. By May 10, the page had attracted 382 likes.
- Five corporate houses - National Thermal Power Corporation, DLF Foundation, TCI Foundation, Jubilant Bhartia and Johnson & Johnson announced their commitment to implement workplace interventions and support TB prevention and care efforts as a part of their corporate social responsibility (CSR) initiatives. They will be implementing programmes targeting miners, prisoners, truck drivers, migrant workers, urban slum dwellers, construction workers and rural communities, committing resources worth an estimated $3 million.
- Both the media campaign and the corporate commitment were announced at the World TB Day event by the MoH. At the event, the Minister of Health also launched several new initiatives under the Revised NTP. These included expanding drug-resistant TB diagnostics (500 Cartridge Based Nucleic Acid Amplification Test machines), launch of BDQ, and third line antiretroviral treatment regimens for people living with HIV.

Improving the diagnosis of children with TB - CTB continued supporting a project offering upfront access to Xpert testing for the diagnosis of pediatric TB. Following the success of the initial project in four cities, it is being expanded to five additional cities in Year 2. The results to date include:

- A 35% increase in enrolment of children with TB symptoms from the previous quarter was noted, i.e. 7,040 children tested from Jan-March, 2016, up from 5,184 tested in Oct-Dec, 2015.
- Of the total children presumptive for TB, 8% (556/7,040) were diagnosed with TB, of which 9% (50) were found to be RR-TB cases. While there was a 35% increase in the children enrolled under the project, there was no decline in the TB positivity rate (8% in Jan-Mar 2016 was vs. 8% in Oct-Dec 2015).
- 59.2% of 7,753 specimens tested were non-sputum specimens. Of these 42.8% were gastric aspirate/lavage (193/3,315 [5.8%] RR), 5.5% cerebrospinal fluid (31/430 [7.2%] RR), 3.5% pleural fluid (11/277 [4%] RR), 2.4% broncho-alveolar lavage (21/192 [10.9%] RR) and 1.6% pus specimens (57/124 [46%] RR).
- Treatment was initiated in more than 75% (379/506) of TB cases (first line treatment) and 76% (38/50) of RR- TB cases (second line treatment as per national guidelines, along with referral for C/DST).

HIV counseling and testing for TB patients - CTB is focusing on providing universal access to HIV counseling and testing for TB patients diagnosed in the private sector, an identified programmatic gap. Fifty five private laboratory technicians (35F/20M) were trained on National AIDS Control Organization guidelines for laboratory technicians between 1-2 March and 8-9 March 2016 in Mumbai at training sessions organized by CTB with technical support from the NRL and Mumbai District AIDS Control Society. Linkages and collaboration were established with the 26 staff of 18 integrated counseling and testing centers across Mumbai, which ensures smooth referral and testing of the patients screened in private hospitals. This will increase case notification, improve the quality of patient support, and allow for the better tracking of patients.

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 a Dec 2015–Sep 2016 work plan, covering all intervention areas with the exception of targeted screening of active TB. The largest investment is in patient-centered care and treatment (specifically for MDR-TB and TB/HIV).

Second phase of revision of TB recording and reporting forms - CTB supported the adaptation of the electronic R&R system (SITT), bringing it in line with WHO revised definitions, based on the revised paper forms (also supported by CTB, finalized and distributed end 2015). The adaptation of SITT is expected to be completed by the end of April 2016.

Integration of Xpert machines and e-TB Manager using GxAlert - CTB provided support to integrate Xpert machines and e-TB Manager using GxAlert. The connection has been tested using dummy data. Variables that are already connected are the names of patients, patient ID numbers, specimen ID numbers, the results of Xpert tests, etc. However, because the simulation results showed a potential error in the connection, it is recommended to use barcodes to minimize the possibility of errors.

District implementation planning - While awaiting the MOH/NTP green light to start implementation at district level, CTB finalized district assessment tools, which consist of questionnaires for all related parties - i.e. local government and local health offices, public health centers, laboratories, and public-private mix (CSOs, professional organizations, prisons, health insurance). The tools also include guidelines and a district advocacy package to inform CTB work and encourage support from local governments towards the program.

On February 17, a Senior Management Team meeting was held with full partner participation. The NTP manager's vision on NTP decentralization to the districts was discussed and the CTB approach was brought in line with the NTP approach. The NTP manager proposed that the CTB District Planning effort would serve as an example of early implementing sites for the country. He emphasized the need of full NTP involvement and capacity building for this approach at national and provincial level, to ensure expansion using government resources would be possible. As the follow up of the agreement, starting in April CTB will conduct District Planning employing this approach.

CTB supported the revision of the NSP indicators to be responsive to the district approach. Regular meetings hosted by the NTP have been conducted with the participation of CTB to formulate the new approach towards TB elimination in the country. It is expected that the new revised NSP will be finalized by the NTP in May. Next, as agreed with the MoH, CTB will use this as the basis of the implementation of District Planning.

CTB staff with the Minister of Health and DKI Jakarta Governor during World TB Day at Marunda, Indonesia (Photo: Teuku Nasrullah)

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 provided technical support to the NTP in the development of a national plan for the introduction of new TB drugs and shortened regimens for MDR-TB treatment. In March 2016, the national plan was submitted to the MoH for endorsement. As soon as it is endorsed (expected in April 2016), CTB-Kyrgyzstan will provide TA to the NTP in the implementation of the plan.

Operations research protocol for new TB drugs and shortened regimen - CTB provided TA to conduct the workshop on the development of the OR protocol for the introduction of BDQ for pre-/XDR-TB patients and shortened treatment regimens for MDR-TB patients. The workshop was conducted on March 3, 2016 and attended by the NTP specialists and representatives of partner organizations. The OR protocol including a clinical protocol and standard operating procedures (SOPs) will be finalized next quarter, which will prepare the basis for patient enrollment that is anticipated by September 2016.

Supply of Bedaquiline - At the end of March 2016, with support of CTB, the NTP submitted a request to GDF for the treatment of 37 DR-TB patients with BDQ (the expected time of arrival of the drug is August-September 2016). For the start of the implementation of BDQ treatment in Kyrgyzstan, the NTP is requesting only a limited number of drugs to make sure that all the requirements are in place and are functioning well. For 2017, the plan is to initiate 61 TB patients on BDQ treatment, with anticipated scale-up in the coming years.

DR-TB patient support - To improve adherence to and prevent the interruption of treatment, in March 2016, CTB-Kyrgyzstan signed a Memorandum of Understanding with the local NGO "TB Coalition". The Coalition consists of forty former TB patients who will be involved in CTB activities providing support to DR-TB patients.

Workshop on the development of the operations research protocol for the introduction of Bedaquiline, Kyrgyzstan (Photo: Bakyt Myrzaliev)

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 the national level, in all five zones, and in 15 scale-up districts within these zones.

Baseline Assessments - CTB in collaboration with the NTP conducted three assessments this quarter, including: (1) Xpert national assessment; (2) Assessment of selected health facilities and private providers in all 15 CTB-supported priority districts; and (3) National assessment of childhood TB services. The key findings of these assessments include:

- A total of 44 Xpert machines are available in the country. A national Xpert implementation plan is not in place, and utilization of the technology is low. The low utilization of the Xpert technology is mainly due to a lack of sensitization among HCWs as well as weak sample transportation systems within some districts. The other findings included poor infrastructure and poor maintenance of the Xpert machines, including a lack of calibration and warranties. The results of the assessment were put into an action plan that stimulated budget reallocation in order to address some of the critical gaps identified. The training of HCWs on Xpert is planned to improve the utilization of the technology. Infrastructure improvement, equipment maintenance including calibration has also been prioritized. A national Xpert implementation plan will be developed, implemented and monitored on a regular basis.
- More than 90% of the community sputum collection points (CSCP) are non-functional in 15 priority districts. The other important findings include lack of TB/HIV committees, lack of TB-IC plans, poor documentation/use of old version registers for collecting data. Major strengths identified are the good management of drugs and good practice of TB/HIV integration in the facilities. The next steps are to coordinate with Action Aid to revamp the CSCPs, to provide support in the formation of TB/HIV committees, to orient staff in the facilities on the documentation of registers and to strengthen the practice of TB/HIV integration.
- Childhood TB services were assessed through a childhood TB benchmarking workshop held in Lilongwe in February 2016. There were 21 participants including representatives from UNICEF and PEPFAR partners. The KNCV benchmarking tool had 25 standards used to evaluate the country's status on key services for childhood TB. The country scored 4/20 for standards that were met, and 16/20 that were partially met. Recommendations that were made included improving coordination and technical oversight for the implementation of the services including guidance on MDR-TB management in children, updating training materials and job aids, dedicated funding to childhood OR, training of public and private providers, and engagement of schools in teaching on childhood TB and establishment of a technical task force or technical committee.

Renovation of National TB Reference Laboratory (NRL) - The NRL has been non-functional since September 2015, hence samples were being sent to Mzuzu Laboratory. CTB supported the NRL renovation, which is expected to be finalized during the coming quarters. Rehabilitation of the media preparation room, staining room and the main culture laboratory, installation of air-conditioning units and UPS for biosafety cabinets have been completed. When complete, the NRL will have a suitable infrastructure to meet the minimum requirements for a TB Reference Laboratory. The time-sensitive renovations are also part of preparatory activities for the upcoming national drug resistance survey, which is scheduled to start in June 2016.

TB Research Network meeting - Malawi was privileged to host a national TB Research Network meeting this quarter with participation by renowned local and international TB implementing and research partners, including Wellcome Trust, the Liverpool School of Medicine and the London School of Hygiene and Tropical Medicine - Karonga Prevention Study. CTB supported the research meeting by reviewing abstracts and presentations, development of meeting program, participation in facilitation of logistics and group discussions, printing of booklets that contained the various abstracts, and payment for the venue costs and travel for some NTP staff who travelled from outside Lilongwe. CTB-Malawi also became a member of the Malawi Research Network.

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".

CB-DOTS training for volunteers, activists and supervisors in Tete Province, Mozambique (Photo: Francisco Luis)

Namibia

CTB-Namibia commenced in October 2015 and has been implementing activities approved for the period October-November 2015 and pre-approved activities for the period of December 2015-March 2016. The new 10-month work plan covering December 2015-September 2016 was approved at the end of March 2016.

TB prevalence survey - As part of the country's preparations to conduct a TB prevalence survey, CTB supported the MoH in conducting a stakeholder consultative meeting and provided TA for protocol development. This effort was a huge success as it led to a draft protocol with clear task allocations for the members of the prevalence survey TWG as well as a detailed implementation plan with realistic timelines. The working group is comprised of members from the MoH, NTP, Namibia Statistic Agency, CTB, MSH, Project Hope, WHO, Cohena, USAID Namibia, CDC Namibia, and Namibia Global Fund. Key deadlines that came out of the stakeholder consultative meeting included a finalized protocol and budget by April 2016, completion of the pilot study by April 2017, formal launch of the study by May 2017 and completion of data collection by June 2018.

Strengthened TB/HIV collaboration - With CTB support, three districts in the northern part of Namibia (Engela, Katima Mulilo, and Oshakati) achieved ART coverage of 97% among TB/HIV patients (up from 88% in 2013/14) compared to the national average of 90% in the reporting period. Strong TB/HIV collaborative activities resulting from introduction of District TB/HIV Coordinators in CTB-supported districts should have contributed to this result. This initiative is going to be expanded to 10 of the 14 regions of Namibia beginning next quarter.

Improved TB data quality and use - This quarter, CTB supported five routine quarterly zonal review meetings. The main purpose of these meetings is to review regional data through cross check and verification of the district data in order to improve data quality and use, while also providing an opportunity for orientation, information sharing and capacity building for new staff. The review meetings resulted in verified data to be submitted to the national level for compiling of national reports. Three of the five CTB District TB/HIV Coordinators participated in the zonal review meetings this quarter. In addition, CTB supported the MoH in training 89 HCWs (56F/33M) on the use of electronic recording and reporting (ERR) tools. Two separate trainings were conducted during this quarter - two ERR systems were used (ETR.net for susceptible TB cases and e-TB manager for DR-TB cases). Improved use of ERR systems by regional and district based TB coordinators has led to the NTP using ERR to compile annual reports and WHO reports from 2016 onwards.

Garden project 'for patients by patients' growing vegetables for patients' consumption, Rundu district, Namibia (Photo by Abbas Zezai)

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.

Expansion of TB diagnostic services - CTB supported the assessment of 84 sites for microscopy expansion in the 12 CTB-supported states. Of the sites assessed, 21 were renovated and 19 microscopes provided. A total of 41 (F19/M22) persons were trained on AFB microscopy. In last quarter, CTB supported the installation of an additional 22 Xpert machines in the 12 CTB-supported states - to boost utilization of the machines, CTB implemented the sputum transportation system using the 'hub' and 'spoke' model whereby facilities are mapped around Xpert sites and are financially supported to be able to transport sputum samples. A total of 5,405 samples were transported to Xpert site during this quarter using this model. This resulted in a significant increase (10%) in the number of all forms of TB cases notified (10,614) in the 12 CTB-supported states from 9,600 in October-December 2015. Cumulative figure over three quarters is 29,728. Three states namely Ondo, Katsina and Cross Rivers have surpassed their cumulative target for the three quarters combined.

Similarly, a total of 12,797 sputum samples were tested with Xpert indicating a 31% increase over last quarter's data (9,794). Furthermore, 11,849 (93%) of the tests during the quarter were successful tests. As a result of the Xpert tests conducted, 2,084 MTB+ cases were detected during the quarter in CTB-supported states and were linked to treatment and care. Of these, 114 (5%) were RR-TB cases. Additionally, CTB supported the enrolment of 91 DR-TB patients on SLD treatment at the community level during this quarter.

CB-DOTS - CTB staff conducted community outreach in Benue, Lagos, Akwa Ibom, Cross Rivers, Rivers and Ondo states. As part of the outreach activities, the community members were provided with information on TB signs and symptoms and were screened for TB. At the end of the outreach, a total of 829 presumptive TB cases were identified and 47 (6%) TB cases diagnosed and enrolled in care. The capacity of CHWs in the various service delivery points was strengthened to continue to identify and treat TB cases in the community.

Childhood TB - With the support of CTB, a total of 35 high-burden pediatric clinics have been identified and linked to the TB program for the management of childhood TB cases. Cumulatively a total of 260 clinicians (144F/116M) were sensitized on childhood TB services. In Lagos State five facilities, that had not reported cases of childhood TB in the three months prior to commencement of activities in the facilities, are currently managing 10 childhood TB cases. In addition, DOTS was established in one of the sensitized facilities, Amuwo-Odofin Maternal and Child Centre.

Enhanced contact investigation - During this quarter, CTB supported TB contact investigation in two states, Katsina and Ondo. Index TB patients' houses were visited and household members screened. In all, a total of 173 index TB patient households were visited; 511 household contacts were screened for active TB; 162 sputum samples collected for diagnosis and 16 (10%) TB cases were detected. All have been linked to treatment services.

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.

Increasing TB case notifications and treatment success rate - CTB continued supporting the TB TWG by sharing supervision plans and assigning partners to locations to conduct data verification, mentorship and support in order to get quality reported data from HFs. Through the CTB support, the timeliness and completeness of reporting from HFs to the central level has improved from 74% (66/87) in July–September 2015 to 80% (70/87) in October–December 2015. The case notification has increased from 1,870 cases to 2,573 cases, respectively (38% increase); 51% (1,300/2,573) of notified TB cases was contributed by CTB intervention areas (Central Equatoria, Eastern Equatoria, and Western Equatoria states). Nationally, there has been a 26% increase in case notification from the 2014 baseline data. The treatment success rate has improved from 74% (635/858) in October–December 2015 to 82% (893/1091) in January–March 2016 in the CTB intervention areas.

Improved contact investigation - CTB continued supporting contact investigation in eight health facilities in the Lainya, Yei River, and Morobo counties. From January–March 2016, a total of 960 household TB contacts were registered and screened, which is more than a twofold increase compared with 416 household contacts screened in October-December 2015. The contacts were screened using standard tools and forms, and presumptive TB patients were referred for diagnosis. Over 30% (293/960) of contacts screened were referred for TB microscopy, out of which 1.7% (5/293) were bacteriologically confirmed with TB through smear microscopy; and 2.4% (7/293) were diagnosed with smear negative TB; 0.3% (1/293) were diagnosed with extrapulmonary TB.

Provision of services to displaced populations - CTB supported the development of the framework "Tuberculosis Prevention, Care and Control among Refugees and Internally Displaced Populations in South Sudan" to ensure access to TB prevention, care and control services for IDP camps in South Sudan. In collaboration with the NTP and partners, CTB trained 45 HCWs on TB diagnosis and case management, procured and delivered lab equipment, supported the preparation of lab reagents as well as quantification of TB drugs. Between January-March 2016, 106 TB cases were diagnosed and enrolled within the intervention area (cumulatively, 393 TB cases since October 2015).

A patient accompanied by a community mobilizer arrives in Yei Civil Hospital, South Sudan (Photo: MSH)

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.

Diagnostic Algorithm Optimization - In January 2016, CTB supported a two-day workshop to adjust the currently used diagnostic algorithm for the implementation of new drugs and shortened regimens for M/XDR-TB treatment. Key specialists and decision makers from the NTP, managers of Rudaki and Dushanbe TB centers, heads of MDR and XDR departments of the Republican TB Hospital in Machiton and representatives of partner organizations all significantly contributed to the revision process. The optimized algorithm will accelerate the diagnosis process as the intermediate steps have been reduced, as have the number of specimens being tested (from 3 to 2). The new algorithm allows for proper/timely triage of patients for each regimen ensuring good quality specimens, and improved data exchange between laboratories and clinicians. Clinical protocol developed – CTB provided TA to the NTP in the development of a clinical protocol on the use of new drugs and shortened regimens. The clinical protocol contains SOPs for case finding and diagnosis at the primary health care and TB facilities, patients triage, treatment regimen design, clinical monitoring and drug safety. The clinical protocol is currently being reviewed by the NTP and is expected to be approved in the next quarter.

OR protocol - CTB developed a draft OR protocol to be used for implementation of new drugs and shortened regimens in Tajikistan.[3] The protocol includes the following components: study design, enrollment procedures, methods, treatment regimen formulation, clinical monitoring, monitoring of side effects as well as data collection, management and analysis. The draft OR protocol has been submitted to the NTP for further review and comments and is expected to be approved by the end of May 2016.

Pharmacovigilance (PV) and active drug safety monitoring (aDSM) - Between January-March 2016, CTB continued supporting the NTP in establishing PV/aDSM for anti-TB drugs. Draft PV/aDSM forms (adverse event register, PV/aDSM annex to TB01R form, and a standard quarterly adverse event reporting template) as well as relevant regulatory document ("Statement on active TB drug-safety monitoring and management in framework of the NTP of Tajikistan") were developed, which will be submitted to the NTP for approval in the next quarter.

Logistic management information system (LMIS) - As a follow-up of two LMIS training sessions conducted last quarter, CTB continued monitoring activities in Sughd region to evaluate the maintenance of revised drug recording & reporting documents. The post-training monitoring conducted in seven districts this quarter showed that over 90% of the trained staff are using the revised templates, which contain more detailed information and are more convenient to use. The quality of reporting has improved; 6/7 districts started using computer-based templates for the calculation of TB drug needs and requisitions.

3. The OR status was required according to national regulations, as BDQ is not registered in the country.

World TB Day event in a children's TB hospital, Dushanbe, Tajikistan (Photo: Tatiana Abdurazakova)

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.

Laboratory quality management system (LQMS) - With support from CTB, the NRL worked on the areas for improvement identified from the quality systems assessment performed last quarter. In addition, other focus areas for improvement were identified through a previous assessment performed by the East Africa Public Health Laboratory Network Program in 2015 towards ISO15169 accreditation. By acting on the recommendations offered by these two assessments, the NRL raised its status under the Strengthening Laboratory Management Toward Accreditation (SLMTA) program from two to three stars.

ACSM training package developed - CTB supported the NTP to develop and pilot an ACSM training package to be used for training of HCWs and CHWs to enhance prevention, early detection, treatment and care of TB patients in the country. The materials will be used to train 90 CHWs in three districts (Kinondoni, Meru and Geita) in the next quarter.

External Quality Assessment - CTB supported refresher training on effective implementation of an EQA system for smear microscopy with 44 laboratory staff and district coordinators in CTB targeted regions. Out of 342 microscopy sites, 314 (92%) participated in the EQA program this quarter. For further continuity of the program, CTB recruited an EQA Technical Officer seconded to the NRL who will focus primarily on improvements of smear microscopy and the current system for EQA country-wide.

Pediatric case finding and TB screening in Health Care Workers - Improved knowledge and skills of district coordinators as a result of ongoing supportive supervision and mentoring have resulted in better performance in terms of pediatric case finding and HCW screening. Pediatric case notification increased from 9% of all notified cases in October-December 2015 to 11% in January-March 2016. A total of 760 HCWs in all CTB regions were screened for TB, with seven (1%) HCWs diagnosed with TB (four by chest X-ray, three smear positive) during the reporting quarter compared to last quarter when none were screened. CTB will monitor the yields from HCW screening in the coming quarter and refine the recommendations to ensure a more cost-effective approach if the yields remain low.
TB screening campaign – To commemorate World TB Day, CTB-Tanzania and the NTP conducted a 4-day TB screening campaign in three CTB districts (Meru, Kinondoni and Geita). In Geita region, the screening targeted the small-scale mining communities - out of a total 2,040 people screened using a standard TB screening questionnaire, 1,159 (57%) were presumptive cases; among the presumptive cases 16 (1%) were found to be smear positive, 4 (0.3%) were smear negative and 1 (0.1%) had extra pulmonary TB. All 21 (2%) confirmed TB cases were initiated on anti-TB medication. In addition, 902 (77%) were tested for HIV of which 34 (4%) were found to be HIV infected and referred for HIV care and treatment. The relatively low yield from this ACF intervention underlines the importance of Xpert scale-up and supply management in Tanzania (there was a shortage of Xpert cartridges at the time of the ACF activity, which is currently being addressed) and the need to examine ACF strategies to inform future activities.

TB/HIV collaborative activities - A total of 6,054 TB cases (all forms) were notified during the reporting quarter in CTB-supported regions; 5,812 (96%) of them were tested for HIV and received their results; 1,956 (34%) were HIV co-infected; 1,792 (92%) TB cases were initiated on anti-retroviral treatment (ART) this quarter, compared to 631 (80%) last quarter; 1,932 (99%) HIV co-infected patients were started on co-trimoxazole preventive therapy (CPT) compared to 725 (92%) in the previous reporting period.

TB Screening during the commemoration of World TB Day, Dar es Salaam, Tanzania (Photo: Viocena Mlaki)

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 - CTB-Ukraine conducted two roundtable meetings with the NTP representatives and all other stakeholders to develop the strategy at project sites for TB contact investigation and follow-up. The proposed strategy will address critical challenges including decline of sanitary/epidemiological services (which used to play a central role in contacts investigation and management in the past); the lack of holistic guidelines on TB contact investigation and management; and the lack of current, approved guidelines on pediatric TB management. During the coming two quarters, CTB will lead the development of the strategy, and will support the creation of a holistic, consistent system of TB contacts investigation and follow-up in Mykolayivska and Poltavska oblasts.

Protocol for introduction of new drugs and shortened regimens - CTB developed a draft protocol for introducing new drugs and shortened regimens for the treatment of pre-/XDR-TB and MDR-TB, in close collaboration with the National Research Institute on TB and Lung Diseases (NRITLD) and Ukraine Center for Disease Control (UCDC). Based on discussions with providers from Kyivska Oblast (the proposed site for implementation of the operations research), draft SOPs were developed, including M/XDR-TB case detection at different levels of care, PV/aDSM, clinical monitoring, etc. Currently, the protocol is being reviewed by in-country stakeholders and USAID; also undergoing ethical review to the Kyivska Oblast ethical committee, NRITLD ethical board, and PATH's institutional review board. All of these activities will be completed over the next two quarters. Patient enrollment is expected to start in the last quarter of this year.

Clinical guidelines for side-effects management - The draft clinical guidelines for side-effects management for TB and DR-TB patients were finalized and submitted to the UCDC and the MoH for approval. The first workshop on the guidelines was conducted from February 17–19 2016 in Kyiv, with 29 participants (chief doctors, deputy chief doctors, MDR-TB department heads of oblast and district TB dispensaries, rayon/district TB doctors working in the primary health care service from Mykolayivska, Poltavska, and Kyivska oblasts as well as representatives from UCDC, NRITLD, and the National Medical University) in attendance. The participants discussed the current situation and urgent necessity to improve registration of side effects in the national TB register (e-TB Manager). During the next quarter, CTB in collaboration with NRITLD and UCDC, plans to conduct a webinar on the guidelines for all TB service providers in Ukraine.

DR-TB patient support - Three CTB-supported NGOs, Light of Hope, Initiative for Life, and Vykhid, provided psycho-social support to DR-TB patients during the ambulatory phase of treatment in Poltavska and Mykolayivska oblasts. By March 31, these NGOs working in close collaboration with the oblast TB dispensaries and other key regional TB stakeholders, supported 133 M/XDR-TB patients within the project sites. Light of Hope provided support to 41 patients in Poltavska; in Mykolayivska, Initiative for Life and Vykhid provided support to 48 and 44 patients, respectively.

Role-playing the patient during a workshop on clinical guidelines for side effects management, Kyiv, Ukraine (Photo: Svitlana Leontyeva)

Vietnam

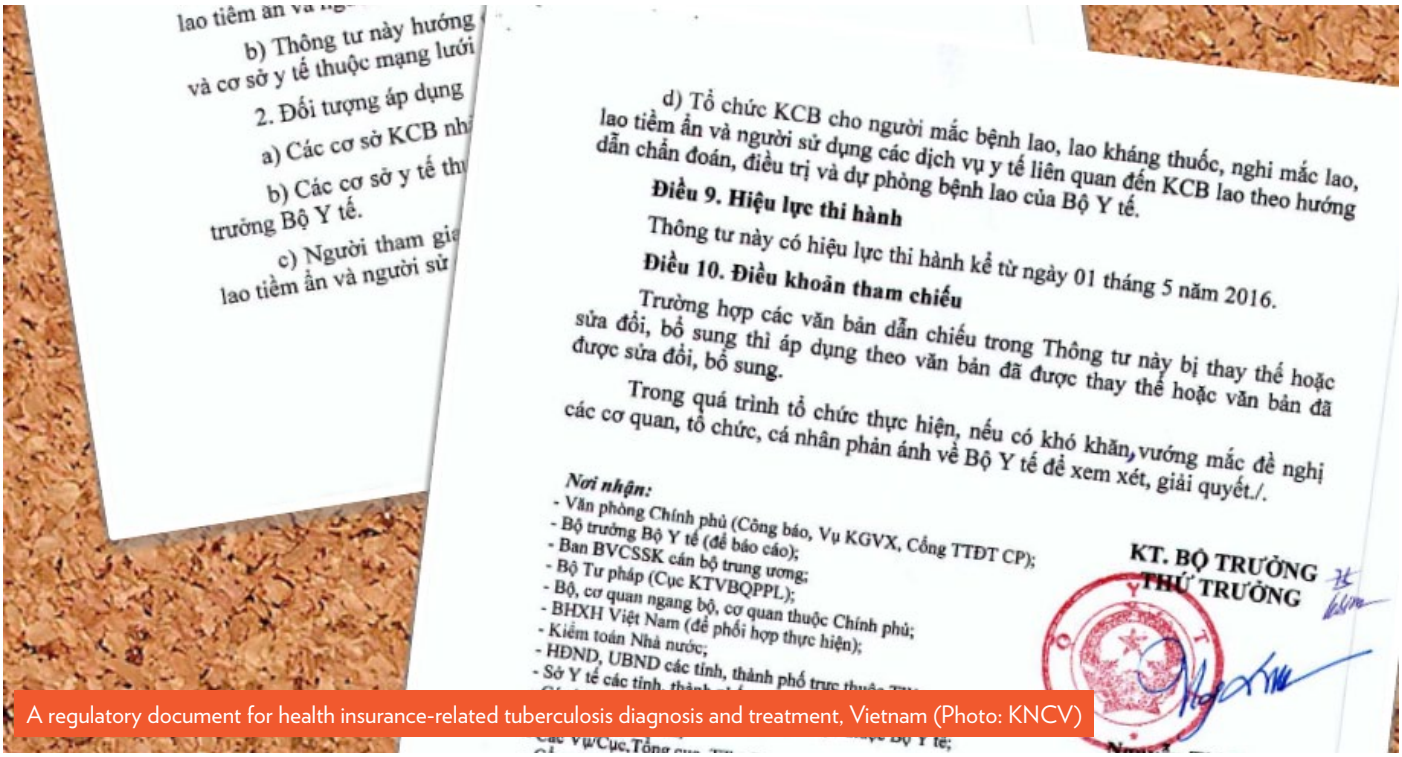
CTB-Vietnam is led by KNCV and works closely with WHO as a collaborating partner. The overall strategy of CTB in Vietnam is to develop, pilot and evaluate TB control innovations that are planned under the NSP (2015-2020), in close collaboration with the NTP, the USAID mission and partners. The project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

Xpert implementation and rollout - CTB has been providing technical support to the NTP in the procurement of extended warranty packages for 28 Xpert machines, 12 modules & one central processing unit for in-country stock under the GF NFM 2015 grant; and providing TA in the procurement of 20 new machines and 50,000 Xpert MTB/RIF cartridges under the GF NFM 2016 grant covering all 63 provinces. The NTP/GF NFM procurement plan for Xpert is ready to be submitted to the MoH for final approval before ordering.

BDQ introduction - The new TB drug BDQ has been introduced in the country since November 2015. As of March 31, 2016, a cumulative total of 25 pre-/XDR-TB patients in three pilot provinces have been enrolled on a BDQ-containing treatment regimen.

Improved political commitment and leadership - A regulatory document for sustained funding for TB has been issued. The NTP is in a transitional period, during which financing for TB control is being shifted from being a vertical program to one supported by the national health insurance mechanism. To ensure the provision of TB diagnosis and treatment for patients, CTB provided financial and technical support to the MoH to do a national assessment and develop a circular to instruct the provision of health insurance for TB diagnosis and treatment. The circular No. 4/2016/TT-BYT on regulations on medical examination and treatment, and payment of health insurance-related TB diagnosis and treatment was issued on February, 26, 2016 and will be effective from May 1, 2016. The circular stated health insurance will cover TB diagnosis, treatment and preventive treatment. It allows patients with presumptive TB to be referred from commune health posts to provincial TB hospitals, bypassing district health centers, with the benefit of health insurance reimbursement. This can help to reduce the waiting time for the case of smear-negative pulmonary TB and extra-pulmonary TB, which is currently only diagnosed at province level upward. The circular also covers diagnosis and treatment including SLD for DR-TB.

Improved TB-IC measures in district health facilities with TB-HIV integrated services - CTB provided TA to Binh Dinh TB and Lung Disease Hospital in the development of the layout designs of the new MDR-TB departments. The layout designs have been finalized and submitted to Provincial Department of Health for financial support. TB-IC facility assessments have been conducted in seven districts with TB-HIV integrated services among five provinces selected by the MoH. The TB-IC improvement plans have been developed by the staff at the District Health Center/District General Hospital and reviewed by the staff at Provincial TB Hospital and Provincial HIV/AIDS Centers and CTB staff, and are ready for implementation beginning next quarter.


lao tiêm ân và
b) Thông tư này hướng
và cơ sở y tế thuộc mạng lưới
2. Đối tượng áp dụng
a) Các cơ sở KCB nh
b) Các cơ sở y tế th
trưởng Bộ Y tế.
c) Người tham gi
lao tiềm ẩn và người sử

d) Tổ chức KCB cho người mắc bệnh lao, lao kháng thuốc, nghi mắc lao, lao tiềm ẩn và người sử dụng các dịch vụ y tế liên quan đến KCB lao theo hướng dẫn chẩn đoán, điều trị và dự phòng bệnh lao của Bộ Y tế.

Điều 9. Hiệu lực thi hành

Thông tư này có hiệu lực thi hành kể từ ngày 01 tháng 5 năm 2016.

Điều 10. Điều khoản tham chiếu

Trường hợp các văn bản dẫn chiếu trong Thông tư này bị thay thế hoặc sửa đổi, bổ sung thì áp dụng theo văn bản đã được thay thế hoặc văn bản đã được sửa đổi, bổ sung.

Trong quá trình tổ chức thực hiện, nếu có khó khăn, vướng mắc đề nghị các cơ quan, tổ chức, cá nhân phản ánh về Bộ Y tế để xem xét, giải quyết./.

Nơi nhận:
- Văn phòng Chính phủ (Công báo, Vụ KGVX, Cổng TTĐT CP);
- Bộ trưởng Bộ Y tế (để báo cáo);
- Ban BVCSSK cán bộ trung ương;
- Bộ Tư pháp (Cục KTVBQPPL);
- Bộ, cơ quan ngang bộ, cơ quan thuộc Chính phủ;
- BHXH Việt Nam (để phối hợp thực hiện);
- Kiểm toán Nhà nước;
- HĐND, UBND các tỉnh, thành phố trực thuộc
- Sở Y tế các tỉnh, thành

KT. BỘ TRƯỞNG
THỨ TRƯỞNG

A regulatory document for health insurance-related tuberculosis diagnosis and treatment, 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.

Media engagement through a TB mentorship program - CTB successfully engaged the media through a TB mentorship program targeting eight journalists (6F/2M), and an advocacy workshop targeting 19 journalists (11F/8M). The expected outcome is to strengthen media coverage on TB issues, which will result in communities being empowered to demand quality patient centred care and to participate in TB interventions. By the end of this quarter, 15 print and electronic media articles on TB were published. The articles focused on experiences of patients diagnosed with drug-resistant TB and successfully treated as well as programme updates on childhood TB and TB-diabetes. Two radio programs focusing on the transmission and prevention of TB were broadcast.

Childhood TB intervention package - A pilot comprehensive childhood TB intervention package was launched in Makoni District of Manicaland province. A training manual was developed and used to train 98 HCWs (50F/48M). The HCWs were trained in childhood TB prevention, diagnosis, treatment and care at the different levels of the health delivery system. A post-training support visit was conducted to gather baseline data, which showed that all the 12 high-volume sites visited did not have SOPs and IPT guidelines. Within these sites, only 4% of notified TB cases (6/153) were among children (0-14 years of age). This is far below the national average of children (0-14 years of age) making up to 8% of notified TB cases, and the WHO recommended target of 15%. This baseline data provides site specific implementation status of childhood TB against which the pilot outcome will be measured to inform scale-up in Year 3.

Improved political commitment and leadership - From an initial 14 signatories to the Barcelona Declaration in August 2015, the number of parliamentarians who signed the declaration rose to 115 by March 2016 out of a possible 350 Parliamentarians in Zimbabwe. It is envisaged that the continued parliamentary engagement of the Zimbabwean legislators through CTB support will result in increased domestic funding for TB specifically from the national budget from the Ministry of Finance and the National AIDS Trust Fund.

TB data recording and reporting - CTB supported five trainings on the District Health Information Software Version 2 (DHIS2) targeting HCWs from eight rural provinces, three major cities including personnel from the uniformed forces (Zimbabwe Defense Forces, Zimbabwe Prisons Services and Zimbabwe Republic Police). A total of 185 HCWs (58F/127M; provincial managers, TB Coordinators, Health Information Officers, TB Focal persons, the NTP and CTB staff). The districts have started entering health facility data dating back to January 2015. It is envisaged that once the backlog is cleared, there will be timely reporting of facility data for decision making. For the period of October–December 2015, 938/1,780 (53%) health facilities have had their data entered into DHIS2 by the end of this quarter.

TB Drug Resistance Survey (TB-DRS) - Notable progress was observed in the nationwide TB-DRS supported through CTB. Recruitment of study participants started in August 2015 and as of March 31 2016, 741/1,625 (46%) of the study population had been enrolled into the survey. A mid-term review by CTB on survey implementation was conducted from March 7-11, which highlighted several strengths including: adherence to the survey protocol, timeliness of scheduled activities, knowledgeable and well-trained staff implementing the TB-DRS, uninterrupted AFB microscopy services and survey consumables and commodities, as well as TB-DRS results linked to patient care (i.e. access to treatment). The electronic database has been updated and the data were highly consistent. Data collection is expected to be completed in August 2016 and a preliminary report is expected by December 2016, the final report will be disseminated in 2017.

A TB/HIV patient takes her TB treatment with the assistance of a TB nurse, Rusape District Hospital, Zimbabwe (Photo: Paidamoyo Magaya)

East Africa Region Project

CTB East Africa Region (EAR) Project is implemented by KNCV as the lead and with 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, and implementation of the planned activities has begun.

Cross-border initiative - Two of the three border counties on the Kenyan side (i.e. Garissa and Marsabit) that are earmarked for cross-border TB care and prevention activities, were engaged during the CTB cross-border team meeting. Attendees from the respective county health teams included the county health directors, the TB coordinators, an EPI coordinator and a surveillance coordinator. The teams were taken through the objectives and the scope of the project. The meeting resulted in concurrence and support to the border facilities workshop and agreements to the dates of this workshop (to take place in the next quarter). The county TB coordinator was also incorporated into the existing cross-border committee. Thirty border health facilities were identified in the three counties on the Kenyan side; these are the facilities close to the borders in the respective counties and those that serve refugee camps.

Biosafety measures in laboratories ensured - Translation of the SOPs on TB-IC in the Somali language was finalized based on the comments made by the Somali laboratory teams. Printing and distribution of these SOPs is planned for the next quarter.

Well-functioning procurement and supply chain management system in place - The team finalized the concept and design of the ECSA TB commodities supply chain portal, which contained two major parts: a commodities dashboard and a virtual resources center. Tanzania was enrolled in the portal and two more countries will be enrolled to start using the portal to coordinate and improve TB commodity supplies.

A TA mission was conducted to Tanzania with the key focus of collecting TB program reports, policies, and training materials relevant for TB commodities supply chain management. In addition, various stock status data and pipeline information were collected, analyzed, and were put into the regional TB commodities supply chain portal.

Qualified staff available and supportive supervisory systems in place - An inventory of existing and potential training institutions for the training corridor in the region has been developed. This activity will be finalized during the regional NTP meeting. In addition, a contract was signed with the Rwanda based Center of Excellence (CoE) to support the CoE's capacity strengthening efforts. KNCV also selected a consultancy firm to develop a business plan for the CoE in line with its objectives to become a regional center of excellence. The contract will be signed next quarter.

People crossing River Dawa from Ethiopia into Kenya (Photo: Victor Ombeka)

Core Projects

CTB is working on priority projects that have implications for TB prevention and control globally. Achievements from the GF Hub are captured on page 8. The Transmission, Prevention and Catastrophic Cost projects did not have any major achievements to report on this quarter. Progress and achievements from January-March 2016 are summarized below for the three other core projects.

Bedaquiline Introduction

The BDQ core coordination project is supporting the introduction of BDQ in CTB countries. This quarter, a CTB BDQ core project workshop took place in The Hague at the end of March. The purpose was to ensure a coordinated, efficient and effective approach towards the rapid introduction of BDQ in CTB project countries, making best use of resources, the joint experiences of coalition partners and the upcoming CTB Year 3 planning cycle. A document mapping the status of eight priority countries in relation to critical implementation steps and timelines for the introduction of BDQ was produced.

A final draft implementation protocol for the Evaluation of the feasibility, effectiveness and safety of the MDR/XDR-TB Patient Triaging Approach has been developed. The underlying CTB approach is the early triage of TB patients: using rapid (preferably molecular) methods. The quick triaging of patients ("the right diagnosis") will allow for fast and appropriate treatment initiation ("the right treatment") with first line drugs, a shorter regimen for uncomplicated MDR-TB and regimens containing new drugs (e.g., BDQ) for those patients with additional resistance to fluoroquinolones and/or second line injectables, or with other indications (such as intolerance to other second line drugs). The generic triage algorithm will need to be adjusted to fit the local epidemiological and technological situations. Routine/standard indicators are being incorporated into the protocol, which will be finalized in April/May 2016.

The team has compiled an inventory of available training and supportive materials, which will be completed in Quarter 3, with user-friendly access via the most relevant website. Training for CTB country teams is planned for June 2016 prior to the Country Director's Meeting in The Hague to meet the identified need of capacity building on the introduction of new drugs.

Progress in countries since project approval:

- **Ukraine:** All the critical steps for the introduction of BDQ have been completed, with expected enrolment of first patients on BDQ-containing regimens in October 2016. BDQ will be ordered by the NTP and supplied to the country via a humanitarian mechanism, pending in-country drug registration.
- **Tajikistan:** Optimized diagnostic algorithms and clinical protocols for the treatment of non-complicated MDR-TB cases and pre-XDR-TB and XDR-TB patients with new drugs and shortened regimens is being finalized and awaits subsequent endorsement by the NTP.
- **Vietnam:** Treatment of patients on BDQ started in December 2015; expected to have 80 patients on treatment by the end of September 2016.
- **Kyrgyzstan:** All critical steps for the introduction of BDQ have been completed, with expected enrolment of first patients on BDQ-containing regimens in August 2016. BDQ was ordered by the NTP/UNDP and will be supplied to the country via a waiver mechanism, pending in-country drug registration.
- **Indonesia:** Treatment of patients on BDQ started in October 2015. It is expected to have 75 patients on treatment by the end of September 2016.
- **India:** Guidelines for the introduction of BDQ under the NTP were published in February. The initial six sites are being supported by CTB. The first patients are expected to be enrolled on treatment in May 2016 (the initial 600 patient courses of BDQ donated by Janssen directly to the Government of India).

A work plan to support the programmatic introduction of BDQ in Kazakhstan (covering April-September 2016) has been submitted for approval to provide technical assistance to both the national and regional levels of the NTP in three main activities:

1. Programmatic preparations for implementation of new drugs
2. Build programmatic capacity for initial scale-up of BDQ treatment, including PV/aDSM in East-Kazakhstan, and national roll-out
3. Systematic M&E for implementation of BDQ.

Stigma

The Stigma Project aims to develop valid, feasible, and efficient methods to measure TB stigma within the community, patient, and health worker populations. The project is preparing for a set of Stigma Project Meetings in May: a measurement meeting from May 17-18 (26 invitees) and a stigma reduction meeting (56 invitees) on May 19. A positive response to the two meetings has resulted in a high level of participation by academics, donors, partners and stakeholders who are leveraging

their own funds to attend. There is interest from WHO to have a validated TB stigma index that can be included as part of the measurement framework for the END TB strategy. There is also interest from GF to have a TB stigma index to use as part of their key performance indicators for their investments in anti-discrimination efforts.

Key to the stigma measurement meeting will be the presentation and discussion of results from the various studies/reviews the project has been conducting. Preliminary analysis of the anticipated stigma surveys has been completed, which indicate a high degree of variation within and among countries, and few sociodemographic predictors. CTB countries with a very high general population stigma level include Ukraine, Malawi, Zimbabwe and Namibia. The most interesting preliminary finding is that the greater the proportion of people who are aware of the airborne route of TB transmission, the lower the proportion that would disclose that a family member has TB. That has important (and possibly counterintuitive) implications for anti-stigma campaigns that focus on increasing understanding of TB etiology to decrease stigma.

Data extraction for the systematic literature review analysis has also been completed. Only seven studies were eligible for final inclusion. Three are among TB patients, two among HCWs and two targeted the general population. These data have been abstracted, graded, and a report is expected in May. The immediate implication of the lack of well-measured intervention studies identified in this review is that it will be challenging to provide guidance to CTB countries on what works to reduce stigma in the short term.

During this quarter a draft conceptual framework and HCW TB Stigma scale was developed by the project team. In Quarter 3, the draft scale will be pre-tested and validated in Nigeria by PharmAccess as part of a project funded by a different donor (Dutch Ministry of Foreign Affairs). Once a valid measurement tool is developed, it can be incorporated into CTB Year 3 country work plans.

In 2015, the Bill and Melinda Gates Foundation and USAID undertook an analysis of the role of prevalence surveys in TB control. KNCV's Eveline Klinkenberg provided expert support to this endeavor, having participated in multiple prevalence survey efforts. During this reporting period the global prevalence assessment report was completed and formally submitted to USAID on March 17. The report will be presented during the Global Task Force meeting in April.

UN Special Envoy for Tuberculosis

The goal of the UN Special Envoy (UNSE) for Tuberculosis, Dr. Eric Goosby, 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. During this period the project refined the strategy for the UNSE focusing on five principal objectives: i) Support efforts to secure international funding (Global Fund, other donor countries, following G7/G20 agenda etc.); ii) Support high burden country engagement; iii) Use Anti-Microbial Resistance (AMR) agenda to secure TB research dollars; iv) Write a Lancet Commission on TB, and v) Participate in key fora (HLM HIV, TB 2016, The Union, etc.). Highlights from this quarter are presented below:

The project team continues to engage with the AMR Review team (UK) regarding AMR as a source for new TB R&D funding. Editorial comments were provided for their three latest publications with the goal of keeping TB on the AMR agenda and ensuring that their proposals support the needs of TB.

The team is planning for an advocacy trip to Nigeria (May 16-19), coordinating with various stakeholders to understand the TB situation in Nigeria and to optimize the impact of the meeting. A trip is also planned for Australia/Papua New Guinea (June 27) to encourage the Australian government to commit to the GF replenishment and urge them to take a leadership role in TB in Asia.

In preparation for the UN High Level Meeting on HIV/AIDS, the UNSE participated in initial meetings and drafted an advocacy plan and key messages on TB. Dr. Goosby met with various advocacy groups to try to ensure participation in the civil society consultation (April 6). The aim is that the language of the declaration provides clear support to essential strategies necessary to reduce mortality in TB/HIV co-infected patients.

The project team is coordinating a meeting with the head of UNICEF (Dr. Anthony Lake) to explore how the organization can more broadly engage in pediatric TB diagnosis and treatment. The team supported UNICEF/TB Alliance in the launch of the "Louder than TB" communications campaign.

The UNSE has prepared a concept note for review by the Lancet Commission. Numerous press releases and articles were published this quarter related to the release of the National Action Plan for Combating MDR-TB and World TB Day. All of these publications can be found on the newly launched UNSE website: http://www.tbenvoy.org/news/.

New Publications

East Africa Brochure
http://www.challengetb.org/publications/CTB_East_Africa_Brochure.pdf

Challenge TB Newsletter
http://www.challengetb.org/publications/newsletters/Challenge_TB_Newsletter.pdf

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

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

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

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

GxAlert Implementation Strategy 2016 (Archive ZIP)
A guide to the implementation of GxAlert or other connectivity devices that are capable of linking diagnostic results to patient records. GxAlert allows for fast feedback of laboratory results to patients, referring clinicians, treatment centers, Ministry of Health (MoH) staff and the country's existing health information systems.

http://www.challengetb.org/publications/tools/lab/GxAlert_Implementation_Tool_Box_Version_1_2016.zip

Small scale miners in Geita district queuing for TB screening on World TB day, Tanzania (Photo: Patrick Magasa)

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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