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**TB CARE I**

# **TB CARE I - Zambia**

**Year 3**

**Annual Report**

**October 1, 2012 –September 30, 2013**

**October 30, 2013**

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## List of Abbreviations

ACSM	Advocacy Communication and Social Mobilization
CDC	Centers for Disease Control and Prevention
CIDRZ	Centre for Infectious Disease Research
DCMO	District Community Medical Office
EQA	External Quality Assessment
KNCV	KNCV Tuberculosis Foundation
MDR-TB	Multi-drug resistant Tuberculosis
MoH	Ministry of Health
MCDMCH	Ministry of Community Development Mother & Child Health
MSH	Management Sciences for Health
NRL	National Reference Laboratory
NTP	National TB control Program
PEPFAR	President's Emergency Fund for AIDS Relief
PITC	Provider Initiated Testing and Counselling
PMDT	Programmatic management of drug resistant TB
PMO	Provincial Medical Office
SOPs	Standard Operating Procedures
TB CARE I	Tuberculosis CARE
TB IC	Tuberculosis Infection Control
TWG	Technical Working Group
USAID	United States Agency for International Development
WHO	World Health Organization

## **Executive Summary**

TB CARE I Zambia project is a United States Agency for International Development (USAID) cooperative agreement with the KNCV Tuberculosis Foundation. The project has provided support to the Ministry of Health (MoH), the Ministry of Community Development Mother and Child Health (MCDMCDH) in key focus areas of TB control and TB/HIV collaborative activities during the third year of project implementation. FHI360 led the implementation of project activities, partnering with KNCV Tuberculosis Foundation, Management Sciences for Health (MSH) and the World Health Organization (WHO). TB CARE I Zambia also expanded the project support to the National TB Control Program NTP to two new provinces in the country called Lusaka and Southern provinces. TB CARE I also collaborated with the Centre for Infectious Diseases Research in Zambia to implement activities in four of the ten provinces. For this fiscal year, the project received \$4,396,000 from the United States Agency for International Development (USAID), and additional PEPFAR funding in the amount of \$1,957,526 for the WHO 3Is. TB CARE I also carried over funds from year two of project implementation to support the procurement of equipment and commodities for Zambia's first national TB prevalence survey.

TB CARE I achieved the following key results by technical area:

### **Universal Access:**

#### **Technical outcome 1.2: increased quality of TB services delivered among all care providers**

##### **Outcome indicator 1.2.7 Prisons with DOTS**

TB CARE I provided support to the NTP for DOTS strengthening and enhancement through training of 992 people that included a population not reached before of 110 prison service providers, 50 prison inmates (peer educators) and 127 traditional healers. Prior to the training of prisoners, baseline assessments of TB and HIV services provided in four prisons were conducted. The DOTS trainings provided increased knowledge and skills in the diverse targeted populations and service sites. This will enhance the quality of TB control activities among these care providers.

TB CARE I also contributed to the development of a national Advocacy Communication and Social Mobilization (ACSM) strategy, providing technical support through an ACSM consultant from the KNCV Tuberculosis Foundation in May 2013. The ACSM strategy is the key document that will enhance the intersection of health services from the health service providers to the community and civil society.

### **TB Infection Control**

#### **Expected Outcome 3.2: Scaled-up implementation of TB IC strategies**

##### **Outcome indicator: 3.2.2 Facilities implementing TB IC measures with TB CARE I support**

35 facilities received support in developing TB IC plans out of a target of 28 for this year. Among these facilities were six prisons including two from the sites supported by CIDRZ. These IC plans have been integrated into the 2013-2014 annual action planning cycle for these activities to receive funding from government. 742 health care workers (of which 74 were prison officers) from these facilities received orientation in TB infection control this year.

### **TB/HIV:**

#### **Technical outcome 5.2: improved diagnosis of TB/HIV co-infection**

##### **Outcome indicator: 5.3.1 HIV-positive TB patients started or continued on antiretroviral therapy (ART)**

TB CARE I contributed to improved diagnosis of TB/HIV co-infection through the support towards establishment of ART services in TB clinics. The project supported two female technical staff from the MCDMCH Kitwe and Mkushi district medical offices to attend the 1st International TB/HIV course focusing on the "TB/HIV ONE STOP SHOP" concept in Kigali, Rwanda from July 22-26, 2013. Upon their return, they have spearheaded the establishment of ART services in TB clinics. They have provided orientation of three district TB/HIV/Leprosy focal persons from Mpongwe, Kasama and Kawambwa districts who plan to implement this concept in their respective district facilities.

The project enhanced collaborative TB/HIV activities through the implementation of the WHO 3 Is Initiative, a three year project that focusses on intensified case finding, infection control and isoniazid preventive therapy. Under the WHO 3 Is initiative the project installed seven GeneXpert machines in five districts of the two target provinces, conducted facility baseline assessments in all 18 target sites, and trained health care workers, prison service providers and community volunteers who will lead the ICF activities. TB diagnosis and rifampicin resistance with GeneXpert technology will commence in October 2013 and the project will collect data using the revised reporting and recording tools that are under final review by the NTP.

### **Monitoring and Evaluation, Surveillance and Operations Research**

#### **Technical outcome 7.2: Improved capacity of NTPs to analyze and use quality data for the management of the TB program**

**Outcome indicator:** National prevalence survey conducted to estimate prevalence of bacteriological confirmed pulmonary TB

TB CARE I provided support for the first national prevalence survey that began in September 2013. The project procured equipment and commodities for the survey, including three Mycobacterium Growth Indicator Tube (MGIT) machines to support liquid culture in the three reference laboratories, and digitalization of three mobile x-ray machines.

The project hosted 50 participants to the national TB/HIV Leprosy data review meeting held in September 2013. The NTP provided updates on the national TB control activities and provincial representatives shared data on TB/HIV activities and patient outcomes.

## Introduction

The Ministry of Health (MoH) in Zambia has been restructured into two ministries. The MoH and the Ministry of Community Development Mother and Child Health (MCDMCH). The MoH has provided national and provincial level support while the Ministry of Community Development Mother and Child Health (MCDMCH) has focused on district to community level care. TB CARE I has partnered with the two ministries to support the National TB Control Program (NTP) activities from national to community level.

The TB CARE I partnership in Zambia is led by FHI360. The other in-country partners are the World Health Organization, Management Sciences for Health and KNCV Tuberculosis Foundation. The project total obligation to date is \$17,373,000 and the staff members under the project have expanded from twenty in 2012 to forty this year. The project implementation expanded support to two more provinces, Lusaka and Southern provinces for implementation of the WHO 3 Is project that refers to intensified case finding, infection control and isoniazid preventive therapy. TB CARE I partnered with the Centre for Infectious Diseases in Zambia (CIDRZ) to support initiation of WHO 3 Is activities at 39 facilities in Central Copperbelt, Lusaka and Southern provinces. TB CARE I has also been instrumental in the implementation of key components of the National TB Strategic Plan including the development of key documents in the prevalence survey, procurement of key equipment and field commodities, provision of technical assistance in the development of the data management unit and the survey field implementation activities; the initiation of a national laboratory referral system for diagnosis of drug resistant TB by sputum culture and DST; the development of national guidelines for the novel Xpert MTB/RIF and multi-drug resistant tuberculosis and the development of a national Advocacy Communication and Social Mobilization (ACSM) strategy.

TB CARE I has also provided support to two core projects this year. The Ndola District TB infection control demonstration project focused on the demonstration of safe work practices in 13 infection control interventions in fifteen health facilities and communities in Ndola. The other core project called the Patient Centered Approach (PCA) project focused on the patient's perspective on health service delivery. PCA seeks to enhance patient involvement in their care; it includes a package of tools that were developed under the Tuberculosis Control Assistance Project (TB CAP) a predecessor to TB CARE I also funded by USAID. PCA was implemented in three districts in the North Western province.

In this third year of project implementation, some health (including TB) services previously housed under the Ministry of Health (MoH) were managed by two ministries, with the Ministry of Health providing support to national and provincial level activities and the Ministry of Community Development, Mother and Child Health (MCDMCH) providing support at district, facility and community level. As a result of this restructuration, staff from the National Tuberculosis Control Program (NTP) moved to the MCDMCH. TB CARE I is working with both ministries to support TB control efforts at national, provincial, district, community and facility levels in the Central, Copperbelt, Luapula, Muchinga, Northern and North Western provinces.

## Core Indicators

TB CARE I has seven core indicators that the program as a whole is working to improve across all countries. Table 1 summarizes the core indicator results across the life of the project for TB CARE I Zambia

**Table 1: TB CARE I core indicator results for Zambia**

Indicators	2010 (Baseline)	2011 (Year 1)	2012 (Year 2)
<b>C1.</b> Number of cases notified (all forms)	44,152	48,594	45,269
<b>C2.</b> Number of cases notified (new confirmed)	12,655	13,671	12,645
<b>C3.</b> Case Detection Rate (all forms)	73	73	70
<b>C4.</b> Number (and percent) of TB cases among HCWs	u	u	U
<b>C5.</b> Treatment Success Rate of confirmed cases	88	82	88
<b>C6.</b> Number of MDR cases diagnosed	118	93	70
<b>C7.</b> Number of MDR cases put on treatment		48	52

Zambia has relied on sputum smear microscopy for TB diagnosis with challenges faced due to the limited number of diagnostic sites (about 213 sites for about 1,500 health facilities in the country in 2012). These diagnostic facilities may not always have laboratory commodities and this may have impact on the number of cases notified and the case detection rate.

The number of TB cases among Health Care Workers (HCWs) cannot be determined because screening of HCWs is not routinely conducted in Zambia. TB CARE I conducted a pilot study on the feasibility and acceptance of TB screening among health care workers in fifteen health facilities under the Ndola District TB infection control demonstration project, as part of the TB Infection control measures. 382 HCWs were screened by the end of the year. This activity was one of the thirteen interventions implemented in the Ndola district TB IC demonstration project, a core project to provide safe work practices to reduce TB transmission among people living with HIV (PLHIV), health care workers, surrounding communities and households.

## Summary of Project Indicators and Results

**Table 2: TB CARE I-Zambia Year 3 indicators and results**

Expected Outcomes	Outcome Indicators	Indicator Definition	Baseline or Y2 (timeframe)	Target	Result	Comments
				Y3	Y3	
<b>Universal Access</b>						
1.1.2 Increased quality of TB services delivered among all care providers (Supply)	1.2.1 Private providers collaborating with the NTP	Number of private providers collaborating with the NTP	0 (Year 2)	25	0	PPM activities were not implemented this year.
	1.2.3 Status of PPM implementation	The status of the Public-Private Mix (PPM)	1 (Year 2)	3	1	A PPM survey was conducted in September 2012 by the NTP in three provinces, Lusaka, Central and Copper belt.
	1.2.5 Childhood TB approach implemented	Childhood TB is an important component of the NTP strategy. The level to which childhood TB is addressed in the NTP Strategy	2	3	3	The NTP reports for notified and outcome cases is age disaggregated to monitor Childhood TB
	1.2.7 Prisons with DOTS	The coverage of prisons providing DOTS services. Prisons should regularly diagnose and refer suspects and should put patients on treatment in order to be qualified.	0	4	0	TB CARE I conducted baseline assessment of TB and HIV services in three prison sites and provided DOTS training for prison service providers and prison peers in these facilities. DOTS activities will be implemented in the next year.
<b>Laboratories</b>						
2.1 Ensured capacity, availability and quality of laboratory testing to support the	2.1.1 A national strategic plan developed and implemented for providing the TB	A national laboratory plan has been developed that addresses strategic objectives on how the	0	3	0	Current NTP National strategic plan for 2010-2015 is under implementation. A laboratory section is

diagnosis and monitoring of TB patients	laboratory services needed for patient diagnosis and monitoring, and to support the NTP	country will meet the national requirements for quality TB diagnostic services.				included in the Strategic plan. However, the country does not have a separate national laboratory plan
	2.1.2 Laboratories with working internal and external quality assurance programs for smear microscopy and culture/DST	Laboratories have successfully established a mechanism for performing internal quality control for smear microscopy and culture /DST (e.g. performing control samples etc0 and are enrolled in EQA program, which is supervised by higher-level laboratory	<b>National</b> 64%	<b>National</b> 80%	<b><u>National</u></b>  <b><u>TB CARE I</u></b>  100% (135/135)	TB CARE I has provided quality assurance with a newly developed tool, to the 135 diagnostic centers that participated in EQA this year. The project is not able to establish the quality assurance from the non-TB CARE I supported sites
	2.1.3 Laboratories demonstrating acceptable EQA performance	The percent of laboratories enrolled in EQA for smear microscopy and/or culture/DST that successfully passed EQA in the last reporting period.	80%	90%	71% (?/135)	Following expansion of EQA activities to health centre level facilities, some facilities did not provide required slides for blinded rechecking during the second quarter of project support as required. This affected the resulting percentage of laboratories enrolled in EQA. These factors might explain in part the apparent drop in the proportion of laboratories with acceptable EQA performance.

2.2 Ensured the availability and quality of technical assistance and services	2.2.2 Technical assistance visits from an SRL conducted	A selected SRL conducts TA visits to national reference laboratories.	Yes	Yes	No	The SRL from Uganda is planning to provide technical support under APA 4.
2.3 Ensured optimal use of new approaches for laboratory confirmation of TB and incorporation of these approaches in national strategic laboratory plans	2.3.1 Diagnostic sites offering advanced technologies for TB or drug-resistant TB	Number of diagnostic sites, in which GeneXpert MTB/RIF, HAIN MTBDRplus or liquid culture/DST are implemented and routinely used for diagnosis, stratified by testing.	<b><u>NATIONAL</u></b> TB culture (6) First line DST (6) Second-line DST (1) HAIN MTBDRplus (2) GeneXpert (1) LED microscopy (12)	<b><u>NATIONAL</u></b> TB culture (6) First line DST (6) Second-line DST (2) HAIN MTBDRplus (3) GeneXpert (8) LED microscopy (50)  <b><u>TB CARE I</u></b> GeneXpert (5) LED microscopy (25) Liquid culture (3)	<b><u>NATIONAL</u></b> TB culture (6) First line DST (6) Second-line DST (0) HAIN MTBDRplus (3) GeneXpert (8) LED microscopy (45)  <b><u>TB CARE I</u></b> GeneXpert (7) LED microscopy (25) Liquid culture (3) TB culture (1) First line DST (1) Second-line DST (1) HAIN MTBDRplus (0)	There are three public culture and 3 private culture facilities. All the facilities perform drug susceptibility testing (DST) for first line drugs.  Hain test is performed in the 3 private facilities.

	2.3.2 Rapid tests conducted	Number of rapid tests conducted using GeneXpert MTB/RIF	n/a	12,130	Not yet available	Seven GeneXpert machines have been installed by August 2013 in TB CARE I, WHO 3 Is supported facilities and these facilities will provide diagnosis with GeneXpert in the next year. The WHO 3Is partners are still awaiting the release of the reporting and recording tools from the NTP to support the reporting process with the new diagnostic tool.
	2.3.3 Patients diagnosed with GeneXpert	The number and percent of patients diagnosed using GeneXpert	na	758	Not yet available	
<b>Infection Control</b>						
3.2 Scaled-up implementation of TB-IC strategies	3.2.2 Facilities implementing TB IC measures with TB CARE support	Facilities that receive support for implementation of TB IC measures through TB CARE I out of the number of facilities that planned to receive support for TB IC implementation.	6	28 ( for this year)	35 (for this year)	The 35 facilities include 29 health facilities and 6 prison sites  Scale up is done according to the national guidelines model and with the tools of the Ndola District TB IC Demonstration project
<b>Programmatic Management of Drug-Resistant TB (PMDT)</b>						
4.1 Improved treatment success of MDR TB	4.1.2 MDR TB patients who are still on treatment and have a sputum culture conversion 6 months after starting MDR-TB treatment	MDR TB patients who are still on treatment and have a sputum culture conversion 6 months after starting MDR-TB treatment. The cohort is patients put on treatment in a calendar year.	u		u	

	4.1.4 A functioning National PMDT coordinating body	National PMDT coordinating body has been established, is recognized by the MOH and is functioning	No	Yes	Yes	The national PMDT sub-committee held meetings this year to update the MDR TB guidelines.
	4.1.5 Number of MDR TB patients diagnosed by GeneXpert	Number of MDR TB patients diagnosed by GeneXpert in TB CARE I areas	0	758	u	TB CARE I installed seven GeneXpert machines in the WHO 3 Is project site. Reports from the WHO 3Is sites will be available in quarter 1 of APA 4
<b>TB/HIV</b>						
5.2 Improved diagnosis of TB/HIV co-infection	5.2.1 HIV-positive patients who were screened for TB in HIV care or treatment settings (%)	<b>Numerator:</b> Number of HIV-positive patients seen at testing and counseling or HIV treatment and care services who were screened for TB symptoms at least once during year. <b>Denominator:</b> Total number of HIV-positive patients seen at HIV testing and counseling or HIV treatment and care services, over the same given time period	u	70% (National target)	u	TB CARE I will support the diagnosis of TB among HIV positive patients with the GeneXpert in the next year in the facilities supporting the WHO 3 Is activities.
	5.2.2 TB patients (new and re-treatment) with an HIV test result recorded in the TB register (%)	<b>Numerator:</b> NTP reports from revised reporting and recording system; WHO report <b>Denominator:</b> Total number of TB patients registered over the same time	83% (2010 Data)	100%	100%	(WHO Global TB Report 2013)

	5.2.3 TB patients (new and re-treatment) recorded as HIV-positive	<b>Numerator:</b> Total number of all TB patients registered over a given time period who are recorded as HIV as HIV positive. <b>Denominator:</b> Total number of TB patients registered over the same time period	65%	n/a	54%	(WHO Global TB Report 2013)
<b>Health System Strengthening</b>						
6.2 TB control components (drug supply and management, laboratories, community care, HRD and M&E) form an integral part of national plans, strategies and service delivery	6.2.1 TB CARE-supported supervisory visits conducted	TB CARE's support of NTP's supervisory activities by comparing the number of planned visits in the TB CARE I work plan(denominator) to what was actually conducted (numerator)		100%	20% (two out of ten planned visits were conducted)	Supervisory visits were conducted in two provinces
	6.2.2 People trained using TB CARE funds	Number of people trained by disaggregated by technical area	115	Total 1,269: Universal access (925), Laboratory (133), infection Control (100), TB/HIV (76), HSS (15) and M&E (20)	Grand Total:992 (608 males and 384 females)  Universal Access: 535 Laboratories :168 TB IC:164 TB/HIV:125	
<b>Monitoring, Evaluation &amp; Surveillance</b>						
7.2 Improved capacity of NTPs to analyze and use	7.2.1 Data quality measured by NTP	Any aspect of data quality has been measured in the last	Yes	Yes	Yes	TB CARE and USAID mission teams supported a data quality assessment visit to

quality data for the management of the TB program		year9internal consistency, timeliness, completeness, accuracy, etc.) at national, intermediate/regional or peripheral levels Yes/No				review records for core indicators. The visit was conducted in February, 2013 in Muchinga Province.
	7.2.2 NTP provides regular feedback from central to intermediate level	NTP prepares and disseminates regular, written and comparative feedback from central to intermediate levels based on analysis of the national surveillance and programmatic data.	Yes	Yes	Yes	
	7.2.3 National prevalence survey conducted to estimate prevalence of bacteriological confirmed pulmonary TB		No	Yes	Yes	The implementation of the first national prevalence survey to estimate prevalence of PTB started in August 2013. TB CARE I investment included procurement of equipment and supplies, digitalization of three x-rays and technical support during the preparation and implementation phases.
7.3 Improved capacity of NTPs to perform operations research	7.3.1 OR studies completed	TB CARE I OR studies completed	0	2	0	Four OR draft protocols were developed but not submitted for ethical review. The project is planning to only implement two of the OR studies in year four.
<b>Drug Supply &amp; Management</b>						
8.1 Ensured nationwide systems	8.1.1 National forecast for the	A National forecast of both first and second	Yes	Yes	Yes	

for a sustainable supply of drugs	next calendar year is available	line TB drugs for the next fiscal year has been conducted				
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## **Universal Access**

### **Key results:**

#### **Trainings in TB DOTS**

TB DOTS trainings were conducted for a total of 992 people that included community volunteers, traditional health providers, prison officers and health care workers. A total of 79 health care workers, 110 prison service providers, 51 prison peer educators, 77 traditional health providers and 319 community volunteers were trained. The project provided training to prison service providers and traditional healers, a unique population which influences access to TB control services in their respective communities

The trainings have provided increased knowledge and skills to implement intensified case finding efforts by community volunteers and active referral of presumptive TB cases by traditional healers.

#### **Challenges:**

The project was not able to conduct the planned activities for childhood TB and Public Private Mix (PPM) DOTS because of the limited staff members under the NTP that were not able to prioritize these activities, following the restructuring of the MoH.

#### **Next steps:**

TB CARE I will engage the provincial TB/Leprosy liaison officers hired with Global Funds to implement the remaining activities and will also receive guidance from the NTP following the finalization of the restructuring process.

#### **WHO 3Is**

TB CARE I partnered with the PEPFAR funded Centre for Infectious Diseases and Research in Zambia, to implement the WHO 3Is initiative under the leadership of the Ministry of Health, HIV/AIDS program and NTP. The WHO 3 Is initiative aims to increase case detection efforts with the GeneXpert technology, enhance patient treatments success, provide TB infection control in HIV care settings, scale up Isoniazid Preventive Therapy, and active referral of co-infected patients for TB treatment. TB CARE I hired staff in 16 positions under the 3Is initiative. These positions included five facility level TB/HIV technical officers, five facility level laboratory officers and a Senior Clinical Care Officer. The TB/HIV technical officers are implementing the WHO 3Is initiative at facility and community level, the facility level laboratory officers will be supporting TB diagnosis using the GeneXpert machines, as part of the intensified case finding efforts under the initiatives. Five GeneXpert machines were also procured and seven were installed under the project to support intensified case finding efforts using the new technology. The 3 Is activities will be focused around this diagnostic tool. Facility level baseline assessments were conducted in 15 facilities and 3 prison sites using the assessment tools developed by local and international TB CARE I, CDC, CIDRZ, USAID and OGAC staff members. These visits provided information on the current level of TB/HIV services being offered. Feedback meetings were held in all the districts and agreements were made on addressing challenges identified during the assessment visits.

A three day workshop was held in August 2013 with TB CARE I, CDC, CIDRZ, USAID and OGAC staff members to review progress made in the first six months of the WHO 3Is implementation including technical support in M&E. In the meeting the M&E framework was reviewed and agreed upon by all the partners and a set of indicators that will be used to evaluate the project impact were finalized.

Agreement was also made on the approaches to data collection, custody and sharing of data among partners and stakeholders.



*Dr. Albert Mwango (The National ART Coordinator – Ministry of Health) giving an overview on the first six months of the WHO 3 Is activities*



Officer, Bernard Sichinga providing orientation to WHO 3Is new technical and laboratory staff in March 2013 M&E



GeneXpert installation at Kabwe General Hospital. TB CARE I Laboratory Technical Officer, Robertson Chibumba, conducting the installation

**Challenges:**

- Release of ICF and IPT guidelines, reporting and recording tools by the Ministry of Health and the NTP is still pending.
- Lack of transportation for moving samples to the hubs for GeneXpert testing.

**Next steps:**

TB CARE I has communicated to the MCDMCH administrators to provide the key documents that are needed to implement the ICF and IPT activities and will begin testing of HIV positive patients with presumptive TB next year with the GeneXpert technology. TB CARE will also collaborate with CIDRZ to provide a data collection and monitoring system for all the facilities participating in the WHO 3 Is.

**Advocacy Communication and Social Mobilization (ACSM)**

The NTP led the development of a national ACSM strategy and TB CARE I was a key partner providing funding and technical support. The ACSM strategy provides an intersection for delivery of health care services between health service providers, the community and civil society. The ACSM strategy is intended to achieve the following outcomes:

- Patient centered quality services provided by public and private health facilities as well as through Civil Society organizations (NGOs, CBOs)
- Engaged communities to find solutions to the challenges the TB control program is facing, including strengthening early case finding, reduced stigma and improved adherence to treatment.
- Effective communication strategies for individual behavior change and social change to support the process of community engagement and improve the quality of services.
- Active Stop TB partnerships at different levels (national, regional, district) and in different settings (community, hospitals, prisons) for effective planning and implementation, building ownership and through advocacy activities working towards sustainability of people centered TB control.



*Participants at the ACSM Workshop in Ndola (Month, Day, Year)*

**Patients Centered Approach (PCA):**

The TB CARE I successfully completed the implementation of the PCA activities in three districts in North Western province this year. During the implementation period, TB CARE I sponsored two investigators to a PCA regional conference organized by KNCV and held in Mozambique from March 4-8, 2013. A country presentation was made on the baseline data and implementation process. The project principal investigators also successfully submitted two abstracts to the Union conference that will be shared as poster presentations—one presentation is titled Perceived quality of health service among Tuberculosis patients in Zambia and the second one is titled An Exploratory Study on Stigma Associated with Tuberculosis in a Zambian Adult Population.

The PCA tools highlighted the needs and rights of patients and expectations from health care providers including health seeking behaviors, provision of timely TB diagnostic and treatment services, community level sensitization and treatment adherence support. The PCA also highlighted the factors that lead to stigmatization of TB patients, as ignorance, cultural beliefs and the association of TB with HIV as shown in the poster below titled “.An exploratory study on Stigma associated with Tuberculosis in a Zambian Adult population.

# An exploratory study on Stigma associated with Tuberculosis in a Zambian Adult population

J.Anitha Menon<sup>1</sup>, Seraphine Kabanje<sup>2</sup>, Henry Phiri<sup>2</sup>, Rose Masilani<sup>2</sup>, Lielzel Wolmarans<sup>3</sup>, Ernest Kakoma<sup>2</sup>, & Bernard Sichinga<sup>2</sup>

<sup>1</sup> Department of Psychology, University of Zambia

<sup>2</sup> TB Care, Zambia

<sup>3</sup> Royal Tropical Institute (KIT), Netherlands



INTRODUCTION	RESULTS	DISCUSSION																				
<ul style="list-style-type: none"> <li>Various studies have demonstrated that stigma related to TB keeps people away from seeking care.</li> <li>Studies suggest that TB patients experience double stigma with TB being considered as a disease of the poor and that all TB patients are HIV positive.</li> <li>Victims of stigma are those perceived to possess characteristics different from the rest of the population</li> </ul>	<p>Excluded from school and services</p> <table border="1"> <thead> <tr> <th></th> <th>Yes</th> <th>No</th> <th>No answer</th> <th>Total</th> </tr> </thead> <tbody> <tr> <td>Ever been discriminated against because of TB</td> <td>5 (15.6%)</td> <td>27 (84.4%)</td> <td>-</td> <td>32</td> </tr> <tr> <td>Never</td> <td>7 (9%)</td> <td>69 (88.5%)</td> <td>2 (2.6%)</td> <td>78</td> </tr> <tr> <td>Total</td> <td>12 (10.8%)</td> <td>97 (87.4%)</td> <td>2 (1.8%)</td> <td>111</td> </tr> </tbody> </table>  <ul style="list-style-type: none"> <li>More than one quarter of the participants (28%) reported being discriminated against because they had TB and a lesser number (10.8%) agreed that people with TB should be kept out of school or other services to prevent infection spreading.</li> <li>Some participants felt that they themselves were ill and needed to be secluded (self-stigma).</li> <li>The main perpetrators of TB related stigma and discrimination were identified as family members (59%), steady boyfriends/girlfriends (21%) and friends (8%).</li> <li>Tuberculosis also seemed to be associated with HIV as some participants were reportedly being stigmatized and discriminated against as people thought they were HIV positive.</li> <li>Separation and isolation from family including parents, siblings and spouses were experienced by respondents.</li> </ul>		Yes	No	No answer	Total	Ever been discriminated against because of TB	5 (15.6%)	27 (84.4%)	-	32	Never	7 (9%)	69 (88.5%)	2 (2.6%)	78	Total	12 (10.8%)	97 (87.4%)	2 (1.8%)	111	<ul style="list-style-type: none"> <li>In spite of the unwavering global resolve to rime the world of the TB scourge, TB-related stigma continues to be a major obstacle in realizing this commitment.</li> <li>In this era of HIV and AIDS, stigma seems to be gaining roots alongside TB/HIV prevention messages.</li> <li>This study found the association of HIV with TB to be one of the major causes of stigma.</li> <li>Some participants revealed they were being stigmatized and discriminated against on the suspicion that they were HIV positive. This finding strengthens arguments of researchers who have stated that HIV/AIDS is fundamentally the source TB-related stigma.</li> <li>The link between HIV and TB as a source of TB stigma has implications for TB control programmes.</li> </ul>
	Yes	No	No answer	Total																		
Ever been discriminated against because of TB	5 (15.6%)	27 (84.4%)	-	32																		
Never	7 (9%)	69 (88.5%)	2 (2.6%)	78																		
Total	12 (10.8%)	97 (87.4%)	2 (1.8%)	111																		
<p><b>AIM</b></p> <p>The current study aimed to explore tuberculosis related stigma in tuberculosis adult patients.</p>		<p><b>CONCLUSION</b></p> <ul style="list-style-type: none"> <li>Stigma was prevalent in the study.</li> <li>Participants perceived being stigmatized and discriminated.</li> <li>Increasing awareness in patients and sensitization of the community were identified as a way of reducing stigma.</li> </ul>																				
<p><b>METHODOLOGY</b></p> <ul style="list-style-type: none"> <li>The study was carried out at three health facilities from three districts in North Western Province in Zambia.</li> <li>The three districts (Solwezi, Mwinilunga and Kabompo) had been selected for their high TB/HIV disease burden in the province.</li> <li>Participants in the study included adult TB patients on treatment for a minimum of 3 weeks, as well as health care workers and community members.</li> <li>After obtaining informed consent, a survey questionnaire was administered to 111 TB patients.</li> <li>The survey was translated into local languages and piloted before use.</li> <li>Data was also obtained from Health care workers and community members through focus group discussions and in-depth interviews.</li> <li>Smaller groups of TB patients also participated in focus group discussions. The data was subjected to quantitative and qualitative analysis.</li> </ul>		<p><b>Selected references</b></p> <ul style="list-style-type: none"> <li>Bard V, Chikweke M, Sullivan C and Magai B. The Correlating Impact of Stigmatization, HIV/AIDS and Rural Insecurity in Zambia and South Africa. Lusaka: ZAMBART; 2005.</li> <li>Core group - TB Working group. Community-Based Tuberculosis Prevention and Care: Who and How do We Get Involved? An International Handbook for Non-governmental Organizations and Civil Society Organizations. Washington, D.C.: Core group; 2013.</li> <li>Coker A, Li, West C, J. Miller N. The growing burden of tuberculosis: global trends and interventions with the HIV epidemic. <i>Arch Intern Med</i>. 2010; 170:1009-1021.</li> </ul> <p><b>Acknowledgments</b></p> <p>NTP Manager - Dr. Kazema, TB CARE I staff members Sara Mwanza, Aneta Banda, Paul Sichinga, and NTP for North Western province: Dr. George Lushaba and the District Health Officers: Dr. George Lushaba and the District Health Officers: Dr. George Lushaba, Mwinilunga DCHMO - Dr. Dennis Banda</p>																				



Poster on PCA accepted for the Union Conference 2013 in Paris



*PCA data collectors at the data collection training in Solwezi*



*PCA data collector conducting interviews in Kabompo*

## **Laboratories**

**Expected outcome addressed: Ensured capacity, availability and quality of laboratory testing to support the diagnosis and monitoring of TB patients**

TB CARE I partners FHI360, Management Sciences for Health (MSH) and KNCV Tuberculosis Foundation provided leadership in the implementation of laboratory activities that included the establishment of a national drug resistant TB specimen referral system, the training of laboratory and clinical staff members as trainers on GeneXpert, the quantification of laboratory supplies, the procurement of five GeneXpert machines, the design of a national TB Prevalence Survey and implementation from September 2013.

## **Key Results**

A summary of the key results of interventions to strengthen lab capacity and the quality of TB testing is provided below:

### **National Courier System:**

- Support was provided to the NTP in developing a national sputum referral system for culture and DST. A TB referral system algorithm, standard operating procedures (SOPs) and national referral guidelines were developed.
- The new tools will be piloted in five provinces of Zambia: Copperbelt, Central, Northern, Muchinga and Eastern Provinces from October 2013.

### **Procurement and Installation of GeneXpert Machines, and Training of Trainers:**

- TB CARE I supported the procurement of laboratory equipment and commodities, including five GeneXpert machines and related accessories for the 3Is sites, as mentioned previously. The five GeneXpert machines were installed in August 2013, together with two GeneXpert machines procured by TB CARE I in year two of project implementation.
- The GeneXpert technology will improve TB case detection through intensified CF, reduce the turnaround time for lab results, initiate patients early on appropriate treatment and early implementation of IPT for PLHIV.
- TB CARE I collaborated with CIDRZ and the Ministry of Health to conduct a National GeneXpert TOT for TB and laboratory focal point persons in the country in August 2013. TB and laboratory focal point persons from nine of the ten provinces participated in the training. Reporting and recording tools were reviewed and a National GeneXpert curriculum was developed. The participants were also trained in GeneXpert machine user operation and implementation at country level.



*Laboratory staff during a practical session at the Xpert MTB RIF Trainer of Trainers workshop*

### **External Quality Assessment:**

TB CARE I continued to support External Quality Assessment (EQA) activities in Year 3. A workshop was held from May 13-17, 2013 to review the EQA guidelines and reporting and recording tools. During this workshop, EQA indicators were developed for the first time to monitor improvements in the EQA program at national level. This will lead to improved quality of EQA data analysis in the provinces in the coming year. The indicators developed are listed below.

- Number (%) of 1st controllers with 95% of positive slides agreement
- Number (%) of laboratories with 80% of positive slides agreement
- Number (%) of laboratories with 100 % of negative slide agreement
- Number (%) of microscopy laboratories with > 95% concordant results
- Number (%) of labs with feedback reports available (by supervising laboratories, districts, provinces)
- Number (%) of laboratories receiving feedback within one month (by regions, by supervising labs)
- Number (%) of laboratories with improved performance in the last four quarters
- Number (%) of laboratories with improved quality of slides (by supervising laboratories, districts, provinces)
- Number (%) of the 1st controller errors (by type, by 1st re-checkers, by regions)

### **Quantification of Laboratory Supplies:**

Training of laboratory officers (7 females and 22 males) in the quantification of TB laboratory commodities in order to build capacity in quantification and alleviate stock outs. The participants developed action plans during the training to enable them quantify required supplies in their

provinces, for national level procurement. The training was facilitated by two MSH regional laboratory consultants.

## **Infection Control**

**Expected outcome addressed: Scaled-up implementation of TB-IC strategies.**

### **Key Results**

#### **Development of TB IC Facility Plans:**

- TB CARE I provided leadership in the inclusion of TB IC in 35 facility plans and a total of 742 health care workers (336 males and 406 females) were oriented in TB IC in the third year. Nineteen of the 35 facilities where infection control measures were introduced and infection control plans were developed were in the WHO 3 Is target sites.
- TB IC facility assessments were conducted in 22 facilities under the WHO 3 Is initiative that included five prison facilities and 17 health facilities in the Copperbelt, Lusaka, Central and Southern provinces. The baseline assessment provided information that was incorporated in the TB IC plans.

TB CARE I conducted the first TB IC orientation of prison officers in the country on how to reduce the risk of TB transmission in the prison settings.

### **Renovations**

In order to enhance environmental TB IC measures, TB CARE I supported the renovation of the incinerator housing at the National Reference Laboratory in Lusaka and the TB corner and waiting room at Twapia Clinic in Ndola district, Copperbelt province. These renovations have helped enhance the air flow. Renovation works under the WHO 3Is, planned for Kabwe General Hospital laboratory, Kabwe Mine Hospital laboratory and Lubuto Clinic laboratory will be carried out and completed in Year 4.



*Incinerator housing at the national TB reference laboratory*

### **Trainings of community volunteers and traditional health practitioners**

TB CARE I also supported community-level infection control training of 116 community volunteers (44 females, 72 males) TB IC in four districts -- Kabwe and Mkushi districts (Central province), Kitwe district (Copperbelt province) and Mpika district (Muchinga province). Among the individual trainings were 50 traditional health providers (24 females and 26 males).

### **Challenges**

There were late agreements with the MoH and MCDMCH on the selection of facilities to be renovated. This affected the pace of the renovation process with delayed implementation.

### **Next steps**

TB CARE I will continue to provide TB IC orientation in the target provinces that will include the remaining 19 facilities supported under the WHO 3 Is. Renovation support will continue and

continuous communication with the government administrators will be held to ensure that the sites selected will be renovated.

## **TB/HIV**

Expected outcome addressed: Improved diagnosis of TB/HIV co-infection and improved treatment of TB/HIV co-infection.

### **Key Results:**

#### **TB/HIV coordinating bodies:**

- TB CARE I supported two district TB/HIV coordinating body meetings in Kitwe and Ndola, Copperbelt province with 35 participants in Ndola and in Kitwe.
- Facilities within the two districts shared their successes and challenges in treating TB patients co-infected with HIV.
- The meetings also provided a forum for peer to peer sharing and also enabled both the Kitwe and Ndola district community medical offices to audit all registers for TB/HIV co-infected patients from the participating facilities.
- TB CARE I was able to identify areas in TB/HIV that require more strengthening such as the referral of patients between TB and HIV clinics, the follow up of TB patient data in the HIV clinic, including data on date of ART initiation.

#### **DOTS training of HIV/AIDS care givers:**

TB CARE I provided DOTS training to 122 community volunteers using year two reprogrammed funds. The trainings were conducted in five districts Training volunteers has proven cardinal as they have complemented health care worker efforts in identifying TB suspects who are subsequently screened for HIV once TB diagnosis is confirmed. Early diagnosis of both conditions with prompt treatment is associated with better outcomes.

#### **Next steps:**

TB CARE I will support implementation of TB/HIV collaborative activities in the WHO 3 Is initiative in year four of project implementation. The activities will include the screening for TB of all HIV positive patients enrolled for care.

## **Monitoring and Evaluation, Surveillance and Operations Research**

**Expected outcome addressed: Improved capacity of NTPs to analyze and use quality data for the management of the TB program**

### **Key results**

#### **National TB/HIV/Leprosy technical data review meeting:**

- TB CARE I took a key role in the planning and hosting of the 2013 national TB/HIV Leprosy technical review meeting held from September 2-6, 2013.
- This meeting that is held annually provides a forum for sharing of annual achievements in TB and TB/HIV control, review of challenges at every level of program implementation, and achieve agreement on future implementation strategies. The meeting was chaired by the National TB control Program (NTP), with participating representatives from the ten administrative provinces in Zambia, key local partners including CDC, Jhpiego, WHO, the Centre for Infectious Diseases Research in Zambia (CIDRZ) and TB CARE I.

### **Prevalence survey:**

- Procurement of equipment and commodities for TB culture and smear microscopy for the TB prevalence survey. Three MGIT machines were procured for the three reference laboratories that are participating in the prevalence survey.
- Provision of technical support during implementation of the pilot phase of the prevalence survey in August 2013, and commencement of the actual survey in September 2013 by consultants in epidemiology and data management from the KNCV Tuberculosis Foundation and WHO
- Digitalization of radiology equipment for the prevalence survey was completed in July 2013, and training of radiographers, medical doctors, technicians and radiologists on how to work with the digitalized equipment.



*The radiology equipment that was digitalized inside one of the mobile x-ray vehicles*

*The mobile X-ray machines that were digitalized by TB CARE I stationed at the Ministry of Health July 2013*

### **Challenges**

Only two provinces conducted technical support supervisory visits this year because the government restructuring affected the decision making processes by TB focal persons at provincial level with delays in agreement on the implementation of some activities, including technical support visits.

### **Next steps:**

The project will continue to engage the TB focal persons at the PMO levels in the implementation of technical support supervisory visits.

## **Programmatic Management of Drug Resistant TB (PMDT)**

**Expected outcome addressed: Improved treatment success of MDR TB**

### **Key results:**

- A national PMDT subcommittee held three meetings during the year to finalize the updated PMDT guidelines this year. The guidelines were provided to the NTP for final review and print.
- Two consultants provided technical assistance as part of the Green Light Committee (GLC) in September 2013. The consultants' report indicated that the NTP needed to disseminate the data collection tools following the development of a data base from the previous visit, to help the country provide data on MDR TB patients.

### **Challenges:**

- TB CARE I has not been able to collect data on MDR TB patients or patient outcomes.
- TB CARE I had planned to support the renovation of two facilities to provide PMDT support to the NTP this year. The project was not able to initiate the renovations because of contractual challenges identified by the government with one of the sites. The project also had challenges with the MoH based tender process that required more rigorous documentation and involvement of the TB CARE I project according to USAID requirements.

### **Next steps:**

- The PMDT subcommittee will need to play an advocacy role to support the NTP to provide the data collection tools for patient reports.
- TB CARE I will reprogram the funding planned for renovation support to other activities, even as the project will begin the close-out of project support in year four.