

# USAID TB CARE II Project

## Annual Report, 2012



**TB CARE II**  
MALAWI

**Funded by United States Agency for International Development, Malawi**

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## LIST OF ACRONYMS

ACSM	Advocacy, Communications, and Social Mobilization
AIDS	Acquired Immune Deficiency Syndrome
AOTR	Agreement Officer's Technical Representative
CB-DOTS	Community-based DOTS Program
CBO	Community Based Organization
CDR	Case Detection Rate
CHW	Community Health Workers
DOTS	Directly Observed Treatment Short-course Strategy
DST	Drug Sensitivity Testing
FDC	Fixed Dose Combination
GFATM	Global Fund to Fight AIDS, TB, and Malaria
GHI	Global Health Initiative
GLC	Green Light Committee
HBC	High Burden Country
HIV	Human immunodeficiency virus
IC	Infection Control
ISTC	International Standards of TB Care
LMIS	Logistic Management Information System
M&E	Monitoring and Evaluation
MDG	Millennium Development Goals
MDR-TB	Multi drug-resistant TB
MOH	Ministry of Health and Family Welfare
NRL	National Reference Laboratory
NTP	National Tuberculosis Control Program
PAL	Practical Approaches to Lung Health
PIH	Partners In Health
PMP	Performance Monitoring Plan
PPM	Public Private Mix
PPP	Public Private Partnerships
QA	Quality Assurance

TB	Tuberculosis
TBCAP	Tuberculosis Control Assistance Program
TCN	Third Country National
TSR	Treatment Success Rate
URC	University Research Co., LLC
USAID	United States Agency for International Development
USG	United States Government
WHO	World Health Organization

# 1 EXECUTIVE SUMMARY

The TB CARE II Project is a five-year cooperative agreement from the United States Agency for International Development (USAID) led by University Research Co., LLC (URC) designed to provide global leadership and assist National Tuberculosis Programs in high burden countries around the world to accelerate the implementation of programs for TB DOTS, TB/HIV and Programmatic Management of Drug Resistant TB (PMDT). The TB CARE II Malawi Project is a coordinated effort led by Partners in Health (PIH) in collaboration with Project HOPE and URC. The project aims to: (1) work with the government of Malawi to reach and sustain global and national targets for case detection and treatment success through DOTS expansion and strengthening; (2) scale up universal access to TB diagnosis and treatment, especially in women and vulnerable populations, utilizing community-based approaches; (3) improve TB/HIV integration at all levels, particularly at health facility level, and offer high quality DOTS through a wider range of service delivery outlets, especially for PLHIV; and (4) increase access to drug-resistant TB prevention and treatment through community based-approaches and improved diagnostic capacity for drug susceptible and drug resistant TB.

The project has received substantial support from and collaborated closely with the following organizations: USG and partners, the National Tuberculosis Programme (NTP), the Ministry of Health (MOH), and the district communities served by the program. TB CARE II has completed its second year, October 1, 2011 - September 30, 2012 of implementation. During the year under review, TB CARE II activities were based on national & local priorities relevant to TB described in NTP Strategic Plans 2007 – 2011 & 2012-2016 as harmonized with other MoH Health Development strategic plans and each target district's District Implementation Plan (DIP). The TB CARE II target districts were Machinga, Mangochi, Mulanje, Neno, Ntcheu, and Phalombe. There were also limited activities in Lilongwe related to PMDT.

The key achievements of the TB CARE II Malawi Project are detailed below:

- Completed recruitment and placement of all key technical and administrative staff.
- Technical assistance for the development of the NTP 2012-2016 strategic plan
- Technical assistance (STTA) for the development of a community-based MDR-TB operational guidelines conducted by Dr. Michael Rich and Deputy Director of TB CARE II Dr. KJ Seung
- Provided technical assistance for the development of TB Prevalence survey protocol
- Supported NTP weekly management meetings
- Supported supervisory and monitoring visits by NTP logistics officers
- Supported the development and printing of the revised national TB Control Manual and the operational guidelines for PMDT

- Capacity building for MDR-TB management team for the proposed Centre of Excellence
- Supported the procurement, installation and roll-out of GeneXpert in three districts of Neno, Machinga, Ntcheu and at the Central Reference Laboratory
- Supported training on the use of GeneXpert technology for TB diagnosis & sponsorship of an international training of a Central Reference Laboratory technician on the managerial & technical aspects of GeneXpert at the Hague in Netherlands
- Supported the training of 30 lab technicians on the use of GeneXpert
- Supported capacity building of 1256 health care staff to improve TB diagnosis and correct treatment at the district level in six districts
- Supported nation-wide distribution of SLDs to sites treating MDR-TB patients and monitoring of the usage of SLDs
- Supported the establishment of 13 new TB registration and initiation centers in target districts
- Supported the strengthening of community health systems through establishment of 64 additional community sputum collection points, building capacity of community volunteers (including procurement & distribution of enablers), and scaling up community education and mobilization through community campaigns. TB CARE II also supported the reactivation of 176 sputum collection points bringing the total of sputum collection points in the six target districts to 240.
- Supported the procurement of 21 i-LED microscopes and 8 ParaLens attachments for the expansion of diagnostic networks
- Supported training of lab technicians on the use of i-LED microscopes
- STTA for the assessment of peripheral laboratory networks nation-wide supported by CLSI
- Supported and performed joint supportive supervision and mentoring of MoH district laboratory technicians, lab assistants and HSAs on quality AFB microscopy in target districts.
- Supported and performed joint mentorship of MoH district TB officers and assistant TB officers as well as health care workers in all target districts.
- Supported the training of community volunteers for TB control activities at community level.
- Conducted a situational analysis and evaluation of scale up plan for Community Sputum Collection Points with assistance from Dr. Francoise Nywagi Louis
- Provided technical assistance to the TB and TB/HIV technical working groups
- Supported planning for the national TB prevalence survey including assisting with procurement of TB Prevalence materials & commodities (tents, golf shirts for survey teams, tables etc)

## **INTRODUCTION**

### **1.1 USAID/Malawi Objectives for the TB CARE II Project**

The United States Agency for International Development (USAID) awarded the TB CARE II Project, a five-year cooperative agreement (2010 – 2015) in Malawi to assist the NTP in improving TB control and expanding access to high-quality TB and TB/HIV services in the public sector.

This overarching goal is pursued by focusing activities on 4 programmatic objectives: (1) Improving case detection through DOTS expansion and strengthening; (2) enhancing TB/HIV programmatic integration; (3) improving the programmatic management of drug-resistant TB (PMDT); and (4) leveraging TB control interventions to strengthen the overall health system.

The major project interventions are focused on both the national and district levels. At the national level this includes strengthening the laboratory network and improving the Central Reference Laboratory (CRL) capacity, supporting the nascent drug-resistant TB (DRTB) treatment program, piloting novel diagnostics, and strengthening the NTP centrally. Activities in target districts are focused on implementing a comprehensive package that includes emphasis on DOTS expansion and enhancement, integration of TB/HIV services, improved services for DRTB and health system strengthening through the decentralization of services, improvement of the laboratory network and involvement of community structures in diagnosis and patient follow-up.

The major project outputs are: (1) improved environment for case detection (all forms) in TB CARE II target districts; (2) decentralization of TB registration and treatment initiation to community hospital and health center levels (3) strengthening of community-based mechanisms for TB case detection, contact tracing and adherence support through the use of community volunteers; (4) improve TB/HIV integration through implementation of the 3I's and provision of "One-stop" services for HIV & TB co-infected patients; and (5) ensure a functioning national program for MDR-TB diagnosis, prevention, and treatment.

### **1.2 Overview of Activities/ Results**

During Project Year 2 (October 1, 2011 – September 30, 2012), TB CARE II Malawi achieved several notable results as outlined in the Executive Summary. A more detailed overview of the activities completed is provided below.

#### *Completed activities for Project Year 2:*

At the central level, TB CARE II provided technical assistance and support for the following activities:

- Finalization of the NTP 2012-2016 strategic plan
- Development of a community-based MDR-TB operational guidelines
- Training of MDR-TB management team for the proposed center of excellence

Training of one CRL technician on GeneXpert implementation and another one on managerial and technical aspects of GeneXpert in the Hague, Netherlands coordinated by TB CARE I

- Facilitated and supported NTP weekly management meetings
- Nation-wide distribution of SLDs to sites treating MDR-TB patients and monitoring of the usage of SLDs
- Supportive supervisory, monitoring visits by NTP logistics officers
- Assisted with development and printing the revised TB Control Manual and the operational guidelines for PMDT
- Strengthening of District Health Management Team-members (DHMT staff) through capacity building and mentoring
- TB CARE II sponsored the NTP Deputy Manager for a training on “Influencing, Networking & Partnership” in Chicago, USA
- Supported NTP with the planning of the national TB prevalence survey, provided TA in the development of the survey protocol and procured essential materials for the survey
- Provided TA to the TB and TB/HIV technical working groups
- Supported supervisory, monitoring visits of NTP logistics officers
- Supported World TB Day commemoration at national level

The district level activities supported or performed by TB CARE II included technical assistance and direct support for the following:

- Building of the capacity of health care staff working in TB
- Supported the establishment of 13 new TB registration and initiation centers in target districts
- Supported capacity building and strengthening of the DHMTs
- Procurement of 21 iLED microscopes and 8 ParaLens attachments for the expansion of diagnostic networks
- Joint supportive supervision and mentoring of MoH district TB officers and assistant TB officers as well as health care workers in all target districts. Supervision and mentoring was also conducted for laboratory technicians, lab assistants and HSAs on quality AFB microscopy in target districts
- Collaboration with SSDI on integration of TB in HIV services

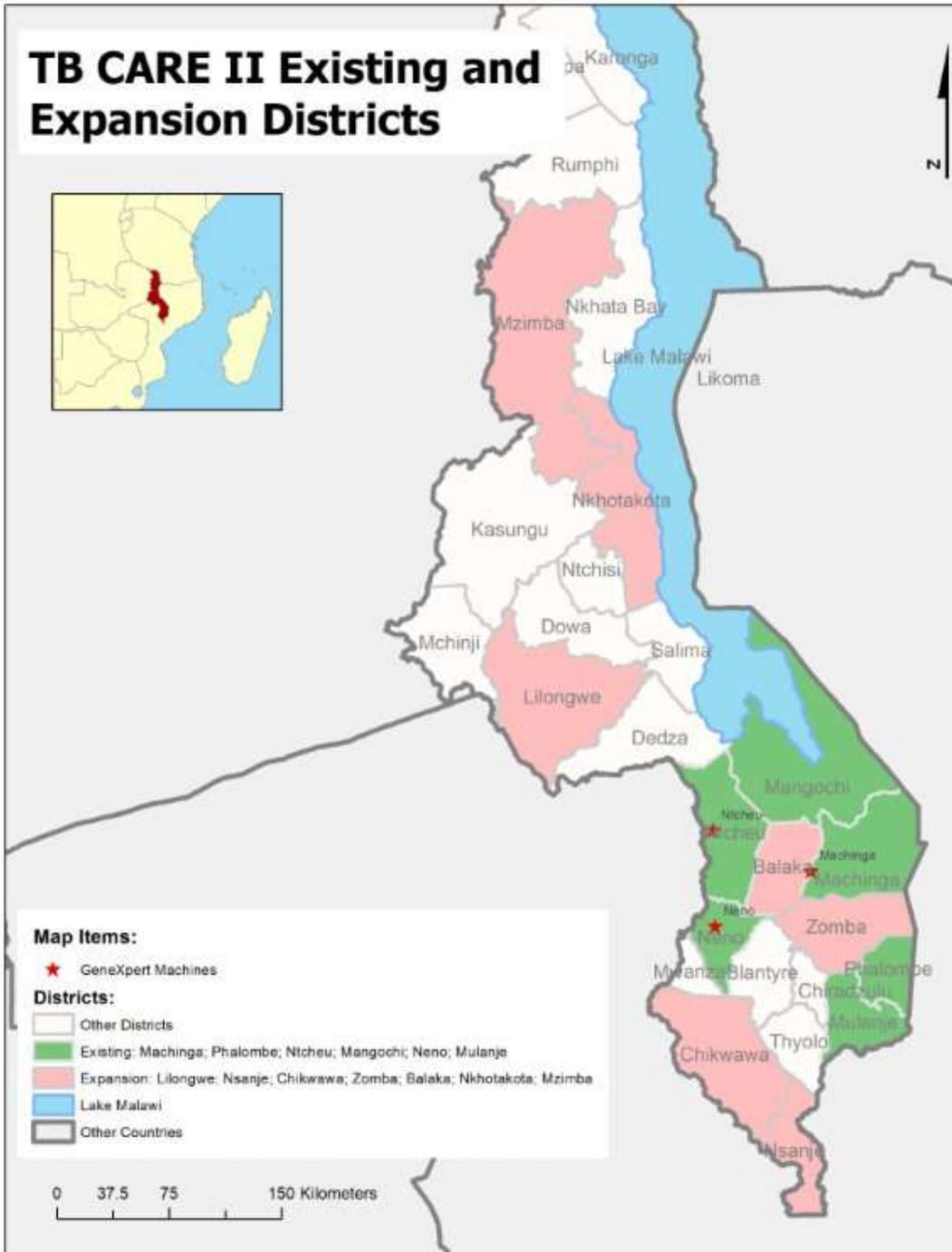
In Project Year 2, certain activities were not able to take place as planned and TB CARE II intends to carry them forward to Project Year 3. These include:

- Supporting the integration of TB and HIV control activities at district level through refurbishment of 12 health facilities, establishment of cough corners, training of TB staff on HIV control activities and those of HIV on TB control activities.
- Strengthening of sputum transport system in collaboration with Riders for Health in Neno and Machinga.
- Training on revised NTP manual was delayed due to finalization of the manual. Printing and training on the manual is scheduled for quarter 1 of Project Year 3.

### **1.3 Geographic Scope**

TB CARE II Malawi implements activities in 6 target districts: Mulanje, Phalombe, Machinga, Mangochi, Neno and Ntcheu and the national level. At the district level, TB CARE II has focused on strengthening of management skills, technical & material support for partnerships, partners' coordination; program implementation; joint supportive supervision, mentoring of staff as well as monitoring and evaluation.

TB CARE II will build on the success accomplished in the six target districts in Year 2 to expand in Year 3 to additional districts with the implementation of a comprehensive package in all relevant health facilities. In collaboration with the NTP, TB CARE II has selected the following additional target districts: Balaka, Chikhwawa, Zomba, Nsanje, Nkhotakota, Mzimba, and Lilongwe.



## **2 RESULTS BY TECHNICAL AREA**

### **2.1 Technical Area 1: DOTS Expansion and Strengthening**

#### **2.1.1 Building capacity of the CRL (national).**

TB CARE II sponsored one CRL lab technician in September 2012 to complete training on the managerial and technical aspects of GeneXpert at The Hague, Netherlands coordinated by TB CARE I.

#### **2.1.2 Expansion and improvement of smear microscopy network (national and district).**

TB CARE II procured and installed 21 LED microscopes for the improvement of TB microscopy. In addition 48 lab technicians were trained in the use and operations of LED microscopes. Furthermore, TB CARE II supported the NTP to procure emergency lab reagents to fill in the gaps for laboratory consumables.

TB CARE II also supported a joint assessment of the national laboratory network conducted by the Clinical and Laboratory Standards Institute (CLSI) in collaboration with the NTP. The objectives of the assessment were to: 1) assess the smear microscopy network at the district level; 2) assess the linkage between the community sputum collection points and the district microscopy laboratories; 3) assess the sputum transport network between health centers and microscopy laboratories the district level; 4) assess the sputum transport network from the districts to the central TB reference laboratory; and 5) assess the internal and external quality improvement system for the district microscopy network. Twelve laboratories were visits and assessed using the assessment tool used was patterned after the “External Quality Assessment for AFB Laboratories” booklet published by the WHO/CDC/APHL.

The results and recommendations from the assessment were shared with the NTP and other stakeholders and incorporated in to the Project Year 3 work plan.

#### **2.1.3 Decentralization of TB diagnosis and registration (district)**

In Y2, TB CARE II supported the opening of 13 new TB registration and initiation sites, which has doubled the total number of initiation and registration sites in the six target districts to 25. TB CARE II is supporting the national decentralization policy of the NTP by supporting training of health workers in the new TB registration sites, providing start up materials and supporting supervision, coaching and mentoring of health workers in these new initiation and registration sites. In addition, TB CARE II provided training on TB management and control for 1256 health workers in the targeted six districts over the year.

## **2.1.4 Support for advocacy and community mobilization around TB**

TB CARE II supported commemoration of the 2012 national World TB Day, which took place in Lilongwe on March 24, 2012. Former first lady Madame Callista Mutharika officiated the function. TB CARE II showcased key project interventions including novel diagnostics such as GeneXpert and i-LED microscopes. Several technical messages on TB were disseminated to the audience at the function through leaflets and posters. An estimated 5,000 people including senior government officials, representatives from UN Agencies, senior government officials, USAID, and the community received messages on TB and TB/HIV. TB CARE II also held various district level activities to commemorate World TB Day. TB CARE II provided T/shirts, leaflets and brochures as promotional materials that were distributed on the commemoration day.

## **2.2 Technical Area 2: PMDT**

### **2.2.1 Community-based care for MDR-TB (national)**

TB CARE II provided technical assistance to support the development and printing of the community based MDR-TB guidelines and the training of MDR-TB management team for the proposed MDR-TB Centre of Excellence in Lilongwe. In addition, TB CARE II supported the training of NTP and other TB staff on PMDT MDR-TB referral & Training Centre in Lesotho.

### **2.2.2 Roll-out of GeneXpert**

TB CARE II procured and installed four GeneXpert machines and accessories as well as cartridges in three districts (Machinga, Neno, and Ntcheu) and one at the Central Reference Laboratory. A total of 35 lab technicians were trained on the use of the machines. In Project Year 2 TB CARE II districts performed 3,095 tests 238 of which were positive for MTB and 8 for Rif resistance.

## **2.3 Technical Area 3: TB/HIV**

TB CARE II supported the integration of TB and HIV control activities at district level through establishment of cough corners and supported the training of 1,965 HTC providers and 695 clinicians, nurses and other health staff on co-management of TB/HIV. A total of 13,968 HIV positive individuals out of 14,157 (98.7%) seen at HTC & HIV service centers were tested for TB. ART uptake increased from 51% to 81% in the same period. In addition, the number of health facilities with TB Infection Control (TBIC) interventions increased from 0 in Project Year 1 to 24 in Y2. Furthermore, 13 sites were assessed and earmarked for TBIC infrastructural upgrade in Project Year 2. TB CARE II supported the training of 91 health care workers on TB IC. On the other hand CPT uptake decreased from 82% in Project Year 1 to 78% in Y2 due to non-availability of the medicine in some of the TB CARE II target districts.

## **2.4 Technical Area 4: Health System Strengthening**

### **2.4.1 Support to the NTP (national and district).**

TB CARE II supported the participation of the Senior Technical Advisor, Dr. Robert Makombe, at the TB TEAM meeting on Global Fund grant held in Nairobi, Kenya. TB CARE II provided TA to NTP in the development of a survey protocol and standard operating procedures (SOPs) for a Global Fund supported National Prevalence Survey which NTP is planning to undertake in 2012 through to 2013. Additionally, TB CARE II is supporting the exercise with procurement of important survey materials such as computers for data management, tents and chairs, T-Shirts for survey officials.

TB CARE II provided support to the NTP to source anti-TB drugs from other African countries - Ethiopia, Zimbabwe and Botswana. TB CARE II funded the freight shipment of drugs from Zimbabwe to Lilongwe and supported the logistics. This averted Malawi from having a critical anti-TB drug shortage

TB CARE II has also facilitated establishment of the proposed first national Centre of Excellence for PMDT. Support was provided for development of guidance documents as well training of clinical staff at Bwaila Martin Preuus Center. The training was also attended by NTP staff that is backstopping the clinic.

### **2.4.2 Community health workers (district)**

TB CARE II supported capacity building of health care staff and volunteers (777 trained in various aspects of community-based TB prevention, care & control) involved in TB prevention, care & support at all levels including community level volunteers. Essential items were procured and distributed among the volunteers which included: bicycles, washing buckets, cups, basins, gumboots, umbrellas, raincoats, carrier bags, and t-shirts.

### **2.4.3 Sample Transportation Network**

TB CARE II provided funds to support sputum samples transportation from all the health facilities nation-wide to the CRL for culture and DST.

The sputum transportation network pilot supported by Riders for Health was delayed and is scheduled to begin in quarter 1 of Project Year 3. TB CARE II will be supporting the training of riders transporting sputum and community sensitization activities.

## **2.5 Challenges Encountered**

The challenges encountered by TB CARE II during the period under review included:

- Resignation of the Chief of Party and Senior Technical Advisor and subsequent unexpected delays in the recruitment of replacements.

- Non-availability of Global Fund disbursement of funds to the MoH (PR) & hence to the NTP, which adversely affected the implementation of NTP planned activities resulting in TB CARE II being called upon to fill the critical gaps on lab reagents, medicines and essential activities like supervision, monitoring and capacity building.
- Training of TB staff on HIV control activities and HIV staff on TB control activities was delayed partly due to non-availability of a supervising Consultant.
- Strengthening of sputum transport system in collaboration with Riders for Health was delayed
- Training on revised NTP manual was planned for year 2, however due to delays in finalizing the manual, this training is being moved to Year 3.

### 3 RESULTS MATRIX

#### Technical Outcome and output Results October 2011 to September 2012

Technical Area		2012 Targets and Results					
DOTS Expansion & Enhancement		Outcome Indicators	Indicator Definitions	Baseline 2011	Target	Result	% Achieved
Expected Outcomes					PY2	PY2	PY2
1	Case finding	Cases notified (all forms)	Number of TB patients identified in the target districts	3115	3528	3056	87%
		Cases notified (bacteriologically confirmed)	Number of smear-, MTB PCR- or culture-positive TB cases identified in the target districts	1283	1517	1480	98%
2	Strengthen and expand community systems for TB control	Functional community sputum collection points	Number of functioning sputum collection points	190	200	240	120%
		New Community sputum collection points	Number of newly establish community-based sputum collection points established	0	10	64	640%
			Total Number of Health Facilities			154	
			Number of Health facilities with at least two community sputum collection points			64	
		CSCP geographic coverage area	Proportion of Health Facilities with at least 2 community sputum collection points	25.17	40%	42%	104%

		<ul style="list-style-type: none"> <li>CSCP suspect finding</li> </ul>	<ul style="list-style-type: none"> <li>Number of suspects identified through CSCP's in the quarter.</li> </ul>	▪	▪	▪ 2301	▪
		<ul style="list-style-type: none"> <li>CSCP case finding</li> </ul>	<ul style="list-style-type: none"> <li>Number of TB cases identified through CSCP's (in the quarter)</li> </ul>	▪	▪	▪ 167	▪
3	<ul style="list-style-type: none"> <li>Improve Facility-based TB case finding and management</li> </ul>	<ul style="list-style-type: none"> <li>Facility-based suspect finding</li> </ul>	<ul style="list-style-type: none"> <li>Number of TB suspects identified through facility service delivery outlets per quarter, including OPD, wards, CTC, ART, HTC</li> </ul>	▪ 3441	▪ 3800	▪ 12195	▪ 321%
		<ul style="list-style-type: none"> <li>Treatment Success Rate of Confirmed Cases (all NEW forms)</li> </ul>	<ul style="list-style-type: none"> <li><i>Numerator: Number of confirmed TB cases registered that were cured plus the number that completed treatment in the target districts in a corresponding quarter last year.</i></li> </ul>	▪	▪	▪ 1621	▪
			<ul style="list-style-type: none"> <li><i>Denominator: Total Number of Cases registered during the same period in the target district.</i></li> </ul>	▪	▪	▪ 1952	▪
			<ul style="list-style-type: none"> <li>Treatment Success rate of Confirmed Cases (ALL New forms)</li> </ul>	▪ 81%	▪ 85%	▪ 83%	▪ 98%
		<ul style="list-style-type: none"> <li>Treatment Success Rate (Sm+ &amp; MTB/ RIF Positive)</li> </ul>	<ul style="list-style-type: none"> <li><i>Numerator: Number of confirmed smear + pulmonary TB cases registered that were cured plus the number that completed treatment in the target districts in the same quarter last year.</i></li> </ul>	▪	▪	▪ 802	▪
			<ul style="list-style-type: none"> <li><i>Denominator: Total number of confirmed pulmonary smear positive TB Cases registered in the same period in the target district.</i></li> </ul>	▪	▪	▪ 935	▪

		<ul style="list-style-type: none"> <li>Treatment Success Rate (Sm+ &amp; MTB/ RIF Positive) <ul style="list-style-type: none"> <li>86%</li> <li>88%</li> <li>86%</li> <li>97%</li> </ul> </li> </ul>
<ul style="list-style-type: none"> <li>Treatment Success Rate (Sm- &amp; MTB/ RIF NEGATIVE)</li> </ul>	<ul style="list-style-type: none"> <li><i>Numerator: Number of confirmed smear neg pulmonary TB cases that completed treatment in the target districts in the corresponding quarter previous year.</i></li> </ul>	<ul style="list-style-type: none"> <li>428</li> </ul>
	<ul style="list-style-type: none"> <li><i>Denominator: Total number of confirmed pulmonary smear neg TB cases registered in the same period in the target districts.</i></li> </ul>	<ul style="list-style-type: none"> <li>506</li> </ul>
	<ul style="list-style-type: none"> <li>Treatment Success Rate (Sm-&amp; MTB/RIF NEGATIVE)</li> </ul>	<ul style="list-style-type: none"> <li>80%</li> <li>82%</li> <li>85%</li> <li>103%</li> </ul>
<ul style="list-style-type: none"> <li>Treatment Success Rate (EPTB)</li> </ul>	<ul style="list-style-type: none"> <li><i>Numerator: Number of confirmed EPTB cases registered in a specified period that completed treatment in the target districts.</i></li> </ul>	<ul style="list-style-type: none"> <li>349</li> </ul>
	<ul style="list-style-type: none"> <li><i>Denominator: Total number of confirmed EPTB cases registered in the same period in the target districts.</i></li> </ul>	<ul style="list-style-type: none"> <li>432</li> </ul>
	<ul style="list-style-type: none"> <li>Treatment Success Rate (EPTB)</li> </ul>	<ul style="list-style-type: none"> <li>71%</li> <li>72%</li> <li>81%</li> <li>112%</li> </ul>
<ul style="list-style-type: none"> <li>Treatment Success Rate (Retreatment)*</li> </ul>	<ul style="list-style-type: none"> <li><i>Numerator: Number of confirmed retreatment TB cases registered in a specified period that were cured plus the number that completed treatment in the target districts.</i></li> </ul>	<ul style="list-style-type: none"> <li>130</li> </ul>

			<ul style="list-style-type: none"> <li>Denominator: Total number of confirmed retreatment TB cases registered in the same period in the target districts.</li> </ul>			154	
			<ul style="list-style-type: none"> <li>Treatment Success Rate (Retreatment)</li> </ul>	80%*	82%	84%	103%
		<ul style="list-style-type: none"> <li>Eligible Children younger than 5 (contacts of PTB adults) that were put on IPT</li> </ul>	<ul style="list-style-type: none"> <li>Numerator: Number of eligible children younger than 5 (contacts of PTB adults) who start (given at least one dose) IPT during the reporting period.</li> </ul>			277	
			<ul style="list-style-type: none"> <li>Denominator: Total number of eligible children younger than 5 (contacts of PTB adults) identified during the same reporting period.</li> </ul>			331	
			<ul style="list-style-type: none"> <li>Proportion of eligible children (five and under) contacts of PTB adults that were put on IPT</li> </ul>	100%	100%	84%	84%
4	<ul style="list-style-type: none"> <li>Decentralize Treatment and Initiation Registration</li> </ul>	<ul style="list-style-type: none"> <li>Access to TB treatment registration/initiation sites</li> </ul>	<ul style="list-style-type: none"> <li>(District) Total number of treatment initiation/registration sites across the 6 target districts</li> </ul>	12	21	25	119%

Strengthening the Laboratory Network for TB		Outcome Indicators	Indicator Definition	Baseline	Target	Result	% Achieved
Expected Outcomes					PY2	PY2	PY2
1	<ul style="list-style-type: none"> <li>Increase CRL capacity</li> </ul>	<ul style="list-style-type: none"> <li>Culture capacity</li> </ul>	<ul style="list-style-type: none"> <li>(National) Number of cultures performed monthly at CRL.</li> </ul>	120	130	123	95%
		<ul style="list-style-type: none"> <li>DST capacity</li> </ul>	<ul style="list-style-type: none"> <li>(National) Number of first-line DST</li> </ul>	120	130	31	24%

			performed monthly at CRL.				
		▪ CRL Sputum transport	▪ (District) Number of sputum samples transported to CRL quarterly from target districts	▪ 12	▪ 50	▪ 115	▪ 230%
<b>2</b>	▪ Strengthen and expand the TB diagnostic network	▪ Expansion of smear microscopy	▪ Total number of functioning smear microscopy sites in each district	▪ 49	▪ 56	▪ 56	▪ 100%
		▪ LED fluorescent microscopes	▪ Total number of sites actively using LED fluorescent microscopy	▪ 0	▪ 24	▪ 43	▪ 179%
		▪ Number of Laboratories with working quality assurance program for tests that they provide including: a) smear microscopy, b) culture, c) DST, and d) rapid molecular test	▪ Total number of laboratories enrolled in EQA program meeting aforementioned criteria in target districts.	▪ 36	▪ 51	▪ 48	▪ 94%
		▪ In-district Sample Transport	▪ (District) Number of samples transported to a microscopy center or GeneXpert via in-district sputum courier.	▪ 0	▪ 100	▪ 28	▪ 28%

TB/HIV		▪ Outcome Indicators	▪ Indicator Definition	▪ Baseline	▪ Target	▪ Result	▪ % Achieved
Expected Outcomes					▪ PY2	▪ PY2	▪ PY2
<b>1</b>	▪ Integration of TB/HIV Services	▪ HTC training	▪ Total number of HTC providers in the target districts trained	▪ 184	▪ 244	▪ 1965	▪ 805%

		<ul style="list-style-type: none"> <li>TB/HIV clinical training</li> </ul>	<ul style="list-style-type: none"> <li>Number of nurses, clinicians and other health workers trained in TB/HIV co-management.</li> </ul>	<ul style="list-style-type: none"> <li>Data Collection On-Going</li> </ul>	<ul style="list-style-type: none"> <li>275</li> </ul>	<ul style="list-style-type: none"> <li>1435</li> </ul>	<ul style="list-style-type: none"> <li>522%</li> </ul>
		<ul style="list-style-type: none"> <li>Intensified TB screening*</li> </ul>	<ul style="list-style-type: none"> <li>Number of HIV-positive patients seen at HIV testing and counselling or HIV treatment and care services who were screened for TB</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>	<ul style="list-style-type: none"> <li>13958</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>
			<ul style="list-style-type: none"> <li>Total Number of HIV positive patients seen at HIV testing and counselling or HIV treatment and care services during the quarter</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>	<ul style="list-style-type: none"> <li>14157</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>
			<ul style="list-style-type: none"> <li>Percent of TB screening among HIV positive patients</li> </ul>	<ul style="list-style-type: none"> <li>90%</li> </ul>	<ul style="list-style-type: none"> <li>95%</li> </ul>	<ul style="list-style-type: none"> <li>99%</li> </ul>	<ul style="list-style-type: none"> <li>104%</li> </ul>
		<ul style="list-style-type: none"> <li>Known HIV status</li> </ul>	<ul style="list-style-type: none"> <li>Total number of all TB patients registered over a given time period with documented HIV test in last 3 months OR who were tested for HIV (after giving consent) during their TB treatment in the target districts</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>	<ul style="list-style-type: none"> <li>2122</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>
			<ul style="list-style-type: none"> <li>Total number of TB patients registered over the same given time period in the target districts.</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>	<ul style="list-style-type: none"> <li>2331</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>
			<ul style="list-style-type: none"> <li>Percent known HIV status</li> </ul>	<ul style="list-style-type: none"> <li>88%</li> </ul>	<ul style="list-style-type: none"> <li>89%</li> </ul>	<ul style="list-style-type: none"> <li>87%</li> </ul>	<ul style="list-style-type: none"> <li>98%</li> </ul>
		<ul style="list-style-type: none"> <li>CPT Uptake</li> </ul>	<ul style="list-style-type: none"> <li>HIV-positive TB patients who receive at least one dose of CPT during TB treatment</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>	<ul style="list-style-type: none"> <li>958</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>
			<ul style="list-style-type: none"> <li>Total Number of HIV positive patients</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>	<ul style="list-style-type: none"> <li>1229</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>

			<i>enrolled</i>				
		▪	Percent CPT uptake	▪ 82%	▪ 85%	▪ 78%	▪ 92%
	▪ TB/ART co-management	▪	<i>HIV-positive TB patients who start on or continue previously initiated ART, during or at the end of TB treatment,</i>	▪	▪	▪ 993	▪
	▪	▪	<i>Total Number of HIV-positive TB patients registered over a given time period in target districts</i>	▪	▪	▪ 1222	▪
	▪	▪	Percent TB/ART uptake	▪ 51%	▪ 60%	▪ 81%	▪ 135%
	▪ TB IC	▪	Number of health facilities in target districts with copy of TB IC policy on-hand and available	▪ 0	▪ 44	▪ 89	▪ 202%
	▪ TB IC Interventions	▪	Number of hospital facilities with functional environmental and administrative controls in place in target districts	▪ 0	▪ 3	▪ 24	▪
	▪ TB IC Training	▪	<i>Number of hospital staff trained in TB IC in the district</i>	▪	▪	▪ 123	▪
▪		<i>Total number of staff in the district</i>	▪	▪	▪ 638	▪	
▪		Proportion of staff trained in TB IC in the target districts	▪ 0	▪ 20%	▪ 19%	▪ 96%	
	▪ TB IC Policy	▪	Yes/No TB IC measures have been included in the overall national IPC policy.	▪ Y	▪ Y	▪ Y	▪

		<ul style="list-style-type: none"> <li>New HIV patients treated for latent TB infection during the reporting period according to MoH guidelines.</li> </ul>	<ul style="list-style-type: none"> <li>Total number of newly-diagnosed HIV positive patients in whom active TB has been excluded who start treatment for latent TB infection in the target district</li> </ul>			<ul style="list-style-type: none"> <li>0</li> </ul>	
			<ul style="list-style-type: none"> <li>Total number of newly-diagnosed HIV positive patients in whom active TB has been excluded.</li> </ul>			<ul style="list-style-type: none"> <li>2519</li> </ul>	
			<ul style="list-style-type: none"> <li>Percent IPT uptake among HIV positive</li> </ul>			<ul style="list-style-type: none"> <li>0</li> </ul>	
2	<ul style="list-style-type: none"> <li>Support implementation of GeneXpert</li> </ul>	<ul style="list-style-type: none"> <li>GeneXpert tests performed</li> </ul>	<ul style="list-style-type: none"> <li>Number of GeneXpert tests performed</li> </ul>	<ul style="list-style-type: none"> <li>0</li> </ul>	<ul style="list-style-type: none"> <li>100</li> </ul>	<ul style="list-style-type: none"> <li>3095</li> </ul>	<ul style="list-style-type: none"> <li>3095%</li> </ul>
		<ul style="list-style-type: none"> <li>TB patients diagnosed by GeneXpert</li> </ul>	<ul style="list-style-type: none"> <li>Number of patients with a positive GeneXpert test</li> </ul>	<ul style="list-style-type: none"> <li>0</li> </ul>	<ul style="list-style-type: none"> <li>20</li> </ul>	<ul style="list-style-type: none"> <li>238</li> </ul>	<ul style="list-style-type: none"> <li>1190%</li> </ul>
		<ul style="list-style-type: none"> <li>DRTB patients diagnosed by GeneXpert</li> </ul>	<ul style="list-style-type: none"> <li>Number of patients with rifampicin resistance found with GeneXpert per month</li> </ul>	<ul style="list-style-type: none"> <li>0</li> </ul>	<ul style="list-style-type: none"> <li>&gt;1</li> </ul>	<ul style="list-style-type: none"> <li>8</li> </ul>	<ul style="list-style-type: none"> <li>800%</li> </ul>

PMDT		Outcome Indicators	Indicator Definition	Baseline	Target	Result	% Achieved
Expected Outcomes					PY2	PY2	PY2
1	MDR-TB diagnosis	Number of MDR-TB cases	(National) Number of patients with a laboratory-confirmed H/R-resistance (in the quarter)	38	42	18	43%

2	MDR-TB treatment	<ul style="list-style-type: none"> <li>Number of MDR-TB cases treated</li> </ul>	<ul style="list-style-type: none"> <li>Number of patients started on MDR-TB treatment with second-line TB drugs</li> </ul>	<ul style="list-style-type: none"> <li>38</li> </ul>	<ul style="list-style-type: none"> <li>42</li> </ul>	<ul style="list-style-type: none"> <li>14</li> </ul>	<ul style="list-style-type: none"> <li>33%</li> </ul>
		<ul style="list-style-type: none"> <li>6 month culture-conversion in MDR-TB treatment</li> </ul>	<ul style="list-style-type: none"> <li>Number of patients started on MDR-TB treatment with second-line TB drugs who are negative at 6 months</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>	<ul style="list-style-type: none"> <li>14</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>
			<ul style="list-style-type: none"> <li>Number of patients started on MDR-TB treatment tested at 6 months</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>	<ul style="list-style-type: none"> <li>19</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>
			<ul style="list-style-type: none"> <li>Percentage of patients receiving MDR-TB treatment who are culture negative at 6 months</li> </ul>	<ul style="list-style-type: none"> <li>12%</li> </ul>	<ul style="list-style-type: none"> <li>17%</li> </ul>	<ul style="list-style-type: none"> <li>74%</li> </ul>	<ul style="list-style-type: none"> <li>435%</li> </ul>
		<ul style="list-style-type: none"> <li>MDR-TB patients who have completed the full course of treatment and have a negative sputum culture</li> </ul>	<ul style="list-style-type: none"> <li>Number of MDR TB patients in a cohort who completed a course of MDR treatment and who fit the WHO criteria for cure or completed treatment</li> </ul>	<ul style="list-style-type: none"> <li>59%*</li> </ul>	<ul style="list-style-type: none"> <li>62%</li> </ul>	<ul style="list-style-type: none"> <li>67%</li> </ul>	<ul style="list-style-type: none"> <li>108%</li> </ul>
		<ul style="list-style-type: none"> <li>MDR-TB suspect case fatality</li> </ul>	<ul style="list-style-type: none"> <li>Numerator: The number of TB patients (Schedule I, II) with confirmed HR or R resistance, who died between the date of the lab request and the start of MDR treatment</li>   <li>Denominator: The total number of TB patients (Schedule I, II) with confirmed HR or R resistance</li> </ul>	<ul style="list-style-type: none"> <li>35%*</li> </ul>	<ul style="list-style-type: none"> <li>30%</li> </ul>	<ul style="list-style-type: none"> <li>33%</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>

		<ul style="list-style-type: none"> <li>▪ Proportion of re-treatment cases (all forms) submitting sputum for Culture &amp; DST</li> </ul>	<ul style="list-style-type: none"> <li>▪ Number of registered retreatment cases started on schedule II treatment plus Xpert RIF positive patients submitting sputum to CRL with a confirmed receipt</li> </ul>	<ul style="list-style-type: none"> <li>▪ Data not available</li> </ul>	<ul style="list-style-type: none"> <li>▪ TBD</li> </ul>	<ul style="list-style-type: none"> <li>▪ 127</li> </ul>	<ul style="list-style-type: none"> <li>▪</li> </ul>
			<ul style="list-style-type: none"> <li>▪ Total number of registered retreatment cases started on schedule II treatment plus Xpert RIF positive patients</li> </ul>	<ul style="list-style-type: none"> <li>▪ Data not available</li> </ul>	<ul style="list-style-type: none"> <li>▪ TBD</li> </ul>	<ul style="list-style-type: none"> <li>▪ 142</li> </ul>	<ul style="list-style-type: none"> <li>▪</li> </ul>
			<ul style="list-style-type: none"> <li>▪ Percent of retreatment cases all forms submitting sputum for culture and DST</li> </ul>	<ul style="list-style-type: none"> <li>▪ 20%</li> </ul>	<ul style="list-style-type: none"> <li>▪ 30%</li> </ul>	<ul style="list-style-type: none"> <li>▪ 89%</li> </ul>	<ul style="list-style-type: none"> <li>▪</li> </ul>

HSS		Outcome Indicators	Indicator Definition	Baseline	Target	Result	% Achieved
Expected Outcomes					PY2	PY2	PY2
1	Strengthen zonal and district management	Joint TB and HIV supervision	Number of joint supervisory visits performed by the zonal health office to target districts	8*	12	26	217%
		TB care and control strategic plan embedded within national health strategies	Yes or No: Country with National Health Strategy that includes specific TB care and control activities, specific for TB or as part of a wider strategy for communicable diseases in their overall national health strategies, budgeting processes and sector monitoring system (HMIS)..	Y	Y	Y	Y
		GOM Involvement	Yes or No: Current annual government budget allocates funding for anti-TB drugs	Y	Y	Y	Y
		General Supportive supervision	Number of district supervisory visits conducted according to the national supervisory standards in TB CARE II districts (in the quarter)	24	24	33	138%
		Health workers trained	Total number of people trained (to be disaggregated by gender and type of training during reporting)	0	500	1256	251%

		<ul style="list-style-type: none"> <li>Essential TB Laboratory Consumables</li> </ul>	<ul style="list-style-type: none"> <li>Cumulative number of days of stock out of microscope slides, TB stains and immersion oil at the district hospital pharmacies in TB CARE II districts</li> </ul>	<ul style="list-style-type: none"> <li>No data</li> </ul>	<ul style="list-style-type: none"> <li>0</li> </ul>	<ul style="list-style-type: none"> <li>205</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>
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M&E		Outcome Indicators	Indicator Definition	Baseline	Target	Result	% Achieved
Expected Outcomes					PY2	PY2	PY2
1	<ul style="list-style-type: none"> <li>Effectively monitor &amp; evaluate TB CARE II activities and disseminate best practices to inform national TB policy decision-making</li> </ul>	<ul style="list-style-type: none"> <li>National TB M&amp;E Plain is up-to-date</li> </ul>	<ul style="list-style-type: none"> <li>Yes or No: National M&amp;E plan is up-to-date based on global policy and M&amp;E frameworks.</li> </ul>	<ul style="list-style-type: none"> <li>Y</li> </ul>	<ul style="list-style-type: none"> <li>Y</li> </ul>	<ul style="list-style-type: none"> <li>Y</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>
		<ul style="list-style-type: none"> <li>NTP provides regular feedback from central to lower levels</li> </ul>	<ul style="list-style-type: none"> <li>Numerator: Number of quarterly feedback reports prepared and disseminated disaggregated by three levels. Denominator: Total number of recipient units/facilities at each level</li> </ul>	<ul style="list-style-type: none"> <li>0</li> </ul>	<ul style="list-style-type: none"> <li>50%</li> </ul>	<ul style="list-style-type: none"> <li>100%</li> </ul>	<ul style="list-style-type: none"> <li>150%</li> </ul>

## **4 PROJECT ADMINISTRATION**

### **4.1 Staffing and administrative challenges**

TB CARE II faced significant challenges when the former Chief of Party and the Senior Technical Advisor resigned in the second quarter of Project Year 2 and the subsequent delay in the recruitment of their replacement affected project implementation.

## **4.2 Environmental Monitoring and Mitigation Activities**

The TB CARE II consortium recognizes the need to ensure that activities conducted under the auspices of the project are designed to provide maximum good to the countries where they are implemented and to the extent possible, minimize any negative environmental consequences.

None of the activities implemented in the second year of the project required any special environmental impact mitigation activities. The team remains cognizant of this issue and will work closely with NTP and other stakeholders to ensure that the measures in the plan to reduce any negative consequences of the activities are implemented.

It is expected in Project Year 3 with the start of the renovation projects, the EMMP will be monitored and reported on quarterly.

## **4.3 Key Initiatives for Year 3**

In collaboration with the NTP, TB CARE II has selected 7 additional target districts namely Balaka, Chikhwawa, Zomba, Nsanje, Nkhotakota, Mzimba, and Lilongwe. The selection criteria included geographical spread, nearness to existing Project Year 2 districts to facilitate reach by TB CARE II district teams, presence of other partners working on HIV and health system strengthening and limited support on TB to the districts.

TB CARE II initiated consultation with SSDI, Bera, HATUP, BAYLOR and UNC at national level to identify areas of collaboration in TB Control activities. It is hoped that such consultations will provide a basis for collaboration at implementation level in the districts and this will help in maximizing the efforts and resources of the partners. Duplication of efforts will be avoided while allocating extra resources to some needy service areas. It will foster harmonization and not competition among implementing partners.

## **5 PROGRESS TOWARDS PROMOTING GHI GUIDING PRINCIPLES**

### **5.1 Woman and girl-centered approach**

TB CARE II has adopted a strategic approach in line with Malawi's GHI strategy with a focus on improving access to ART for TB/HIV co-infected patients—our best tool against HIV transmission—and working to reduce the burden of TB in children. Regarding gender-based health disparities and TB, the NTP has documented that TB case notification is higher among males than females (NTP, 2009). Although further research is necessary to elucidate the reasons for this disparity, it is expected that this is not an indication of higher TB burden among males but rather reflects greater barriers to accessing TB services for women. Several gender-specific TB implementation challenges have been identified in Malawi previously, including: 1) women's diagnostic pathway is prolonged/ impeded by social, cultural and economic barriers; 2) TB affects women during their most economically and reproductively active ages, impacting their children and families; and, 3) women are less likely to be diagnosed with TB than men. Considerable structural barriers may prevent women from accessing TB services, including the high opportunity costs incurred during access of the health system, gender inequality and gender-based violence that prevent women from leaving the home when sick and higher rates of poverty that make paying for transport to a health facility or leaving one's work prohibitive. Lastly, health workers may be biased against identifying women as TB suspects and encouraging women to submit quality sputum specimens for diagnostic testing.

TB CARE II has taken a woman and girl-centered approach to address these barriers by working to scale-up community-based diagnostic services, strengthening of the community health system and care delivery through the capacity building and motivation package provision for community volunteers and the support for community MDR-TB management & care located closer to women's homes and livelihoods, expediting the diagnostic pathway for women and girls through health worker training and mentorship, implementing novel diagnostics to reduce the time from suspect identification to TB diagnosis and promoting gender-equitable national TB policy as articulated in the 2011-2016 NTP Strategic Plan.

### **5.2 Coordination and Programmatic Integration**

TB CARE II is currently collaborating with NTP at the national level by participating in weekly management meetings, providing technical assistance on various programmatic challenges and specifically with issues related to Global Fund. TB CARE II also engaged and supported the DHMTs to strengthen their capacity to coordinate support program implementation, coordination and integration through regular quarterly program review meetings and joint supportive supervision, mentoring and monitoring. In addition, TB CARE II collaborates closely with partners and stakeholders that are planning TB/HIV activities.

Both USAID and CDC provide significant technical assistance under PEPFAR to the HIV program, including TB/HIV collaborative activities. TB CARE II regularly briefs USAID and CDC on the status of activities focusing on TB/HIV integration. The National AIDS Commission (NAC) and the MOH are also included in briefings, as they both continue to be major stakeholders in TB/HIV collaborative activities.

### **5.3 Encouraging country ownership and investing in country-led plans and health systems**

TB CARE II continued to work closely with the NTP to promote and facilitate country ownership of the project. In addition, TB CARE II participated on a regular basis on the deliberations and consultations of the NTP TB Technical Working Group (TWG) and TB/HIV TWG on one hand and on country-led planning, monitoring and review exercises.

The TB CARE II Senior TB Advisor was seconded to the NTP to provide direct technical support for NTP program implementation as well as NTP Global Fund grant implementation & monitoring.

The TB CARE II Project Year 3 workplan was developed in close consultation and participation with NTP to ensure that the work plan reflects the spirit and aspirations of country TB strategic plan of 2012-2016.

TB CARE II initiated consultations with partners such as SSDI, Bera, HATUP, BAYLOR and UNC at national level to identify areas of collaboration in TB Control activities. It is hoped that such consultations will provide a basis for collaboration at implementation level in the districts and this will help NTP to maximize resources of the partners in TB implementation especially at the district level.

TB CARE II also introduced “Peer review meetings” in the impact districts where all TB service providers and DHMT member’s together review and plan for TB in their districts. This will reinforce planning for TB and also ability to critically review their performance with less support from MoH.

## 6 SUCCESS STORIES

### **USAID TB CARE II PROJECT SAVES LIVES OF COMMUNITIES IN MANGOCHI: The experience of Catherine Pelani**

Access to health care services among rural, resource-poor people in low-income countries remains a major obstacle to TB control efforts. A critical factor is the need to improve access to diagnostic facilities, which in many rural areas double as TB treatment initiation and registration centres for TB patients. It is common for patients to travel over 50 kilometers to access TB treatment initiation services. Thanks to the USAID TB CARE II project, more than 31,558 people living near the Chilipa Health centre can now access TB diagnosis and treatment close to their communities.

One such person is 46 year-old Catherine Pelani, from Mphika village. She had this to say during a TB CARE II-organized TB open day in Chilipa: “*Ndikanafa ine kupanda anthuwa*” – “*I would be dead if it were not for TB CARE II.*”



Catherine Pelani, 46, thanks TB CARE II for saving her life.

In 2010, Catherine was diagnosed with pulmonary TB at Chilipa Health Centre, which is located 3 kilometres away from her village. At that time Chilipa Health centre was only a microscopy centre, lacking the ability to start patients on TB treatment. As a result Catherine had to go to Mangochi District hospital, which is more than 56 kilometres away from her home village to start TB treatment. After two months of intensive in-patient treatment, Catherine was discharged.

Unfortunately for Catherine, in early 2012 she fell ill again. A TB CARE II community volunteer visited her and offered to take her sputum to Chilipa Health Centre for smear microscopy. The results from microscopy confirmed Catherine had a relapse of TB. Catherine recalled her trip to the district hospital, and worried about the time and resources it would take to again travel the long distance to Mangochi District hospital. However, thanks to TB CARE II, Catherine was able to start treatment *the same day* at Chilipa Health Centre, just a 20 minute bicycle ride from her home. She was cured six months later.

Judith Kabichi, a TB CARE II community volunteer, escorted Catherine to the Health Centre on a bicycle provided by the project. She continued to provide support throughout the treatment period and even transported sputum samples to the health centre for follow up testing. TB CARE II supports its community volunteers, like Judith, with bicycles, training in TB control, sputum transportation boxes, and other resources to help them help members of their community such as Catherine. These TB volunteers enjoy their work and take pride in helping their communities.



A proud TB CARE II volunteer receiving a bicycle from TB CARE II in July, 2012

Catherine is grateful to TB CARE II and had this to say: “anthu amenewa agwira nthito ndipo sindakwanitse kuthokoza. Pano ndili bwino ngati wina aliyense mumudzimu” – “*these volunteers are so invaluable I am now cured of TB and live like any other person in the village*”. Catherine encouraged her community to support the work of TB CARE II while advising those who suspect that they have TB to utilize TB services in their area.

There are many people who still cannot access TB health care services closer to their homes. TB CARE II is working to improve access to TB diagnosis facilities and access to TB treatment. TB CARE II is helping to launch new TB initiation and registration centres by training health care workers, providing start up materials, and conducting mentoring support visits to the new centres. TB CARE II also supports TB diagnostics and facilitates

community linkages to health care services through a network of community volunteers. Chilipa Health Centre is one of 13 new TB initiation and registration sites that TB CARE II opened in 2012. Through this model, TB CARE II has been able to reach out to many communities. In the past year, a total 3051 TB cases were detected and patients notified in the six targeted districts of Neno, Ntcheu, Machinga, Mangochi, Mulanje and Phalombe.

## USAID/TB CARE II PROJECT WORKS WITH NTP TO IMPROVE TB PATIENT CARE AND TREATMENT



*TB CARE II District Coordinator Patrick Gomani adjusts a mask on tuberculosis patient Zefa Charles to prevent transmission of the disease during an ambulance ride.*

The National TB Control Program (NTP) in Malawi faces a number of challenges, including low case detection rates, high levels of HIV co-infection, and the presence of multi-drug resistant tuberculosis (MDR-TB). Effective TB control requires an integrated response to all of these challenges. The story of Zefa Charles illustrates how all of these factors come into play and how the NTP, through its partnership with the USAID TB CARE II Project, is working to address these challenges to improve TB patient care.

Zefa lives more than two hours away from the district hospital and 20 kilometers from the nearest health center. She lives at the end of a road that quickly degrades into little more than a muddy footpath. Her home is a small mud-walled hut that she shares with her grandmother, sisters, and children.

Over a year ago, Zefa tested positive for HIV at the health center. Her CD4 count — an indicator of immune system strength — was too high to begin antiretroviral therapy, and the tuberculosis bacteria in her lungs went unrecognized, presenting a constant risk of infecting her family. Sick and failing to get better, she spent many days traveling to the health center, only to receive bactrim, an antibiotic to prevent opportunistic infections.

“Bactrim, bactrim, bactrim,” she said, “until the day I was diagnosed with tuberculosis.” She received first-line drugs, but did not get any better; tests confirmed she had MDR-TB, a manifestation that does not respond to first-line treatments.

MDR-TB made an already difficult life much more challenging. “I don’t have food. I have no money. My children have no notebooks for school. The only food I eat is what these children have found,” she explained. Gaunt with sunken eyes, it was clear how significant a toll the difficult access to health services and lack of appropriate treatment options had taken on her.

However, Zefa was able to get the care she needed, thanks to USAID/TB CARE II and its partners. The NTP supplied the rare second-line drugs to treat Zefa, while a room was specifically outfitted at Neno District Hospital so she could benefit from the close oversight of clinicians.

“I’m feeling better because I will finally find the right treatment there,” she said, as she prepared for the long journey back to Neno to be admitted.

After six weeks of treatment and monitoring, Zefa was finally getting better and looking forward to returning home to finish her treatment, finally on her way to being free of TB.

Through its continuing efforts, the TB CARE II project is working to ensure that all patients, even challenging cases like Zefa, are able to access the care and treatment they need to live TB free.

## TB CARE II-SUPPORTED SPUTUM SMEAR FIXATION SITE IMPROVES COMMUNITY ACCESS TO TB DIAGNOSIS

Not long ago, it took four or more weeks for patients with suspected TB to get the results of their sputum smear microscopy tests.

Now, thanks to the efforts of the USAID-funded TB CARE II project, the Kapeni health centre in the Ntcheu district of Malawi is reducing turnaround time, lowering cost, and increasing community access to TB diagnosis through the introduction of a sputum smear fixation site at the health centre.

Kapeni health centre has a catchment population of 10,842. Prior to the establishment of the sputum smear fixation site, members of this community with suspected TB had to travel to the Ntcheu district hospital laboratory, located 16 km from the Kapeni health centre over a road that is bumpy, dusty, and difficult to travel. Due to high transport costs, many patients chose not to make the journey at all. Those who did often experienced high costs, poor turnaround time, and lost test results. In both circumstances, many suspected cases of TB went untested and undiagnosed.

Things began to improve in January of 2012, when Kapeni health centre was assessed by TB CARE II and earmarked for the establishment of a sputum smear fixation site. At this site, patients provide their sputum samples which are then fixed onto slides and prepared for transport by TB CARE II-trained health workers. These samples are then transported to the district hospital microscopy site for testing. This reduces the time and cost to the patient, which has led to an increase in the number of community members coming forward to give sputum samples.



*Secretary to the Village Health Committee Mr Kapeni praises the collaboration between the Malawi government and the USAID/TB CARE II Project.*

During a visit to the Kapeni health centre in May 2012, the TB CARE II project team was introduced to Mr. Kapeni, a community health leader and secretary to the village health committee. Mr. Kapeni was addressing community members, stressing the importance of their role in supporting active TB case finding through the use of the sputum smear fixation site.

Recalling how things had been before the site was established, Mr. Kapeni said:

*“I am happy an intermediate service has been brought closer to the facility and the community. I am also happy that now sputum samples are being smeared and only fixed sputum specimens are sent to the district for examination. Unlike before when we were required to travel by ourselves to the district for the sputum smear fixation and microscopy. Sometimes we were being forced to visit private CHAM hospitals for the same service of which now we are able to get it freely.”*

Community members thanked TB CARE II for bringing services closer to them and motivating them to play a more active role in the detection, management, and control of TB within their community.

## 7 APPENDICES

- Annex 1 – Year 2 EMMP

## Annex 1: EMMP TB CARE II Malawi

Activity	Mitigation measure(s)	Monitoring indicator(s)	Monitoring and Reporting Frequency	Party(ies) responsible	Year 2 Activity Report
Procurement, Storage, Management, and Disposal of Public Health Commodities, including TB drugs, HIV test kits, laboratory supplies and reagents	Ensure that local laws and regulations pertaining to the transport, storage and disposal of pharmaceuticals, medical material and laboratory supplies are reviewed and incorporated in the activity plan. Follow manufacturer recommendations regarding safe disposal of materials. Review medical and laboratory waste issues in training of health workers.	Existence of guidelines on disposal of medical and laboratory waste.  Expired items are disposed of correctly.	Monitored quarterly and reported annually	MOH NTP Project Manager Project Staff	TB CARE II storage and distribution of procurement was compliant with all existing guidelines.
Generation, storage and disposal of hazardous or highly hazardous medical waste, e.g., sharps, TB testing and laboratory-related activities	Ensure that waste management policies are reviewed and incorporated in the activity plan. Include medical and laboratory waste issues in training of health workers.	Proportion of targeted facilities disposing of bio-hazardous materials in MOH approved biohazard containers.  Proportion of facilities in targeted districts with infection control policy documents available to Environmental Health Officers.	Monitored quarterly and reported annually	MOH IP Focal Persons MOH District Environmental Health Officers Project Staff Project Manager	TB CARE II continues to ensure that health facilities ensure proper waste management and adhere to existing guidelines.
Small renovation of lab facilities in targeted districts including access to running water, stable power supply and adequate	Ensure that local laws and regulations pertaining to environmental safety are reviewed and incorporated in the activity plan.	Compliance document pre- and post-renovation completed	Monitoring as needed and reported annually	MOH Lab managers MOH District TB Officers MOH District Environmental Health	TB CARE II will begin renovation projects in Project Year 3.  Prior to commencement of

ventilation.	Require sub-contractor to observe local safety regulations and incorporate this into the contract.			Officers TB Care District Lab Officers TB Care District Coordinators	renovations TB CARE II will consult with the Ministry of Health's Department of Planning and Environmental Officers of the NTP and USAID/Malawi.
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