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TB CARE II in Malawi Annual Report, Project Year I

University Research Co., LLC
Bethesda, Maryland

**USAID TB CARE II Project in Malawi
Annual Report October 2010 – September 2011**

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

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LIST OF ACRONYMS

ACSM	Advocacy, Communication, 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
CLSI	Clinical Laboratory Standards Institute
COP	Chief of Party
CRL	Central Reference Laboratory
DIP	District Implementation Plan
DOTS	Directly Observed Treatment Short-course Strategy
DRTB	Drug-resistant Tuberculosis
DST	Drug Sensitivity Testing
FDC	Fixed Dose Combination
FIND	Foundation for Innovative New Diagnostics
GFATM	Global Fund to Fight AIDS, TB, and Malaria
GHI	Global Health Initiative
GLC	Green Light Committee
GOM	Government of Malawi
HBC	High Burden Country
HIV	Human immunodeficiency virus
IC	Infection Control
ICF	Intensified case-finding
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
NTP	National Tuberculosis Programme
PH	Project HOPE
PIH	Partners In Health
PLHIV	People Living with HIV
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

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. During year 1, consultative meetings were held in all 6-target districts with district MoH officials, NTP representatives and leaders of local government to introduce communities, government entities and other stakeholders to TB CARE II activities and receive feedback about local priorities relevant to TB described in each district's District Implementation Plan (or DIP).

The TB CARE II Malawi Project has completed its first year (February 14, 2011 – September 30, 2011) of implementation. Key achievements are detailed below:

- a) The NTP Review took place in February 2011 and was an important first step towards building consensus around program objectives with the NTP and key stakeholders working in the country.
- b) A meeting of NTP, MoH and key stakeholders was held in early March to discuss GeneXpert piloting and coordination among implementing partners. This meeting set the groundwork for follow-up meetings and the subsequent development of a GeneXpert diagnostic algorithm, which has been drafted by a GeneXpert working group hosted by TB CARE II and is in the final stages of adoption as of late October 2011.
- c) Technical and administrative staffs were recruited and key positions filled, including placement of the Senior NTP Technical Advisor (TA) and a Senior Monitoring and Evaluation (M&E) Officer.
- d) Dr. KJ Seung conducted a MDR-TB STTA visit and submitted a report to NTP and USAID with recommendations for improving the national community-based MDR-TB treatment program.

- e) The COP and Senior TA provided NTP with technical guidance in completing a draft of the 5-year Strategic Plan through regular consultative meetings. The 5-year Strategic Plan was finalized and submitted to MoH headquarters in late October 2011.
- f) Supported national microscopy center mapping exercise.
- g) Sponsorship of one Central Reference Lab (CRL) technician to attend a “Lab Methods for TB Culture and Identification” certificate course at the Africa Centre for Integrated Laboratory Training (ACILT) in South Africa.
- h) The National MDR-TB Implementation Plan was drafted by NTP with the technical guidance of TB CARE II and submitted to the Principal Secretary for approval.
- i) TB CARE II provided technical assistance to the NTP, MoH and the Global Fund R11 writing committee to prepare a first draft of the R11 TB proposal, including the logic framework, narrative and budget.
- j) Introductory meetings between TB CARE II and district-level leadership from MoH, NTP, Local Government and the Traditional Authorities were held in all 6 target districts to obtain district government and community buy-in for district-level activities and to allow a forum for community and government interests to be raised.
- k) Baseline assessments were begun at district level in the 6 TB CARE II target districts.
- l) Planning meetings were held with District Health Management Teams (DHMTs) to identify priority laboratory facilities in need of refurbishment to accommodate microscopy and clinical facilities in need of upgrading to enable TB/ HIV integration.
- m) Routine intensive mentoring of frontline clinicians, nurses, DTOs, ADTOs, HSAs and laboratory technicians and assistants was conducted by TB CARE II District Coordinators and Lab Officers in all 6 target districts.
- n) TB CARE II’s first GeneXpert machine was purchased at the end of September and arrived in Malawi in October.
- o) TB CARE II staff facilitated in-district supportive supervision for NTP TB and TB/HIV activities.

1 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 in Malawi a five-year cooperative agreement (from 2010 – 2015) 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 TB case detection rate (all forms) in TB CARE II focus districts; (2) decentralization of TB registration and treatment initiation to community hospital and health center level; (3) strengthening community-based mechanisms for TB case detection, contact tracing and adherence support; (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 1 (February 14 – September 30, 2011), TB CARE II Malawi achieved several notable results as outlined in the Executive Summary. While the successes from Year 1 are notable, the project fell short of Year 1 targets due to a late start date (the project officially started on February 14, 2011 while the work plan and budget were not finalized and approved until April 2011) and a longer than expected staff recruitment process. A more detailed overview of the activities completed is provided below.

Completed activities for Project Year 1:

- District-level situation analyses conducted with district-level leadership and DHMTs (August 1 – 14, 2011)
- Supported NTP and other stakeholders in compiling the first draft of the Global Fund R11 proposal.

- Supported the NTP in drafting and publishing the 5 Year Strategic Plan (completed October 2011) and Guidelines for the Management of TB (to be completed November 2011).
- The development of the national GeneXpert diagnostic algorithm was completed in September 2011. The algorithm is being presented to the MoH Laboratory and Diagnostics Technical Working Group on November 4, 2011.
- The project completed the procurement of GeneXpert in October 2011.

Activities that have started and are continuing into Project Year 2 in TB CARE II Districts:

- District baseline assessments (completion expected November 2011)
- Decentralization of TB registration and treatment initiation to the peripheral level in TB CARE II districts to be accelerated
- Procurement of Zeiss iLED fluorescent microscopes and completion of the microscopy mapping exercise to determine placement of iLED microscopes
- Situation analysis of logistics and supply chain management – short term TA
- Strengthening of existing community-base sputum collection points
- Implementation of “same day diagnosis” for TB
- Implementation of WHO 3I’s

Additional activities the project intends to complete in Project Year 2 in TB CARE II target areas:

- Strengthen laboratory quality-management systems, including internal quality control and external quality assurance, throughout the laboratory network through in-district mentorship.
- Upgrade infrastructure at selected high volume health facilities to accommodate enhanced TB/HIV service integration
- Train health workers on TB/HIV service delivery
- Improve CRL Lab Technician Capacity for performing culture, DST, fluorescent microscopy and LPA through training at supranational reference lab and on-site mentorship

1.3 Geographic Scope

TB CARE II Malawi implements activities in 7 target districts: Lilongwe, Mulanje, Phalombe, Machinga, Mangochi, Neno and Ntcheu.

2 RESULTS BY TECHNICAL AREA

2.1 Technical Area 1: DOTS Expansion and Strengthening

Achievements

Building Central Reference Laboratory capacity

- TB CARE II sponsored the training of one CRL lab technician in July 2011 at the Africa Centre for Integrated Laboratory Training (ACILT) in South Africa to complete the course “Lab Methods for TB Culture and Identification”.

Expanding and improving the smear microscopy network

- TB CARE II is supporting the implementation and scale up of iLED fluorescent microscopy nationally.

iLED fluorescent microscopy is a new technology recommended by the STOP TB Partnership. It offers the advantage of greater sensitivity over conventional light microscopy for the detection of tubercle bacilli in biological specimens. In order to strengthen the laboratory network, NTP and MoH have articulated a preference for microscopes that can perform both fluorescent TB microscopy and conventional light microscopy to assist in performing other routine laboratory diagnostic tests, including malaria microscopy, stool ova & parasite microscopy and urinalysis. The national target for fluorescent microscopy—20% of laboratories providing smear microscopy services using LED technology by 2015—is in line with international recommendations.

- TB CARE II participated in a microscopy site-mapping meeting in July 2011.

Representatives from HUTAP, CDC, NTP and the MoH Department of Diagnostics were in attendance. The results of a national microscopy mapping exercise were presented at the meeting. A total of 211 microscopy centers were operational as of July 2011. Partners pledged to procure LED fluorescent microscopes to help achieve the national target of upgrading 20% of centers to LED capacity by 2015.

- The procurement process for purchasing iLED microscopes was initiated.

Already in the early stages, quotations have been sourced from various suppliers and distributors. TB CARE II is employing a strategic approach to strengthening the laboratory network. New microscopy centers will be equipped with a dual-objective LED fluorescent/ light microscope. Functional light microscopes in existing operational, high-volume microscopy centers will be upgraded to LED fluorescent microscopy capacity through the procurement of a LED attachment. A source origin waiver request will be submitted to USAID in Q1 of year 2.

- Improving microscopy performance through intensive supportive supervision

TB CARE II district Laboratory Officers provided nearly a dozen supervision visits to microscopy centers in Neno, Ntcheu, Mulanje and Phalombe districts. Lab officers

distributed copies of MoH AFB microscopy SOPs, mentored lab technicians, assistants and HSAs on proper ZN microscopy and completed comprehensive site assessments.

Decentralizing TB registration and scaling up access to TB treatment initiation

- TB CARE II district teams worked with DHMTs to identify two health facilities in each of the 6 target districts to introduce TB treatment initiation services. TB CARE II teams will work with DHMTs to train health workers on registration and treatment initiation and will work with the NTP at zonal and central level to source registers, treatment cards and FLDs during Q1 of year 2.

Setting up a team to expand community-based active case-finding

- TB CARE II hired key technical staff—including two community liaison officers—and have scheduled interviews for the third (in Neno/ Ntcheu) to support community-based activities. TB CARE II also began reviewing the “Training Manual for Community Groups Involved in TB” developed by Project HOPE and NTP with USAID support to adapt it to the TB CARE II community-based strategy.

In the next reporting period, TB CARE II will begin refresher trainings for existing community sputum volunteers, identify and train new volunteers and strengthen existing community sputum collection points with the procurement of essential commodities. TB CARE II will build on the lesson learned from the successful USAID-funded Project HOPE TB and TB/HIV project recently completed in Mulanje and Phalombe districts.

2.2 Technical Area 2: PMDT

The MDR-TB survey to assess the prevalence of MDR-TB among retreatment and new smear positive cases has been completed and reveals a low prevalence of MDR-TB. A small proportion of samples are undergoing result verification at the SNL in RSA. However, available results reveal a prevalence of MDR-TB of 4% among smear-positive retreatment cases and under 1% for new smear-positive cases. As of August 2011, 33 MDR-TB cases had been identified through the prevalence survey.

Achievements

Providing expert PMDT technical assistance to Malawi to strengthen community-based care for MDR-TB

- In June 2011 Dr. KJ Seung conducted a MDR-TB STTA visit and submitted a report to NTP and USAID with recommendations for improving the national community-based MDR-TB treatment program. Dr. Seung identified areas for immediate intervention to improve program management and service delivery, including: 1) Creating clear guidelines for the community-based care of MDR-TB patients; 2) Selecting a small number of initial MDR-TB treatment sites and providing intensive clinical/programmatic

mentorship to help set up the MDR-TB program; 3) Focusing MDR-TB case finding efforts in the MDR-TB treatment sites; 4) Tightening supply chain management for second-line TB drugs; and 5) Moving forward with plans to build an MDR-TB ward in Lilongwe.

Supporting development of the “National Plan for Controlling MDR-TB 2011-16”

- Building on Dr. Seung’s MDR-TB STTA findings and the results of the DRS under TB CAP, TB CARE II supported the NTP in drafting the national implementation plan for drug-resistant TB control. The plan, which seeks to fill identified gaps in national drug-resistant TB management activities, was submitted to MoH senior management for approval in August 2011. The plan emphasizes the need to scale up access to testing for first-line drug resistance, effective infection control measures in high-risk clinical areas and high-quality community-based MDR-TB treatment and care.

In the next reporting period, TB CARE II will convene a national meeting to bring together front-line health workers and NTP officials to identify PMDT implementation barriers and to adopt a national guideline for the community-based care of drug-resistant TB, based on the recently published guide produced by TB CARE II under core activities. In addition, follow-up expert PMDT STTA will work with frontline health workers in Lilongwe to establish the country’s first MDR-TB Referral Clinic and to plan for a GFATM-funded MDR-TB training session for health workers in Lesotho.

2.3 Technical Area 3: TB/HIV

Achievements

Improving TB/HIV integration in target districts

- TB CARE II District Coordinators have intensively mentored clinical officers, medical assistants and nurses in target districts, reinforcing key TB/ HIV co-management concepts and particularly intensified case-finding (ICF) in line with the new MoH HIV guidelines.

Supporting Implementation of GeneXpert MTB/RIF

- A National GeneXpert Meeting was successfully hosted by TB CARE II in Lilongwe in August 2011 to formulate the first draft of the national GeneXpert diagnostic algorithm. A consensus algorithm was developed with NTP, MoH and partners (including CDC, USAID, WHO, CDC, College of Medicine) for inclusion in the R11 GFATM TB proposal. The proposal will be presented to the MoH Diagnostic/ Laboratory TWG for approval and national roll out on November 4.
- The project has successfully procured the first of three GeneXpert units that will be implemented in 3 district hospitals of the 6 target Districts in Southern Malawi. Upon

finalization of the national algorithm, GeneXpert will be implemented immediately thereafter.

2.4 Technical Area 4: Health System Strengthening

Achievements

Strengthening NTP management

- TB CARE II supported a successful NTP Program Review with USG, WHO and other stakeholders in February 2011. The final report was released in August 2011 and identified programmatic gaps that have provided critical guidance for the formulation of the NTP 5-year Strategic Plan as well as the R11 GFATM TB proposal.
- The project successfully placed a full-time Senior Technical Advisor at the NTP who provides daily guidance on the formulation of national policy, strengthens implementation of national operational plans and supports the drafting of critical national documents.
- The COP and Senior TA supported national TB policy formulation by regularly attending national-level TB, TB/HIV and HIV technical working group meetings.
- The project sponsored the Deputy NTP Manager to attend a WHO-organized training course on TB Prevalence Surveys with a focus on field operations in Cambodia from July 26 to August 4, 2011.

Filling the M&E Gap

- TB CARE II hired and placed an experienced Senior M&E Officer at NTP to oversee project M&E and to provide guidance for NTP M&E activities. The Senior M&E Officer will mentor NTP data officers and a soon to be hired MoH M&E officer. The Senior M&E Officer has several years experience working on national-level HIV and TB/HIV programs with Mothers2Mothers and UNICEF.

Improving the Sample Transportation Network

- Meetings were held with NTP to discuss sputum sample transportation from district-level to the Central Reference Laboratory. Beginning in FY 12 for GOM, NTP will cover the cost for a nationwide courier service, Axa transport, to ship sputum from district hospitals to the CRL. Consultative meetings were also held with the MoH Department of Diagnostics, CDC and CDC partners HUTAP and Riders for Health to pilot an *in-district* biological specimen transportation network in 2 TB CARE II districts—Neno and Machinga—during year 2. The vision is that coupling implementation of GeneXpert with this strengthened sputum transportation network will create programmatic synergies to improve TB case detection.

2.5 Challenges Encountered

The project has experienced a few challenges in the course of the startup of Year 1.

Late Start

The primary challenge was a slow start due to delayed approval of the Project Year 1 work plan and budget in April 2011. This significantly delayed recruitment of key staff and the implementation of activities. In response to this challenge, the project proposed to accelerate the timeline of the Project Year 2 work plan and budget development to ensure timely submission, review, and approval so not to cause any disruption in the implementation of year 2 activities.

Staff Recruitment

Difficulties were encountered in recruiting qualified technical staff. Several key positions including the Senior M&E Officer, the Senior TA and all lab officers were filled late due to a lack of qualified specialists in country with significant TB experience. As of this writing, all key technical staff with the exception of the community liaison officer in Neno/ Ntcheu had been filled.

Fuel Shortage

A critical fuel shortage in Malawi due to problems within GOM with securing foreign currency and timely delivery of fuel slowed down implementation of some activities, most notably field-based supervision and coordination meetings in Lilongwe.

3 RESULTS MATRIX

The performance monitoring plan will be developed further in year 2. The project's Senior M&E Officer has joined the team in October 2011 and will greatly boost M&E.

Performance Monitoring Plan							
Indicator	Data Source	Base-line	Target				
			2011	2012	2013	2014	2015
DOTS Expansion and Strengthening							
Treatment Success Rate for registered new SS+ cases	PMIS, TB Register	87%	88%	89%	90%	90%	90%
TB Cure Rate for SS+ cases	PMIS, TB Register	TBD	TBD	TBD	TBD	TBD	TBD
Case Notification Rate of new SS+ cases	PMIS, TB Register	35%	40%	50%	60%	70%	85%
% of population that understand TB and how and where to seek treatment	KAP survey	TBD					TBD
% population/districts covered by USAID supported project	PMIS, TB Register	TBD	TBD	TBD	TBD	TBD	TBD
# of children put on TB treatment	PMIS, TB Register	TBD	TBD	TBD	TBD	TBD	TBD
# of patients screened for TB	PMIS, TB Register	TBD	TBD	TBD	TBD	TBD	TBD
# new SS+, retreatment, and EPTB put on	PMIS, TB Register	21886	25000	30000	35000	40000	45000

treatment (as per prevailing annual estimates)							
% of laboratories with over 95% correct microscopy results	PMIS, Lab reports	TBD	TBD	TBD	TBD	TBD	100%
% of labs participating in EQA for smears	PMIS, Lab reports	TBD	TBD	TBD	TBD	TBD	100%
# of sputum collection centers established	PMIS	TBD	TBD	TBD	TBD	TBD	TBD
Number of private facilities providing TB services	PMIS	TBD	TBD	TBD	TBD	TBD	TBD
Number of TB patients diagnosed and treated through PPM	PMIS, TB Register, Referral Register	TBD	TBD	TBD	TBD	TBD	TBD
# of TB cases referred by private facilities	Referral Register	TBD	TBD	TBD	TBD	TBD	TBD
# of suspected TB cases referred by communities	Referral Register	TBD	TBD	TBD	TBD	TBD	TBD
# of SDPs experiencing stock-outs of specific tracer drugs	PMIS, Pharmacy records	TBD	TBD	TBD	TBD	TBD	<10%
# of diagnostic centers and culture facilities supported		TBD	TBD	TBD	TBD	TBD	TBD
# of staff trained on DOTS	PMIS, NTP records	TBD	TBD	TBD	TBD	TBD	>95%
# of lab technicians trained in microscopy	PMIS, NTP / lab records	TBD	TBD	TBD	TBD	TBD	>95%
TB / HIV Programmatic Services and Integration							
% TB patients with known HIV status (incl. counseled and tested for HIV)	PMIS, NTP	86%	87%	88%	89%	90%	>90%
% HIV positive TB patients started on CPT	PMIS, NTP	94%	95%	96%	97%	99%	100%
% of eligible HIV positive TB patients started on ART	PMIS, NTP, AIDS program	TBD	>90%	>90%	>90%	>90%	>90%
% HIV positive people screened for TB	PMIS, NTP, AIDS program	TBD	>80%	>90%	>90%	>90%	>90%
Programmatic Management of MDR TB							
# of MDR TB suspects identified	PMIS, MDR TB Register	35 (990)*	TBD	TBD	TBD	TBD	TBD
# of specimens tested for MDR at-risk patients	MDR TB Register	TBD	TBD	TBD	TBD	TBD	TBD
# of MDR-TB cases diagnosed and started treatment	PMIS, MDR TB Register	TBD	All	All	All	All	All
# of MDR patients received ambulatory care	PMIS, MDR TB Register	TBD	TBD	TBD	TBD	TBD	TBD
Health Systems Improved							
# of staff trained on management training	PMIS, NTP records	TBD	TBD	TBD	TBD	TBD	TBD
% of facilities that have an infection control plan	PMIS, NTP records	TBD	TBD	TBD	TBD	TBD	TBD
% of facilities complying with IC guidelines	PMIS, NTP records	TBD	TBD	TBD	TBD	TBD	TBD
# of staff trained on M&E	PMIS, NTP records	TBD	TBD	TBD	TBD	TBD	TBD
% of facilities received one supervisory visit at least once a quarter	PMIS, QA report	TBD	TBD	TBD	TBD	TBD	100%
# of facilities with a functioning QA system	PMIS, MDR TB Register	TBD	TBD	TBD	TBD	TBD	>95%

4 PROJECT ADMINISTRATION

4.1 Project Start up and Expansion

Major delays in start of Project Year 1 resulted in slow development of the work plan and budget. In addition, the delayed approval of the Project Year 1 work plan and budget prohibited the project from commencing any activities. However, the project is confident that it will be able to complete all activities that have carried over into Project Year 2 without any issues.

4.2 Staffing

The project experienced delays in hiring staff due to delays in the startup and approval of Project Year 1 work plan and budget. However, the project managed to hire or identify all key technical staff for all of the districts and is currently finalizing the hiring for the administration support staff which we fully anticipate to be complete during the first quarter of Project Year 2.

4.3 Administrative Challenges

The project experienced some delays in finalizing the policies and procedures respective to the partners in implementation of operations and administration in the districts. But with the key administrative staff in place it is fully expected that the startup will be complete, all key administrative processes will be in place, and the policies and procedures will be drafted and approved.

4.4 Environmental Monitoring and Mitigation Activities

(EMMP Table included in Annex)

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 first 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.

5 PROGRESS TOWARDS PROMOTING GLOBAL HEALTH INITIATIVES (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 possible 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 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 aims to use implementation of the WHO 3I's, support for joint district-level TB/HIV supervision and selected infrastructure renovations to improve and accelerate integration of TB/HIV services. The focus has been to promote integration across TB and HIV programs at all levels to improve uptake of ART and HTC among TB patients, uptake of IPT among pre-ART patients and increase intensified case finding at HIV service delivery points. Improving integration during year 1 has been limited. The main successes have been building into the R11 GFATM TB proposal a framework for strengthening of collaborative TB/HIV mechanisms and providing intensive mentorship to frontline HIV and TB providers in target districts.

To improve coordination among implementing partners during year 1, TB CARE II staff conducted introductory meetings with DHMTs and other district-level stakeholders to improve district-level coordination of TB and TB/HIV activities. TB CARE II will collaborate 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 meets regularly with USAID and CDC on the status of

activities focusing on TB/HIV integration. The National AIDS Commission (NAC) and the MOH will also continue to be included in briefings, as they both are major stakeholders in TB/HIV collaborative activities.

Finally, TB CARE II has collaborated with other partners in planning the implementation of novel diagnostics. Members of TB CARE II staff have met with laboratory technicians from Partners In Hope, which procured Malawi's first GeneXpert to glean lessons learned. TB CARE II has convened national workshops, attended technical working group meetings and worked alongside TB REACH, CHAI, MSF, College of Medicine, HUTAP and CDC to map out scale up of GeneXpert and iLED microscopy to avoid overlap of interventions and promote complementarity of activities. As outlined above, TB CARE II has worked with CDC, HUTAP and Riders for Health to strength the district-level laboratory and sample transport network. TB CARE II has coordinated with current and prior USAID/Malawi-supported health projects, including TB CAP and Project HOPE's TB project in Mulanje and Phalombe, to learn best implementation practices for TB.

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

Recent developments between GOM and bilateral and multilateral donors have changed the long-term aid outlook for Malawi into a more austere picture. Global Fund has decided to pull out of the SWAp mechanism and to become a discrete donor for R11 and beyond. What's more, the UK and GOM have suspended diplomatic ties with serious implications for DFID support of health and development initiatives in Malawi.

The country is currently in the fourth year of GFATM R7, which is the main source of funding for national TB activities. Unfortunately, the absorption of R7 funds during the first two years has been slow, and therefore 6 million USD of Phase I funds were lost in 2011. TB CARE II has compensated for the loss of GF Round 7 funding by incorporating some Phase I activities into the Y2 workplan. However, the loss of Phase I funding is expected to affect the NTP workplan for Phase II as well. TB CARE II has worked closely with the NTP to accelerate implementation of R7 activities, including planning for a MDR-TB training in Lesotho and supporting DHMTs to complete GF-funded microscopy center renovation projects in target districts. By virtue of the mandate for funding consolidation across rounds, the Global Fund round 11 proposal will be an opportunity for the NTP to holistically review its financial and activity implementation status so as to refocus its attention on priority activities. TB CARE II has provided major technical assistance in the writing of the R11 proposal—attending a writing team retreat, attending a TB Team preparatory meeting in Nairobi and accompanying NTP leadership in drafting the objectives, SDAs, activities and corresponding budget—and has strongly advocated for the NTP to take ownership of the proposal writing process.

A crucial issue is the ability of the NTP to implement GF activities. Failure to implement many of the GF activities led to the loss of some of Phase I funding, and further poor performance will jeopardize Phase II funding as well. Implementation of GF activities is now one of the major focuses of the NTP management. The Senior TA and COP have focused much of their time on providing supervision and technical assistance for national-level TB control activities, including keeping GF implementation on track, supporting writing of the 5-year Strategic Plan and assisting in the drafting of the National DR-TB Implementation Plan. The Senior M&E Officer, now hired, has just started to provide technical assistance to the NTP in the analysis of national-level

program data, strengthening national capacity to use evidence to inform quality policy decision-making.

6 SUCCESS STORIES

The project has devised a plan to produce one success story per quarter for Y2.



One of the major success stories from Y1 has been the rapid integration of TB CARE II staff into the NTP and MoH TB teams at district level. TB CARE II technical staff have established a fast rapport with government counterparts, enabling them to provide intensive on-site mentorship and supportive supervision. Mr. Huxley Kanyongoloka, an experienced District Laboratory Officer (on the right), is mentoring a district lab technician in rural Ntcheu district in central Malawi.

7 APPENDICES

Annex 1: Activities Planned for Project Year 1

Annual Action Plan & Budget

1. DOTS Expansion & Enhancement Expected Outcomes		Activities	Activity Description	Lead Partner	Other partners	Total:	Budget	Geographical coverage	Target groups
						Quarter			
1	Increase CRL capacity	1.1.1	Renew 2 year service contract for CRL safety cabinets	PIH		3		National	All TB patients
		1.1.2	Conduct needs assessment for establishing Line Probe Assay (Hain Test) at CRL	PIH	FIND, CLSI	3		National	All TB patients
		1.1.3	Procure select CRL consumables	PIH		3		National	All TB patients
2	Strengthen and expand the TB diagnostic network	1.2.1	Procure and install LED fluorescent microscopes in identified priority facilities & provide associated training in their use at zonal and district levels.	PIH		3		National	All TB patients
		1.2.2	Upgrade laboratory facilities at selected health centers.	PIH	PH	4		Target districts	All TB patients
		1.2.3	Support the national sputum transport network.	PIH		3		National	All TB patients
3	Expand community case-finding	1.3.1	Support expansion of community sputum collection points, including Community Therapeutic Centers (CTCs) and Nutritional Rehabilitation Units (NRUs).	PIH	PH	3-4		Target districts	All TB patients
2. PMDT Expected Outcomes		Activities	Activity Description	Lead Partner	Other partners	Total:	Budget	Geographical coverage	Target groups
						Quarter			

1	Support scale-up of MDR-TB treatment nationally	2.1.1	Perform detailed needs assessment of current MDR-TB program	PIH		3		National	MDR-TB patients
		2.1.1	Develop consensus on community-based care for MDR-TB	PIH	URC	3		National	MDR-TB patients
2	Develop guidelines and tools to support PMDT	2.2.1	Support development of MDR-TB monitoring system including reporting tools	PIH		3		National	MDR-TB patients

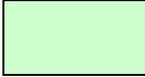
3. TB/HIV		Activities	Activity Description	Lead Partner	Other partners	Total: Quarter	Budget	Geographical coverage	Target groups
1	Expected Outcomes								
1	Integrate TB/HIV Services	3.1.1	Assess current status of TB/HIV integration and TB case finding.	PIH	PH	3		Target districts	Co-infected patients
		3.1.2	Support upgrade of selected health facility HTC rooms and TB in-patient space	PIH	PH	4		Target districts	Co-infected patients
		3.1.3	Support training and mentoring support for clinicians, nurses and TB office staff	PIH	PH	3-4		Target districts	Co-infected patients
		3.1.4	Support decentralization of TB registration to the community hospital and health center levels.	PIH	PH	3-4		Target districts	Co-infected patients
		3.1.5	Work with DHMTs to establish diagnostic pathway, including "cough corner", cough screening and triage at all health facilities.	PIH	PH	3-4		Target districts	Co-infected patients
		3.1.6	Train HSAs as HTC providers.	PIH	PH	3-4		Target districts	Co-infected patients
	Support implementation of GeneXpert	3.2.1	Pilot implementation of a novel diagnostic technology (e.g. GeneXpert), intended to improve case-detection among HIV/TB co-infected patients. The placement of the machine will be finalized in consultation with NTP and other partners.	PIH		3		Lilongwe	Smear-negative TB patients

4. Health services strengthening Expected Outcomes		Activities	Activity Description	Lead Partner	Other partners	Total:	Budget	Geographical coverage	Target groups
						Quarter			
1	Strengthen NTP management	4.1.1	National TB program review in coordination with WHO and the NTP	URC		2		National	All TB patients
		4.1.2	Place senior full-time advisor in the NTP, tasked with helping NTP with routine review of operational plans and program performance at various levels in the health system	URC		3		National	All TB patients
		4.1.3	Support NTP monthly management meetings	PIH	PH	3-4		National	All TB patients
		4.1.4	Provide TA to the TB and HIV/TB Technical Working Groups	PIH	PH	3-4		National	All TB patients
2	Strengthen zonal and district management	4.2.1	Support zonal and district level supervision that is integrated across HIV/TB services	PIH	PH	3-4		Target districts	All TB patients
3	Improve electronic TB records	4.3.1	Partner with Baobob and MOH on the content development of electronic TB and HIV/TB modules for touch-screen point of care reporting and recording (EMR).	PIH		3-4		National	All TB patients

Annex 2: EMMP, TB CARE II – Malawi

Activity	Mitigation measure(s)	Monitoring indicator(s)	Monitoring and Reporting Frequency	Party(ies) responsible
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
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
Small renovation of lab facilities in targeted districts including access to running water, stable power supply and adequate ventilation.	Ensure that local laws and regulations pertaining to environmental safety are reviewed and incorporated in the activity plan. Require sub-contractor to observe local safety regulations and incorporate this into the contract.	Compliance document pre- and post-renovation completed	Monitoring as needed and reported annually	MOH Lab managers MOH District TB Officers MOH District Environmental Health Officers TB Care District Lab Officers TB Care District Coordinators

Annex 3: Project Year 2 Work plan Matrix

 Y1 activity carried over - as-is
 Y1 activity carried over - slightly modified for Y2

1. DOTS Expansion & Enhancement	Activities	Sub-activities	Activity Description	Lead Partner	Other partners	Total:	Geographical coverage	Target groups
						Qtr		
1	Strengthen and expand community systems for TB control	1.1.1	Support expansion and strengthening of community sputum collection points and community volunteer cadre to scale up community-level active case finding, contact tracing, health education and adherence support	PIH	PH	3-4	Target districts	All TB patients
		1.1.1.1	Develop clear community volunteer selection criteria	PIH	PH	1	Target districts	All TB patients
		1.1.1.2	Refine training curricula, job aides and supervision plan	PIH	PH	3-4	Target districts	All TB patients

	1.1.1.3	Train community volunteers and their immediate supervisors, HSAs, on active-case finding, contact tracing, coaching patients on sputum production, specimen packaging and transport, community health education and adherence support	PIH	PH	3-4	Target districts	All TB patients
1.1.2	Conduct community sensitization and mobilization for uptake of TB services		PIH	PH	4	Target districts	All TB patients
	1.1.2.1	Disseminate NTP IEC materials to CBOs	PIH	PH	4	Target districts	All TB patients
	1.1.2.2	Train community volunteers to conduct health education talks on TB in their villages	PIH	PH	4	Target districts	All TB patients
	1.1.2.3	Conduct World TB Day Activities	PIH	PH	2	Target districts	All TB patients

2	Improve Facility-based TB case finding and management	1.2.1	Support revision and update of NTP guidelines for the management of tuberculosis in adults and children including development and dissemination of appropriate job aids.	PIH	URC	2	Target districts	All TB patients
		1.2.2	Train, mentor and supervise health workers and TB Officers on the new NTP guidelines.	PIH	PH, URC	4	Target districts	All TB patients
		1.2.3	Establish "cougher-corner" for cougher screening, triage and infection control at high-volume health facilities.	PIH	PH	3-4	Target districts	Co-infected patients
		1.2.4	Support in-patient TB quality improvement initiative including support for quarterly death audits, NTP non-admission policy and regular TB ward rounds.	PIH	PH		Target districts	All TB patients
		1.2.5	Pilot "spot-spot" two sputum sample strategy in a TB CARE II district.	PIH		3	Neno District	All TB patients
3	Decentralize Treatment and Initiation Registration	1.3.1	Support NTP decentralization plan for scale up of TB registration and treatment initiation sites	PIH	PH, URC	2	Target districts	All TB patients
		1.3.1.1	Work with NTP and DHMTs to identify 2 high-volume facilities per year in target districts to establish new TB treatment initiation sites, endeavoring to keep pace with ART scale-up and offer high-	PIH	PH, URC	2	Target districts	All TB patients

			quality microscopy, HIV services and TB services at the same site.					
		1.3.1.2	Train health workers at the new TB treatment initiation sites (i.e. community hospital and health center levels) on patient registration, medication distribution, side effect monitoring and TB medication stock management.	PIH	PH, URC	3	Target districts	All TB patients

2. Strengthening the Laboratory Network for TB	Activities	Sub-activities	Activity Description	Lead Partner	Other partners	Total:	Geographical coverage	Target groups
						Quarter		
1	Increase CRL capacity	2.1.1	Renew 2 year service contract for CRL safety cabinets	PIH		1	National	All TB patients
		2.1.2	Conduct needs assessment for establishing Line Probe Assay (Hain Test) at CRL	PIH	FIND, CLSI	1	National	All TB patients

		2.1.3	Support CRL WHO/AFRO One-star accreditation activities	PIH	URC		National	
		2.1.4	Procure select CRL consumables	PIH		4	National	All TB patients
		2.1.5	Develop CRL Quality Control and EQA Guidelines and SOPs	PIH	URC	2	National	All TB patients
		2.1.6	Support CRL EQA linkage with SNL	PIH	URC	1		
		2.1.7	Hire CRL TA to perform LPA situation analysis and support capacity building for CRL staff on sample decontamination, C/DST, sample registration/processing/result reporting, microscopy, QC/EQA, LPA	PIH	URC	1	National	All TB patients
2	Strengthen and expand the TB diagnostic network	2.2.1	Install and support LED fluorescent microscopes in identified priority facilities & provide associated training in their use at zonal and district levels.	PIH	PH	3	Target districts	All TB patients
		2.2.2	Conclude district-level microscopy service mapping exercise	PIH	PH	1	Target districts	All TB patients
		2.2.3	Upgrade laboratory facilities at selected health facilities.	PIH	PH	4	Target districts	All TB patients
		2.2.3.1	Install/maintain previously procured biosafety cabinets to enable Xpert implementation in Mulanje, Neno and Machinga District	PIH		2	Mulanje, Neno and Machinga District	All TB patients

		Hospitals.					
	2.2.3.2	Renovate 2 health center laboratories per target district to ensure adequate bench space, ventilation and running water/sink.	PIH	PH	4	Target districts	All TB patients
	2.2.4	Establish new microscopy centers.	PIH	PH	4	Target districts	All TB patients
	2.2.5	Conduct microscopy refresher and initial training in target districts.	PIH	PH	1	Target districts	All TB patients
	2.2.6	Improve the sputum sample transport network	PIH	URC	3	National	All TB patients
	2.2.6.1	Support NTP to maintain AXA sputum courier services for samples transported from district-hospital laboratories to CRL for C & DST	PIH	PH	4	National	Re-treatment cases and MDR-TB suspects
	2.2.6.2	Pilot initiative for district-level sputum transportation network strengthening in districts implementing	PIH	PH	3	Machinga, Neno	All TB patients

		GeneXpert (Riders for Health).					
2.2.7	Strengthen district-level microscopy supportive supervision and quality management system.	PIH	PH	4	Target districts	All TB patients	
2.2.8	Procurement of durable laboratory commodities (e.g. diamond pencils, protective equipment, xylene jars, slide holding boxes, wire loops, Bunsen burner, staining racks, drying racks, squeezer bottles, etc.).	PIH	PH	4	Target districts	All TB patients	
2.2.9	Emergency laboratory consumables (phenol, carbo fuschin, methylene blue, HTH, slides, immersion oil, etc.).	PIH	PH	4	Target districts	All TB patients	
2.2.10	Implement same-day diagnosis quality improvement initiative in TB CARE II districts.	PIH	PH	3	Target districts	All TB patients	
2.2.11	District-level Peer TB Quarterly Review meeting.	PIH	PH	4	Target districts	All TB patients	

3. TB/HIV	Activities	Sub-activities	Activity Description	Lead Partner	Other partners	Total: Quarter	Geographical coverage	Target groups
Expected Outcomes								
1	Integrate TB/HIV Services	3.1.1	In line with NTP review recommendations, TB CARE II will support upgrade of selected high-volume health facilities to accommodate enhanced TB/HIV service integration ("one stop shopping").	PIH	PH	4	Target districts	Co-infected patients

	3.1.1.1	TB clinical spaces including hospital wards and TB clinics will be renovated to accommodate rooms for HTC, secure drug & patient file storage and ART provision.	PIH	PH	4	Target districts	Co-infected patients
	3.1.1.2	ART clinics will be renovated to create space for patients to submit sputum samples, be registered as TB suspects or confirmed TB cases and receive TB medication.	PIH	PH	4	Target districts	Co-infected patients
3.1.2		Support training and mentoring support of clinicians, nurses, HSAs and TB officers on TB/HIV integration.	PIH	PH	2	Target districts	Co-infected patients
3.1.3		Intensify TB case finding in people living with HIV and AIDS	PIH	PH	4	Target districts	Co-infected patients
	3.1.3.1	Mentor health workers on ICF at HIV Care and ART clinics	PIH	PH	4	Target districts	Co-infected patients
	3.1.3.2	Support dissemination of MOH job aids for ICF	PIH	PH	4	Target districts	Co-infected patients

3.1.4	Support implementation of WHO-recommended facility-level Infection Control measures, including installation of environmental controls, in District Hospital in-patient wards.	PIH	PH	4	Target districts	All TB patients
3.1.4.1	Mentor DTOs and focal TB nurses to implement facility-level administrative TB controls as part of hospital IC guidelines, including triage of patients with TB symptoms, prompt transfer of hospitalized TB patients from general wards to TB ward, etc.	PIH	PH	4	Target districts	All TB patients
3.1.4.2	Ensure that published NTP IC guidelines are available in all health facilities.	PIH	PH	1	Target districts	All TB patients
3.1.4.3	Install ceiling fans and ultraviolet germicidal irradiation (UVGI) light fixtures in TB wards at Ntcheu, Neno, Machinga,	PIH	PH	4	Target districts	All TB patients

			Mangochi and Mulanje district hospitals.					
		3.1.5	Train selected TB providers and other health workers on HTC and PITC.	PIH	PH	3-4	Target districts	Co-infected patients
2	Support implementation of GeneXpert	3.2.1	Implement GeneXpert in 3 district hospitals to improve case-detection among HIV/TB co-infected patients. The placement of the machines and the diagnostic algorithm will be finalized in consultation with NTP and other partners.	PIH	PH	3	Target districts	Co-infected patients

4. PMDT		Activities	Sub-activities	Activity Description	Lead Partner	Other partners	Total: Quarter	Geographical coverage	Target groups
Expected Outcomes									
1	Support scale-up of MDR-TB treatment and improving implementation of community-based approach	4.1.1	Re-establish DOTS-Plus Coordination & Mentorship Team at NTP	PIH	URC	1	National	MDR-TB patients	
		4.1.2	Develop and implement sputum specimen tracking system for all MDR-TB suspects at district level for specimens sent to CRL for C & DST.	PIH	URC	2	National	All MDR-TB Suspects	
		4.1.3	As part of the training on the new NTP guidelines, ensure proper training of focal TB clinicians and nurses on the management of retreatment cases, including the timely collection and submission of sputum for C/DST.	PIH	PH	2	Target districts	All TB retreatment cases	
		4.1.4	Train 20 health workers on the management of MDR-TB			2	National	MDR-TB patients	

		cases.					
	4.1.5	Establish a MDR-TB "Referral Clinic" at Bwaila Hospital in Lilongwe.	PIH	URC	3	Lilongwe	MDR-TB patients
	4.1.5.1	Establish MDR-TB clinic schedule with one day per month.	PIH	URC	3	Lilongwe	MDR-TB patients
	4.1.5.2	STTA to mentor clinicians and nurses previously trained on MDR-TB in Lesotho.	PIH	URC	3	Lilongwe	MDR-TB patients
	4.1.5.3	Identify room at Lilongwe DHO TB clinic (in Martin Preuss) to use as MDR-TB clinic room.	PIH	URC	3	Lilongwe	MDR-TB patients
	4.1.5.4	Implement environmental controls in MDR-TB Clinic Room (UVGI, Fan).	PIH	URC	3	Lilongwe	MDR-TB patients
	4.1.5.5	Procure personal protective equipment (e.g. N95 Masks) for Health workers.	PIH	URC	3	Lilongwe	MDR-TB patients

		4.1.5.6	Establish clinic stations for weight/height, vital signs, blood draws, patient education, filling out recording forms, treatment supporter education, incentive payment, drug kit assembly, food package distribution, etc.	PIH	URC	3	Lilongwe	MDR-TB patients
		4.1.6	Pilot implementation of community-based management of MDR-TB in Lilongwe including establishing and training adherence support workers and supporting NTP to provide incentives and enablers to patients.	PIH		3	Target districts	MDR-TB patients
		4.1.7	Tighten and centralize second-line and ancillary drug supply chain for MDR-TB patients.	PIH	URC	4	National	MDR-TB patients
		4.1.7.1	Mentor and build capacity at NTP to package a month's supply of SLD and ancillary drugs for each patient.	PIH	URC	4	National	MDR-TB patients

		4.1.7.2	Establish closer links between SLD supply at NTP and peripheral facility or patient level, passing DHO pharmacies, to simplify the supply chain and reduce the chance of stock outs.	PIH	URC	4	National	MDR-TB patients
		4.1.8	Support implementation of WHO-recommended facility-level Infection Control measures, including installation of environmental controls, in District Hospital in-patient wards.	PIH	PH	4	Target districts	All TB patients
		4.1.8.1	Mentor DTOs and focal TB nurses to implement facility-level administrative TB controls as part of hospital IC guidelines, including triage of patients with TB symptoms, prompt transfer of hospitalized TB patients from general wards to TB ward, etc.	PIH	PH	4	Target districts	All TB patients
		4.1.8.2	Ensure that published NTP	PIH	PH	1	Target districts	All TB patients

			IC guidelines are available in all health facilities.					
		4.1.8.3	In accordance with NTP policy, support DHMTs to identify and/or renovate a side-room located in the District Hospital TB ward for hospitalization of MDR-TB cases.	PIH	PH	4	Target districts	All TB patients
2	Develop guidelines and tools to support PMDT	4.2.1	Support development of MDR-TB monitoring system including reporting tools	PIH		3	National	MDR-TB patients
		4.2.2	Support creation, publication and dissemination of guidelines for community-based care for MDR-TB patients.	PIH	URC	1		

5. Health services strengthening	Activities	Activity Description	Lead Partner	Other partners	Total:	Geographical coverage	Target groups	
					Quarter			
1	Strengthen NTP management	5.1.1	Support NTP and other stakeholders in drafting the Global Fund R11 TB proposal.	URC	PIH	1	National	All TB patients
		5.1.2	Provide TA to the TB and HIV/TB Technical Working Groups.	PIH	PH, URC	3-4	National	All TB patients

2	Strengthen zonal and district management	5.2.1	Support zonal and district level supervision that is integrated across HIV/TB services.	PIH	PH	3-4	Target districts	All TB patients
		5.2.2	Support one-time repair/maintenance of essential x-ray equipment at district hospital level.	PIH	PH	4	Target districts	All TB patients
		5.2.3	Procure emergency consumables to enable improved TB/HIV service integration, TB case detection and TB IC.	PIH	PH	4	Target districts	All TB patients

6. Monitoring & Evaluation	Activities	Activity Description	Lead Partner	Other partners	Total:	Geographical coverage	Target groups	
					Quarter			
1	Effectively monitor & evaluate TB CARE II activities and disseminate best practices to inform national TB policy decision-making	6.1.1	Exchange visits in TB CARE II districts to facilitate early dissemination of best practices.	PIH	PH, URC	4	National	All TB patients
		6.1.2	Share TB CARE II-Malawi lessons learned/best practices at International TB Conferences.	PIH	URC, PH	3-4	National	All TB patients