USAID TB CARE II Project

Core Annual Report Year 3
October, 1 2012- September 30, 2013

University Research Co., LLC

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APPENDIX 45

LIST OF ACRONYMS

AIDS	Acquired Immunodeficiency Syndrome
CLA	Canadian Lung Association
CLSI	Clinical and Laboratory Standards Institute
DOTS	Directly Observed Treatment Short-course
EHG	Euro Health Group
HIV	Human Immunodeficiency Virus
IPC	Infection Prevention and Control
ISTC	International Standards for Tuberculosis Care
MCH	Maternal and Child Health
MDRTB	Multi Drug Resistance Tuberculosis
M&E	Monitoring and Evaluation
MoH	Ministry of Health
NGO	Non Governmental Organization
NJGTBI	New Jersey Global Tuberculosis Institute
NTP	National Tuberculosis Program
PIH	Partners In Health
PMDT	Programmatic Management of Drug-resistant TB
PMTCT	Prevention of Mother to Child Transmission
QA	Quality Assurance
TAC	Technical Assistance Center
TAT	Turn-around Time
TB	Tuberculosis
URC	University Research Co., LLC
USAID	United States Agency for International Development
WHO	World Health Organization

EXECUTIVE SUMMARY

Over the course of the project's third year, TB CARE II supported the implementation of a broad framework of core-supported activities, continuing to build on lessons from the first two years of the project and conducting an innovative array of activities that included a blend of field work, analysis, online and distance learning, conferences, and development of much needed tools and materials. The activities were designed to blend the array of talents and skills brought by the consortium members and included inputs from stakeholders at the country level as well partners within the TB CARE I team.

Transitions between Year 2 and Year 3 activities did not happen at one smooth moment during the year, but rather were staggered as some activities faced different constraints caused by delayed communications, approvals, or simply longer-than-anticipated work requirements. Nevertheless, activity across the board was steady, and most issues were able to be resolved on a case-by-case basis. In addition to the activities in the core portfolio, TB CARE II partners and staff were very much involved in global leadership efforts related to TB control, playing active roles in the GLI, GLC, WHO and other stakeholders discussions. The project had a significant presence at the 43rd Word Lung Health Conference in Kuala Lumpur, Malaysia. TB CARE II also hosted the project's joint annual meeting this year at URC's headquarters, bringing stakeholders from both consortiums, USAID, CDC and WHO.

The project put an even greater effort this year on documenting and disseminating new materials and tools developed, as well as sharing successes. The Program Management Support Group has continued to look for the best ways to capture and share information, and in the meantime has streamlined processes for circulating activity reports and monthly updates. The monthly updates, which serve almost as a targeted newsletter distributed to a wide project listserv, have been particularly helpful in encouraging staff and partners to parse and package their results and have assisted the PMSG to disseminate outcomes. In addition, the project has focused heavily on promoting and disseminating information related to new tools and materials and successes via the consortium's professional networks and through online platforms. Along with the TB CARE II project website, the project supports the innovative Drug Resistant TB Learning network, which includes an array of online capacity building forums targeted to professionals addressing DR TB, and is developing the interactive learning functions of the site Design to Heal to provide public health professionals, policy makers and architects tools to design safer and more effective TB service delivery sites.

OVERVIEW

Progress and Significant Achievements

TB CARE II experienced a busy and overall successful year, involving a wide range of diverse activities. In addition to the activities in the core portfolio, TB CARE II partners and staff were very much involved in global leadership efforts related to TB control, playing active roles in the GLI, GLC, WHO and other stakeholders discussions. The project had a significant presence at the 43rd Word Lung Health Conference in Kuala Lumpur, Malaysia. TB CARE II also hosted the project's joint annual meeting this year at URC's headquarters, bringing stakeholders from both consortiums, USAID, CDC and WHO.

Some of the main achievements of the year are summarized below:

- Best practices in IPT delivery: TB CARE II completed a comprehensive systematic literature review on IPT provision to eligible children and adults, which is being used to inform the development of best practices for providing IPT in Southern Africa.
- DR TB Learning site: The first web course of 2013 "Drug-Resistant Tuberculosis Program Management" was held from March 12-28, 2013; there were 6 lectures on various programmatic elements. TB CARE II led a follow up webinar series *Drug-resistant Tuberculosis Program Management: The Basics* in Russian from May 14-30, 2013. This complemented the English version of the series which took place in March. The preliminary number of participants in 357.
- DR TB Scale up Meeting: The meeting was held March 4-5, 2013 before the joint annual meeting. Participants from TB CARE I and TB CARE II discussed in depth progress and barriers to the scale up of MDR TB services in Uzbekistan, Nigeria, Indonesia and Bangladesh.
- TB CARE II project participated in a high level consultation on "Eliminating the Catastrophic Economic Burden of TB Universal Health Coverage and Social Protection Opportunities" which took place in Sao Paulo, Brazil from April-29- May 1, 2013. TB CARE II presented findings from the case studies on health insurance systems in high burden TB countries, and discussed a framework for utilizing insurance-based financing to reduce expenditures for TB patients and linkages with social support systems.
- The training course in the management of MDR-TB/HIV co-infection has been completed and is available online, including 1 Facilitator Guide, 1 Participant Manual, and 8 presentations.
- The DRTB Suspect and Sputum-Tracking Tool was completed and is available online.
- Building Design and Engineering Approaches to Airborne Infection Control Training course: the project support seven participants (5 totally, 2 partially) to participate in this course at Harvard University.
- The TB CARE II Project, along with participants from the USAID TB Program South Africa, ILO, and the TB CARE I Project gathered in August in Johannesburg, South Africa to host a conference focused on improving the response to TB and TB/HIV workplace health in Southern Africa. The conference brought together 40 diverse stakeholders from Botswana, Namibia, South Africa and Swaziland, from policy makers to members of businesses and civil society agencies, in the hopes of fostering creative discussions aimed at improving TB and TB/HIV related occupational health services. Please see the following article for more information about the workshop: http://www.scoop.co.nz/stories/HL1309/S00010/are-healthcare-workers-tuberculosis-proof.htm

- Toolkit to Address Delays in TB Diagnosis: A hands-on toolkit was developed incorporating easy-to-read findings relating to the causes of patients' delays in seeking TB care, diagnosis, and treatment initiation and summarizing the obstacles to delay include patients, communities, providers, and the health system itself. The toolkit provides a visual planning tool for TB program managers to assess where the barriers causing delay are and for selecting appropriate interventions. In addition, it provides practical assessment tools to measure causes of delay among different audiences (TB patient, TB health care provider, health facility manager, and NTP/district level manager) as well as health clinic registers from the first signs and symptoms of TB to treatment initiation. Our sample tools are based on TB CARE II's field tested studies and findings in Bangladesh, Swaziland, Kenya, and Zambia and can be adapted to specific country and/or program needs. This toolkit also provides guidance on how to use the findings from the surveys for decision-making and provides examples of evidence-based, patient-centered interventions to address TB delays. The toolkit is available at: http://tbcare2.org/content/tb-care-ii-introduces-toolkit-address-timely-tb-case-detection-and-treatment
- Provider Compliance with TB Guidelines: Final study reports were completed for all three countries (Zambia, Kenya, and Bangladesh); findings have been shared with the MOH/ NTP and inputs incorporated. The reports have been revised and finalized. Following the studies, the main findings were incorporated into a Quality Improvement Handbook for TB services, which provides key principles and operational steps that will assist in improving the quality of TB and MDR-TB services in resource-constrained settings. Although considerable guidance exists to describe the development of QI systems, as seen by the provider compliance studies conducted by TB CARE II, there is still frequently a considerable "know-do" gap when it comes to provision of TB services according to guidelines. The purpose of this manual is to explain how to apply quality assurance and improvement strategies to help decrease the gap between TB quality of care standards and actual performance. Specifically, it provides guidance to Quality Improvement Coordinators to: 1) Identify and prioritize problems based on data and 2) develop and monitor action plans to solve problems. The handbook is available at: http://tbcare2.org/content/tb-care-ii-quality-improvement-handbook-tb-and-mdr-tb-programs
- Infection Control Building Design Casebook: In September, TB CARE II partner MASS Design undertook visits to MDR TB treatment sites in Swaziland and South Africa. The purpose of the visit is part of a larger study on best practices in design and administrative controls for infection control at TB facilities. Information gained during the visits will be developed as a case example on hospital design on the TB CARE II supported website, Design to Heal

Dissemination and Information Sharing

The PMSG in collaboration with BEA has worked steadily to include fresh content and promote the project website, while continuing to develop additional features to increase functionality and usability and to direct more users to the site. The use of the site as a TB resource is evident in the analysis provided below.

In addition to the TB CARE II project website, the project supports the innovative Drug Resistant TB Learning network, which includes an array of online capacity building forums targeted to professionals addressing DR TB, and is developing the interactive learning functions of the site Design to Heal to provide public health professionals, policy makers and architects tools to design safer and more effective TB service delivery sites.

Table 1. Analytics, TB CARE II website

FY 2013, October 1, 2012- September 30, 2013	
Visitors	3955
Visits	6,278
Page views	17,800
Average visit (min:sec)	4:27
New visitors	62%
Top countries for visits	Bangladesh, US, India, Philippines, South Africa, UK, Malawi, Thailand, Indonesia
Average pages per visit	2.8
Mobile device users	586
Top search words	TB CARE II Bangladesh, TB CARE II, tbcare2.org, PMDT, TB CARE, TB CARE 2, tuberculosis in Bangladesh
Top search engine	Google
Top pages viewed	homepage, country page Bangladesh, announcements, employment opportunities, national guidelines management TB children, resources-PMDT, RFP educational video, contact, resources-TB DOTS
Direct traffic	31%
Referral traffic	20%
Search engines	49%

Please see **Appendix 1** for details a breakdown of users and participants of the activities on the DR TB Learning Site.

Implementation status

At the end of the annual reporting period, the core activities were at various stages of completion as follows:

Table 2. Status of TB CARE II Core Activities

Year 1	Activity name	Lead partner	Status	Comments
1.1.3	Develop methods to evaluate the frequency and causes of delays	URC	Complete/ Closed	
1.1.4	Develop approaches for system wide quality improvement of TB services	URC	Complete	
2.1.1	Map existing network of PMDT centers of excellence and strengthen existing centers	PIH	Complete/ Closed	

2.1.2	Develop practical tools describing step by step implementation of community based PMDT	PIH	Complete/ Closed	
2.1.3	Develop training SOPs and training tools for the care and support of MDR TB patients	PIH	Complete/ Closed	
3.1.4	Develop and implement workers' compensation policy and package	URC	Complete/ Closed	
4.2.1	Develop and implement baseline survey tool to measure TB disease in health workers	Jhpiego	Complete	Ongoing dissemination continuing to take place
7.2	Create tools to enable annual strategic planning review/evaluation and build capacity of NTP to carry out these activities	GTBI	Anticipated completion Q2 Year 4	
7.3	Explore national insurance programs where TB can be included to motivate/incentivize universal coverage	URC	Complete/ Closed	
Year 2	**Activity name**	**Lead partner**	**Status**	**Comments**
1.1	TB Patient's Rights Charter	URC	Complete/ Closed	
1.2	Improving TB Care Services through IPT Administration to Eligible Children and Adults	Dartmouth	Complete/ Closed	
3.1	Continuation of Online Case Book for building designs for TB infection control	PIH	Complete/ Closed	
3.2	Continuation of Core Package Approach to Revitalizing TB Transmission Control	PIH	Complete	
3.3	Airborne Transmission Control Training and Clearinghouse for Engineers	PIH	Complete	
3.5	Testing of Guide for TB among HCWs	PIH/ PH/ URC	Complete	

4.1	Training course in the management of MDR-TB/HIV co-infection	PIH	Complete/ Closed	
4.2	TB CARE Clinical Fellowship for PMDT	PIH	Complete	
4.3	DR-TB Learning Site	PIH	Complete	
4.6	DRTB Suspect and Sputum-Tracking Tools	PIH	Complete/ Closed	
5.1	Identify best practices for early initiation of ART for TB patients	URC/ Jhpiego/ GTBI	Ongoing	
6.1	Health Insurance Toolkit	URC	Ongoing	
Year 3	**Activity name**	**Lead partner**	**Status**	**Comments**
1.5	IPT delivery to Children and HIV Contacts	Dartmouth	Ongoing	
3.6	Online Casebook Building Designs	MASS Design/ URC	Ongoing	Completion of additional cases in Year 4
3.7	AIC Course and Mentored Visits	PIH	Ongoing	
3.8	Occupational Safety for HCW	URC	Ongoing	Pending distribution of conference statement
3.10	Ndola Demo Site	PIH	Ongoing	Joint Activity with TB CARE I
4.8	Scale-up Meeting	PIH/ URC	Complete/ Closed	
4.9	PMDT Fellowship	PIH	Ongoing	Additional fellows in Y4 with remaining money
4.10	DR TB Learning Site	PIH	Ongoing	Will continue in follow on Y4 activity
4.11	DR TB Pocket Guide	PIH	Ongoing	Pending distribution of the guide
4.12	cPMDT District Planning Tool	URC	Ongoing	Pending distribution of tool
6.2	Ethical Patient Management	GTBI	Ongoing	
6.3	Insurance toolkit	URC	Ongoing	

Additional details related to progress and status of activities includes:

- CLA Impact Evaluation: In Year 3, in consultation with USAID, TB CARE II continued to provide support for CLA to conduct impact evaluations of USG funded TB activities, as determined by USAID. Per the request of USAID in Q3/Q4, additional funds were obligated to CLA to cover evaluations of TB in pregnancy.
- Several TB CARE II activities led by PIH, including the PMDT Fellowship, AIC course and mentored visits, and the DR TB Learning site are designed to be multi-year projects, which have built steadily over the course of the project and incorporate new participants each year. As such, from a practical standpoint there has been a bit of roll over from one year to the next, and budgets have necessarily been revised and shifted based, for example, on the number of participants identified for different components and to reflect changes in schedules in an effort to be responsive to stakeholders.
- A number of activities have undergone modifications during the course of the year, as plans become more refined in consultation with stakeholders and based on changes in local or global needs. Modification requests have been reported to USAID on a quarterly basis or as needed and are summarized in the activity descriptions below.
- Overall progress has been quite steady; a number of activities (specifically those related to tool development and distribution) have continued to spend remaining funds for printing and distribution of materials after technical activities have been completed. These have been summarized in the expenditure reports provided to USAID.

UNIVERSAL ACCESS

Year 1 activities

1.1.4: Develop approaches for system wide quality improvement of TB services

A. Progress Against Expected Outcomes

This activity consisted of analysis reports of provider compliance with adherence with TB standards and guidelines in Kenya, Zambia, and Bangladesh; as well as a TB Quality Improvement Manual. The expected outcomes were achieved and can be viewed on the TB Care II website (http://tbcare2.org/content/assessments-providers-adherence-tb-evidence-based-standards-and-guidelines-bangladesh-zambia as well as http://tbcare2.org/content/tb-care-ii-quality-improvement-handbook-tb-and-mdr-tb-programs):

- "Assessment of Provider Adherence to TB Evidenced Based Standards and Guidelines in Bangladesh" was finalized October 2012 by URC. Data tools were developed at URC headquarters and finalized in Bangladesh. Data was collected and analyzed in Bangladesh. The report was written jointly by the URC Bangladesh and headquarters team. The study was endorsed by the NTP, WHO colleges, civil surgeons at the district level, and Upazilla Health and Family Planning officers (UHFPO) at the sub-district level.
- "Adherence with TB Standards and Guidelines in Selected Health Facilities in Kenya" was finalized April 2013, in partnership with Jhpiego Corporation. Data tools were developed at URC headquarters and adapted to the local context in Kenya by Jhpiego. Data was collected and data analysis was conducted in Kenya. The report was written jointly by the Jhpiego and URC headquarters team. The study was endorsed by the Office of the Director of Medical Services, Ministry of Medical Services, Kenya and the Division of Leprosy, TB and Lung Diseases (DLTLD).
- "Assessment of Provider Adherence to TB Evidence Based Standards and Guidelines in Zambia" was finalized April 2013, in partnership with Jhpiego Corporation. Data tools were developed at URC headquarters and adapted to the local context in Zambia by Jhpiego. Data was collected and data analysis was conducted in Zambia. The report was written jointly by the Jhpiego and URC headquarters team. The study was endorsed by the Ministry of Health, at the National level and provincial level. In addition, input was provided by the National TB and Leprosy Program
- TB CARE II: Quality Improvement Manual for TB and MDR-TB Programs was finalized in June 2013 by URC.

B. Activities and Results

Between 2011-2012, TB CARE II conducted multi-country studies in Bangladesh, Zambia, and Kenya to gather information on: (1) Knowledge and skills of providers to provide standard TB services; (2) Providers' compliance with national and service delivery standards; (3) Existence of systems for maintaining TB service delivery capacity; and (4) TB patients' perceptions of quality of care received at facilities.

Some general findings included:

- While all health facility managers had access to adult TB guidelines, fewer had access to specific guidelines, such as for MDR-TB and TB-HIV.

- Some new guidelines had been developed by the NTP but not yet disseminated, illustrating a system delays in getting guidelines from the NTP to facility levels.
- While most facilities had functioning TB register systems in place, issues were found such as data from monitoring TB activities not being always used for decision-making, scheduling follow up, recording of symptoms and contact tracing mechanism was much less often done.
- TB drug shortages were reported by many health facility managers.
- There appeared to be a training-knowledge gap: most providers had been trained but many did not have adequate knowledge about TB, including those at highest risk of TB; treatment of TB in pregnancy; and TB testing in HIV+ patients.
- While all countries had a functional TB supervisory system in place, supervision was not always done as often as stipulated by guidelines and adequate follow-up was not always being provided.
- There were gaps in the information health providers communicated to TB patients or those with TB symptoms – especially having to do with information about side-effects of TB treatment; the need to have family members and close contacts screened for TB; not linking all patients to DOTS support; and for the countries with high HIV prevalence offering HIV counseling and testing to patients with unknown HIV status and referring HIV positive patients for ART.

More detailed findings are provided in each of the three country reports: Bangladesh, Zambia, and Kenya mentioned above.

Overall, it is clear from the findings that a number of challenges continue to affect the ability of health providers to adhere to clinical and programmatic guidelines to maintain a consistent quality of TB services. These challenges are related to provider skills and knowledge gaps, a lack of monitoring and supervision, and regular reviews of performance data. To assist in addressing these challenges, TB CARE II developed a Quality Improvement Handbook which provides key principles and operational steps that will assist in improving the quality of TB and MDR-TB services in resource-constrained settings. Although considerable guidance exists to describe the development of QI systems, as seen by the provider compliance studies conducted by TB CARE II, there is still frequently a considerable "know-do" gap when it comes to provision of TB services according to guidelines. The purpose of the manual is to explain how to apply quality assurance and improvement strategies to help decrease the gap between TB quality of care standards and actual performance. Specifically, it provides guidance to Quality Improvement Coordinators to: 1) Identify and prioritize problems based on data and 2) develop and monitor action plans to solve problems.

C. Challenges

A key challenge experienced during the course of implementing the compliance activity related to the fact that it took longer than anticipated to field the surveys in three different sites; set up separate data protocols; filed teams; and obtain in-country approvals.

D. Next steps/ Implications for Year 2 Activities

URC is working with its field programs (including non-TB CARE II field projects) to pilot and adapt the manual to country settings. New content including in depth case studies is being developed in collaboration with NTPs to further assist in utilization and uptake.

E. Dissemination of Lessons Learned

All reports are available on the TB CARE II website and were shared at international partner forums. In addition, the compliance reports were shared in-country with the stakeholders mentioned in Section A. Findings and outcomes from the study in Kenya were shared with the

NTP and a poster abstract was submitted and accepted for the 44th World Lung Conference in Paris, France.

Year 2 Activities

1.1 TB Patient's Rights Charter: Toolkit to Address Timely TB Case Detection and Treatment

A. Progress Against Expected Outcomes

The initial approach proposed in this activity involved development of tools to support the implementation of the TB patient's right charter, and was structured as a follow on to the Year 1 activity assessing the cause and frequency of TB-related delays (targeting both patient and provider delays, with an emphasis on determining the causes of patient delays). However, through extensive consultation with in-country teams and NTPs involved in the assessments, it was determined that the initial approach might not be feasible/ accessible, as there was some resistance from the NTPs related to the introduction of the TB Patient's Charter activity. In part this was due to sensitivities around implementation of activities to promote the patient's charter and a lack of clarity between TB-related patient's rights and broader patient's charter initiatives.

Countries participating in this activity also participated in the previous TB patient delay assessment from Y1 that found that TB delays due to patient's factors were from two to three times longer than TB delays due to health system factors. In consultation with country stakeholders and NTPs, it was determined that an implementable approach to improving patient centered strategies to reduce delays was needed that includes patient rights, was adequate to deliver TB awareness, communication and advocacy among public, patients, providers and decision makers.

B. Activities and Results

Consultative meetings were held with NTP representatives in Swaziland and Bangladesh to discuss the findings of the patient delay study and chart steps for strengthening patient-centered interventions to reduce TB delays in the context of the TB patient's charter.

A "Toolkit to Improve Timely TB Case Detection and Treatment" was developed which builds on the findings of the delay studies and provides practical guidance to countries to assist them in addressing programmatic interventions to target the causes of patient's delays in accessing TB services, in the context of the principles of the Patient's Rights Charter.

The purpose of this toolkit is to provide local TB and health program managers step-by-step assistance in understanding and identifying the possible reasons why people with TB symptoms delay in getting diagnosed and treated for TB. In addition, the toolkit provides guidance on interventions to address these delays. The document provides practical guidance for designing interventions addressing patient delay incorporating a patient centered approach for integrating and streamlining efforts to increase patient's service use and reduction of the time it takes them to use TB services.

This hands-on toolkit is composed of an easy-to-read description of why patients delay seeking TB care, diagnosis, and treatment initiation and that obstacles to delay include patients, communities, providers, and the health system itself. The toolkit provides a visual planning tool for TB program managers to assess where the barriers causing delay are and for selecting appropriate interventions. In addition, it provides practical assessment tools to measure causes of delay among different audiences (TB patient, TB health care provider, health facility manager, and NTP/district level manager) as well as health clinic registers from the first signs and symptoms of TB to treatment initiation. Our sample tools are based on TB CARE II's field tested studies and findings in Bangladesh, Swaziland, Kenya, and Zambia and can be adapted to specific country and/or program needs. This toolkit also provides guidance on how to use the findings from the surveys for decision-making and provides examples of evidence-based, patient-centered interventions to address TB delays.

C. Challenges

Mentioned in section A.

D. Next steps/ Implications for Year 3 Activities

This toolkit can be implemented in TB CARE II countries, so that country-level action plans can be developed to address TB delays.

E. Dissemination of Lessons Learned

Hard copies of the toolkit and materials will be produced and provided to in-country partners. Additionally, the toolkit can be directly accessed online through the TB CARE II website (www.tbcare2.org).

1.2 Improving TB Care Services through IPT Administration to Eligible Children and Adults

A. Progress Against Expected Outcomes

This activity was led by TB CARE II partner Dartmouth University. A significant portion of the work on this activity was completed in Year 2. In Quarter 1, Year 3, work was ongoing to complete and compile the systematic review. In Quarter 2, the review was completed and submitted. Some additional work related to dissemination/distribution took place in Quarter 3, and then activity shifted towards the 2nd phase (Year 3 follow up activity).

B. Activities and Results

Activity 1: Comprehensive Literature Review on Isoniazid Preventive Therapy (IPT) Provision to Eligible Children and Adults

A summary of the systematic review and its findings are provided here:

Objective

To systematically collect, appraise, and organise evidence from systematic reviews on structural interventions adopted by health care delivery systems to improve IPT delivery to children and people living with HIV. Examples of structural interventions are quality monitoring systems and revision of professional roles.

Methods

Dartmouth performed a comprehensive search of the following databases: Cochrane Database of Systematic Reviews, the Database of Abstracts of Reviews of Effects (DARE), and MEDLINE to August 15, 2012. We included systematic reviews that included studies with the following study designs: randomized controlled trials, controlled clinical trials, before-and-after studies, and interrupted time series. We included participants of all ages. We used standardized language to classify the interventions and to summarize results within and across studies.

Two review authors working independently used a standardized form to extract data and the AMSTAR instrument to assess methodological quality of each review.

Main results

We included six reviews (one Cochrane and five non-Cochrane reviews) of varied methodological quality.

The interventions that were examined in the studies of the selected systematic reviews were mostly in the category of changes in the setting/site of service delivery and the presence and organization of quality monitoring mechanisms. The main intervention in this latter category was provision of directly observed preventive therapy. Three reviews assessed studies of integration of IPT delivery into other health care services, either community care or HIV care. One review assessed studies that examined the impact of a revision of professional roles, specifically in the use of lay health workers to support self-administered IPT or provide directly observed therapy.

Most reviews reported a combination of outcomes related to adherence to IPT during treatment and a treatment completion rate. However, most reviews provided only a post-intervention treatment

completion rate without a baseline or comparison rate. Generally, there was limited evidence to demonstrate that most of the interventions studied had a positive impact on treatment completion.

Authors' conclusions

We assessed the evidence from six systematic reviews to identify the most effective interventions to improve IPT adherence. Overall, while most of the structural interventions adopted by organizations were not accompanied by improvements in IPT treatment completion, the integration of TB and HIV services yielded high treatment completion rates in some settings. This overview of reviews points to the need for further research of interventions in high-risk populations in TB prevalent settings to determine the most effective practices.

C. Challenges

The main challenge was the unexpected time needed to complete the early tasks. Specifically, completion of the search strategy and preparation of the protocol (including seeking comprehensive input from a number of Cochrane Review colleagues) was much more time intensive than anticipated.

D. Next steps/ Implications for Year 2 Activities

Next steps are covered in the Year 3 follow on activity discussed below.

E. Dissemination of Lessons Learned

We plan to disseminate our lessons learned at the end of this project via presentations and publication of our results. We also will produce the summary document described above which will be shared widely with TB CARE I and II partners.

Year 3 Activities
1.5 Improving IPT Delivery to Children and HIV contacts

A. Progress Against Expected Outcomes

This activity began with significant work in Quarter 2 and Quarter 3, pending completion of the systematic review (Year 2 Activity 1.2) but since the first site visit in September has been on track to meet the project deliverables with an expected completion date of June 2014.

B. Activities and Results

Activity 1: Implementing Best Practices of IPT Delivery to Child Contacts and HIV-infected Individuals

During the period May through August 2013, the Dartmouth team had several conference calls with the URC HQ and URC-Swaziland Country Director and Deputy Country Director for planning purposes. We began with a desk review of several background documents on Swaziland including the epidemiology of TB and HIV, clinical guidelines for the treatment of TB and HIV and related policy documents. The team discussed the current challenges identified with IPT delivery and reporting as described at the IPT Stakeholders' Meeting held on May 15, 2013. In addition, the team had several conference calls with the Baylor BIPAI team to understand their current activities in pediatric TB/HIV care and their recently awarded TB REACH grant which will focus on intensified case finding through thorough contact investigations and identification of child contacts eligible for IPT. Plans were made for a site visit by Dr. Lisa V. Adams to coincide with the IPT Stakeholders' Meeting (called the IPT Indaba) on September 4, 2013.

Dr. Adams traveled to Swaziland September 1-7, 2013. She presented the team's findings from their overview of systematic reviews (conducted a year 2 TB CARE II activity) at the IPT INDABA. She also visited three clinical sites to investigate how TB and HIV care is delivered at different facilities.

Since her site visit, the team has formulated a plan to assess IPT outcomes and assess barriers to care and preferences for proposed models of care. A Dartmouth student intern, whose travel and living expenses will be covered through a Dartmouth program, will be in Swaziland from January 6 until March 12, 2013 will assist with these activities.

C. Challenges

The main challenge has been the unexpected delay in startup. Therefore, we have requested a no-cost extension of the project so that our end date is now June 30, 2013. We are now on track for completing this task on time (revised timeline below).

Nov – Dec 2013: Finalize data extraction tool for chart review for patient outcomes; finalize questions on patient preferences for IPT delivery to be incorporated into patient satisfaction survey to be conducted by Baylor (BIPAI) team. Survey will be conducted in Dec 2013.

Jan-March 2014: Dartmouth intern Brendan Cronin is in Swaziland to collect data on patient outcomes and review results of patient satisfaction survey. If needed, some additional interviews with patients may be indicated to assess barriers and determine preferences.

Feb/March 2014: Dr. Adams will make second site visit to work with URC-Swaziland team in reviewing results and formulating proposal to NTP and NACP for implementing patient-centered IPT care at multiple sites

April/May 2014: Dr. Elizabeth Talbot will travel to Swaziland to work with URC-Swaziland team to finalize implementation and M&E plans for one or more models of patient-preferred IPT care delivery.

June 2014: Final summary report submitted

D. Next steps/ Implications for Year 4 Activities

Based on the results of the patient satisfaction survey, we will work with URC-Swaziland and the Ministry of Health to determine the best model(s) of IPT delivery to implement. We anticipate submitting a proposal for year 5 to fully implement these models and carry out the monitoring and evaluation to determine which models were most successful and why. This activity will involve assessment of patient outcomes and likely a set of qualitative interviews to determine how any model met the patients' needs or where improvements are needed to ensure desired outcomes.

E. Dissemination of Lessons Learned

We plan to disseminate our lessons learned at the end of this project via presentations and publication of our results. We also will produce the summary document described above which will be shared widely with TB CARE I and II partners.

INFECTION CONTROL

Year 2 Activities

3.2 Continuation of Core Package Approach to Revitalizing TB Transmission Control

A. Progress Against Expected Outcomes

Expected outcome 1: Continuation of Core Package approach to revitalizing TB transmission control

The refocused package of core transmission control components is centered on the FAST strategy: ***F****inding TB cases,* ***A****ctively,* ***S****eparating safely, and* ***T****reating effectively*; it incorporates the notion that effective treatment is part of TB prevention.

In program year three, the FAST strategy promotional package was developed to provide a comprehensive introduction to this refocused approach. The primary purpose of the promotional package is for NTP Managers, District TB Officers, Facility Managers, and other decision-makers to understand what the strategy entails, that it is flexible, and can be applied in a variety of congregate settings. In addition to focusing health care workers on the most effective interventions, the strategy can also be extrapolated to national policy where it can serve as a framework for allocating resources to interventions that will have the greatest impact on reducing TB transmission.

The promotional package is composed of a booklet, pocket cards, posters, and a button that is worn by the health care worker that serves as a visual reminder of the need to *act FAST*. The materials are available in English and Spanish digitally; a limited number of print copies of the former are also available. To view and download the materials, please visit: https://drtbnetwork.org/fast-tb-infection-control-strategy-core-package.

B. Activities and Results

Activity 1: Develop a strategy and materials for a refocused package of core components of TB transmission control

The FAST strategy was developed in program year two and the promotional materials were developed in program year three. The materials are available in English on the DR-TB Training Network and will be soon available in Spanish as well. The English version is also available in print and by early November 2013, 40% of the 300 copies had been distributed to TB CARE I and II partners, to the participants of the *Building Design and Engineering Approaches for Airborne Infection Control* Course to bring back to their respective work places, at the 44th World Conference on Lung Health in Paris, and through requests received on the DR-TB Training Network website.

A generic implementation protocol has also been developed but is not yet publicly available; it will accompany the promotional package once it is further refined with experience from Bangladesh.

Activity 2: Develop a campaign to promote adoption of the core components at facility-level

This activity was first proposed in program year one, put on hold in year two, and was not a part of the no-cost extension into program year three. The FAST strategy is currently being implemented in Zambia within the TB CARE I-led Ndola Demonstration Project and in Bangladesh through TB CARE II. The strategy was also introduced to the TB CARE I Country Directors at their annual planning meeting held in The Hague in May 2013; several country programs included FAST in their work plans for program year four; a final list of implementing countries is not yet available as USAID still needs to approve some of the proposed work plans.

C. Challenges

The biggest challenge in the development of the FAST strategy materials was deciding what to include given the various settings that this strategy could apply to and levels of complexity in terms of protocols and interventions.

In regards to implementing the strategy, there are several challenges:

- In some facilities, implementing FAST will result in additional work load as some tasks like cougher identification/triage might not previously have been performed by anyone, additional patients may need to be screened, tested, and treated for TB/DR-TB, and laboratory and data collection forms may need to be revised to capture process information and add GeneXpert testing, among other adjustments. It is important to ensure that the health care team can take on additional work while emphasizing that more patients diagnosed and treated should eventually reduce their workload as transmission to other patients in the facility or to other community members is reduced.
- There are currently no funds within the TB CARE II budget to enable technical assistance to be carried out for the implementation of FAST in TB CARE I countries. The TB CARE I PMU will try to identify country funds but it may be difficult at this stage.

D. Next steps/ Implications for Year 4 Activities

The FAST strategy will be implemented in several TB CARE countries as part of the support to the NTPs, and as a demonstration project in Vietnam led by URC. Given the need to adapt the strategy to a specific context, no further activities are planned on the generic materials. Each TB CARE country program will need to decide if the focus will be TB, DR-TB, or both, in general or TB specific settings, and how the available resources can best be utilized to ensure rapid diagnosis and rapid start of effective treatment.

E. Dissemination of Lessons Learned

The experience of TB CARE II Bangladesh project in the implementation of FAST was shared with the Union TB IC Working Group meeting at the 44th World Conference on Lung Health. Preliminary data and experiences from the first three months of implementation were shared.

Year 3 Activities
3.6 Casebook for Health Facility Planning

A. Progress Against Expected Outcomes

Planned outcomes for 2013 included the continued documentation of existing approaches to airborne infection control strategies within building designs in a variety of settings. In 2013, two additional MASS Design Group team members received training and certification from the Harvard School of Public Health Airborne Infection Control course and carried out six targeted evaluations of health facilities in South Africa and Swaziland. These countries were selected because they have among the highest TB prevalence rates in the world.

At each of the sites chosen for targeted case studies, an in-depth facility evaluation was conducted, incorporating building performance assessments as well as interviews and discussions with healthcare administrators, facility managers, clinical staff, and operations/maintenance staff. A standardized questionnaire was used to gather information with respect to the facilities' usage, the specific contextual conditions of the site, and building performance issues such as circulation, ventilation, lighting, energy, and maintenance. These additional documented case studies were subsequently added to the existing online Casebook website.

Through these Casebook evaluations and MASS's own work, MASS has continued to build a database of research on infection control and building methods.

B. Activities and Results

Over the last year, MASS completed a range of activities in support of the Casebook project. These have been summarized as follows:

<u>M&E/Data Collection</u>

- Refined facility evaluation questionnaire based on past visits
- Hired M&E specialist to help identify and study an expanded range of impacts and relationships between the physical environment, airborne infection control, and health outcomes.

<u>Documentation + Content Development</u>

- Visited and assessed 7 facilities in South Africa and Swaziland—including 3 facilities in KZN, which has one of the highest TB prevalence rates in the world. At one general hospital MASS visited, 60-70% of inpatients admitted to the facility were TB positive.
- Documented and added 6 case studies to the Casebook website. These included written evaluations, lessons learned, photographs, as well as drawings of successful airborne infection control strategies.
- Produced a facility assessment report and follow-up recommendations for the Swaziland National TB Hospital, as requested by the facility administration.
- Completed the development of Health Infrastructure Standards for Liberia (not through TB CARE II funds), which included the following relevant content, which may serve as a resource for the "Framework" portion of the Casebook site:
    - Building layout standards for clinics, health centers and hospitals with regards to infection control
    - Mechanical and natural strategies for ventilation in tropical and wet climates
    - Standards for finishes and fixtures relating to infection control and hygienic practices.

Website Development

- Worked with the original web developer to fix minor technical user interface issues.
- Began recruitment process for new web developer. Website work next year will focus on upgrading the site and optimizing user functionality and navigation.

Outreach

- Trained 2 more MASS team members in airborne infection control methods and building design concepts through the Harvard School of Public Health course, "Building Design and Engineering Approaches to Airborne Infection Control". The course was used as an opportunity to build contacts with a range of stakeholders working with airborne infection control in limited resource settings, from various Ministry of Health administrators and medical staff to engineers to architects focusing on health infrastructure.
- Participated in and advised projects undertaken by the Fogarty research group led by Ed Nardell, titled "Innovative Interdisciplinary Approaches to Sustainable Airborne Infection Control".

C. Challenges

One of the main challenges in terms of facility assessment continues to be the lack of quantitative airflow measurements. Better airflow measuring methods are not just needed for the project at hand, but have been a longstanding target of engineering and health research initiatives which continue to seek simple yet accurate tools for evaluating the directionality, diffusion, and evacuation of contaminated air within spaces. MASS is part of a 5-year Fogarty research initiative led by Ed Nardell, and will leverage its participation in the project to develop better tools for assessing ventilation in case study facilities.

The lack of strong technical support infrastructure (such as web hosting, server drives, and server optimization) has also limited the development and growth of the Casebook site. In the next year, MASS plans on investing in additional technical support infrastructure to increase the robustness of the site.

D. Next steps

MASS Design will continue collecting case studies and complete the Year 3 activity in Year 4 using remaining funds. There is no new (separate) activity planned for Year 4.

M&E/Data collection

As MASS expands the depth and breadth of project content, it will be imperative to develop more robust processes and tools for documenting, collecting, and evaluating case study data. We will seek to:

- Document an expanded range of impacts and relationships between the physical environment, airborne infection control, and health outcomes.
- Research ways to improve our immersive engagement and data collection processes—including better ways of measuring data and interviewing facility stakeholders.
- Develop more refined questionnaire and report forms for evaluating facilities.

Documentation/Content Development

Focused case study areas for 2014 have been selected, and planning is underway to identify sites and coordinate travel. Four high burden TB regions identified by URC, TB CARE II, USAID, and WHO have been prioritized:

- Cambodia, Thailand, Vietnam
- India/Bangladesh
- Ethiopia
- Brazil/Bolivia

In addition to strengthening content collection, MASS will also aim to strengthen how content is communicated and represented. We will consider adding interactive teaching tools to the Casebook website that could engage users in new ways. Examples include:

- An assessment toolkit, published on the website that could allow users to evaluate their own facilities.
- Anonymous "negative" case studies showing problematic scenarios and various solutions (action steps or priorities) that could be applied to resolved them.

Website Development

In the upcoming year, MASS plans on optimizing the functionality of the Casebook website in the following 3 ways:

- Interface design will be improved to ensure better, simpler functionality—enabling greater user access.
- Database management will be improved to optimize content storage and calibrate the interface as the system grows.
- Graphic branding will also be strengthened to create increased user appeal.

E. Dissemination of Lessons Learned

Once the website and case studies are developed to a more robust level, MASS will focus on strategic methods for promoting the Casebook resource—with the ultimate goal of reaching a wider global constituency and maximizing the project's impact. Potential opportunities have been identified, and include but are not limited to:

- Creating publicity for the site through lectures, blogs or articles
- Reaching out to Ministries of Health and global health professional networks
- Reaching out to architectural/engineering associations
- Embedding additional outlets for user feedback into the site
- Creating an abbreviated introduction to the Casebook project that would very simply summarize what the intent of the platform, and how design relates to airborne infection control.

3.7 AIC Course/Mentored Visits

A. Progress Against Expected Outcomes

Expected outcome 1: IC design and engineering controls capacity building through HSPH summer course

The *Building Design and Engineering Approaches to Airborne Infection Control* Course was held at the Harvard School of Public Health Executive and Continuing Professional Education Center (HSPH ECPE) in Boston, MA, USA, from August 5-16, 2013. There were 42 participants, of which, TB CARE II fully funded 5 people and partially funded 1 person; in addition, 1 more person that received a full tuition scholarship from HSPH was supported by TB CARE II for accommodation.

Expected outcome 2: Trained and mentored professionals on environmental controls

The TB CARE I consortium led 2 mentored visits during the program year falling short of the target of 10-12 mentored visits. It was difficult to identify suitable trips for mentoring.

Expected outcome 3: TB Design Roster (IC consultant clearinghouse)

The TB Design Roster is a GHDonline-based tool for identifying TB Infection Control consultants. The beta version has been launched and feedback from users is being encouraged to ensure that it will be a useful resource. Consultants can complete a profile with some basic information including where they work, area(s) of expertise, and recent projects completed, or in progress, and clients can email consultants directly for more information and references.

B. Activities and Results

Activity 1: Training course *Building Design and Engineering Approaches to Airborne Infection Control* (AIC Course)

The AIC Course covers technical aspects of ventilation, filtration, UVGI air disinfection, building design, respirator use, fit-testing, administrative controls, active case finding, and the impact of early diagnosis and effective treatment on infection transmission. It has been offered annually for the last six years in Boston, MA, USA and provides hands-on access to a ventilation laboratory at Northeastern University.

The seven TB CARE II supported participants -

- Came from Kazakhstan, Haiti, Malawi, Ethiopia (the two people partially supported), Lesotho, and Kenya.
- There were four people from National TB Programs including the National PMDT Coordinator of Kenya and the NTP Manager of Ethiopia; two people work with NGO's directly supporting public sector TB services; and one person works with an inter-governmental organization (WHO) in a TB and TB/HIV role.
- There were five medical doctors, one engineer, and one non-medical public health professional working in an infection control role.

Activity 2: Mentored field visits

The mentored field visits (MFV) are intended to provide nascent infection control consultants with capacity building opportunities to accompany more experienced infection control professionals during the course of their work. This activity is led by TB CARE I but other partners can also propose mentoring opportunities. In year three, two MFVs were conducted during the course of TB CARE I activities.

Activity 3: Clearinghouse on GHDonline.org

The beta version of the TB Design Roster was launched in quarter four. It was introduced to the participants of the AIC Course in August 2013 who were encouraged to register and provide feedback. It was more widely introduced to the TB IC Community on GHDonline in October 2013. It will be monitored by the moderators of the TB IC community on GHDonline. The moderators are Ed Nardell (Harvard/PIH), Paul Jensen (CDC), and Grigory Volchenkov (Vladimir Oblast TB Dispensary).

C. Challenges

It has been difficult to identify suitable mentoring trips. In year four, TB CARE I will explore the possibility of having more than one mentee on a trip. It is also challenging to find adequate funds for the AIC Course each year and ensure that candidates from resource-limited settings are able to attend.

D. Next steps/ Implications for Year 4 Activities

All three IC capacity building activities will be conducted in year four. The TB Design Roster will be a more mature resource and metrics will be collected on its usage and the characteristics of the users.

E. Dissemination of Lessons Learned

Information is shared on GHDonline and through partner networks.

3.8 Occupational Safety Meeting

A. Progress Against Expected Outcomes

Expected outcome 1: Develop priority steps for adoption of Occupational Safety approach for workers at risk of TB

B. Activities and Results

Activity 1: Consensus building conference to outline steps involved in adoption of OS measures for workers at risk of TB

There is a growing recognition of the impact of TB and HIV on the workforce, including decreased productivity of workers, absenteeism, high turnover, and the risk of further infection. Moreover, TB infection and disease are important occupational hazards for certain key sectors such as health care workers, particularly those in middle and low income countries with high TB prevalence. TB related morbidity and mortality among healthcare workers often leads to inadequate staffing levels, poor quality of care, increased healthcare costs and stigma or discrimination of healthcare staff.

Implementation of TB and TB/HIV control in the workplace in high burden setting requires partnership and close collaboration between multiple government and civil society partners to define objectives, interventions, and responsibilities. Some high burden TB countries such as those in Southern Africa have important experiences adopting and implementing workplace and occupational safety approaches related to HIV, which can be learned from. In order to move forward with the adoption and implementation of workplace and occupational safety measures for TB and TB/HIV control, momentum needs to continue and discussions with stakeholders involved should be initiated to move towards agreement on tangible, prioritized interventions.

In August 2013, the TB CARE II Project, with participation from USAID TB Program South Africa, ILO and the TB CARE I Project conducted a two-day consultative workshop titled "Strengthening and Scaling up the Response to TB and TB/HIV Workplace Health in Southern Africa– Where do we stand? Where do we go from here?" in Johannesburg, South Africa. The purpose of the meeting was to bring together diverse stakeholders to discuss and initiate further debate to improve TB and TB/HIV-related occupational health services including prevention, treatment, care, and support services in workplace settings which pose a high risk of TB transmission for employees. The goal of the conference was to share experiences and build consensus around the need for multi-sector action to design and implement TB and TB/HIV occupational health programs in key employment sectors including prevention, treatment and care programs and linkages to social support.

Approximately 40 participants attended from four countries (Namibia, South Africa, Swaziland, Botswana) and the region, covering a range of policy makers including the NTP/ MOH and other ministries (e.g., labor, social welfare) as well as businesses and civil society agencies with experience and expertise in the area of TB infection control, workplace TB and TB/HIV interventions, and occupational health and safety. Many of the representatives from the countries included in the workshop are implementing and scaling-up innovative practices on TB and TB/HIV workplace activities.

An outcome statement was drafted following the meeting, highlight key actions agreed on by the participants to further discussion, policy, and intervention needs around this topic.

C. Challenges

The activity went smoothly and generated considerable interest. A programmatic challenge relates to identifying the appropriate means of advancing the issue of occupational risk for TB, and developing sustainable partnerships with relevant ministries and the private sector to produce concrete actions.

D. Next steps/ Implications for Year 4 Activities

TB CARE II has not proposed a follow on activity on this topic but will continue promoting the outcomes of the meeting and discussing the items in the participants' statement with partners and through our field projects, identify tangible follow up steps.

E. Dissemination of Lessons Learned

Dissemination and discussion will continue through our professional networks and via the TB CARE II online platforms.

3.10 Ndola Demonstration Site

A. Progress Against Expected Outcomes

Expected outcome 1: Final report and publication of the project results, including the tools and a description of the implementation and scale-up models

Please see TB CARE I report

Expected outcome 2: Symposium with representation from the MoH, all nine administrative provinces, and partners

Please see TB CARE I report

B. Activities and Results

Please see TB CARE I report; details for activities involving TB CARE II partners are included below.

Activity 1: IC implementation and planning meeting

Activity 2: TB screening among healthcare workers (HCWs)

Activity 3: Development of information, education and communication (IEC) materials

The FAST promotional package of materials was shared with the team in Zambia. The partners involved discussed the strategy to be implemented with the NTP Manager and the generic protocol was used as a starting point for developing the country specific protocol.

Activity 4: Sputum transportation system

Activity 5: Mobile technology

Activity 6: Participatory review

Activity 7: End-evaluation symposium

C. Challenges

Please see TB CARE I report.

D. Next steps/ Implications for Year 4 Activities

Please see TB CARE I report.

E. Dissemination of Lessons Learned

Please see TB CARE I report.

PMDT

Year 2 Activities

4.1 Training Course on the Clinical Management of Multidrug-Resistant Tuberculosis

A. Progress Against Expected Outcomes

Expected outcome 1: Training course on the management of MDR-TB/HIV

The *Training Course on the Clinical Management of Multidrug-Resistant Tuberculosis* was completed in October 2012.

B. Activities and Results

Activity 1: Course materials

The *Training Course on the Clinical Management of Multidrug-Resistant Tuberculosis, Generic Version,* consists of:

- A Facilitator's Guide
- A Participant's Manual
- A pre- and post-test
- Lectures in PowerPoint format

The raw files are available for adaptation.

C. Challenges

None to report

D. Next steps/ Implications for Year 4 Activities

The content of the course is being adapted to include information on new drugs and the HIV-MDR-TB section has been enhanced. The material should be updated periodically to stay relevant.

E. Dissemination of Lessons Learned

The Generic Version of the Training Course is available digitally on the DR-TB Training Network website: www.drtbnetwork.org/resources. The materials have been adapted for both the Malawi and Bangladesh country programs.

4.2 TB CARE Clinical Fellowship for PMDT

A. Progress Against Expected Outcomes

Expected outcome: TB CARE Clinical Fellowship for PMDT

The PMDT Fellowship was offered at the Centers of Excellence in PIH programs in Russia and Peru. Twenty-four and fifteen TB practitioners applied to the PIH Russia and Peru Centers of Excellence, respectively. Four applicants were selected for the Russia fellowship, and three for the Peru fellowship. Selection criteria included: employee of an NTP, substantial number of years working as a TB doctor, and the ability to speak Russian or Spanish. Potential candidates were also interviewed.

Selected fellows PIH Russia: 7 May – 1 June 2012

1. Dr. Todgiddin Kasirov, NTP Tajikistan
2. Dr. Svetlana Korotchenko, NTP Ukraine

3. Dr. Gulniza Moldoeva, NTP Kyrgyzstan
4. Dr. Maya Omarova, NTP Kazakhstan

Selected fellows PIH Peru: May – 2 June 2012

1. Dr. Luis Acosta Castro, NTP Mexico
2. Dr. Mirna Beltran Arzaga, NTP, Mexico
3. Dr. Daniel Puga, Infectious Disease Physician, Gregorio Maranon Hospital Madrid and international consultant.

The fellowships applied both didactic and participatory based learning approaches. Training environments consisted of classroom, facility and community-based settings. Throughout the fellowship, the fellows were taught, mentored, evaluated and given opportunities to provide feedback on the overall fellowship experience. After the fellowship was completed at each site,

a comprehensive evaluation applying qualitative research methods was conducted to ensure that the program was implemented as intended in both Peru and Russia. Semi-structured interviews were conducted with each fellow.

B. Activities and Results

Activities Year 2

Development of expert consultants

Results Year 2

1. A total of 7 fellowship opportunities were offered, and 7 participants successfully completed the program.
2. Based on pre- and post- MDR-TB knowledge assessments conducted with the fellows, there was roughly a 50% increase in knowledge after the fellowship.
3. All of the fellows expressed that this opportunity would benefit them professionally, and it would assist them in their daily TB-related work activities. Upon completion of the fellowship, the fellows proposed ideas to continue their training and initiate some different activities they learned in their respective countries. A 6-month post fellowship interview will be conducted in November 2012 with each fellow.

C. Challenges

The development of the fellowship in Russia and Peru did not pose any challenges worth documenting; the fellowship in Lesotho had to be postponed to year 3 due to unanticipated and insurmountable scheduling roadblocks.

D. Next steps/ Implications for Year 3 Activities

In year 3, PIH sites in Russia and Peru will offer the fellowship again. PIH in Lesotho will offer the fellowship for the first time in 2013 with two fellows attending. The Rwanda Center of Excellence supported by KNCV will begin preparations to offer a fellowship.

E. Dissemination of Lessons Learned

The results of the fellowship evaluation process were shared with the two sites participating. The feedback from the mentors and fellows was discussed and will be used to make improvements to the next round. The information gathered in the follow-up interviews with fellows in November 2012 will be available before the next round of fellowships start.

4.7 Pediatric DR-TB Handbook

F. Progress Against Expected Outcomes

Expected outcome 1: An updated resource for clinicians treating pediatric DR-TB

The *Management of Multidrug-Resistant Tuberculosis in Children: A Field Guide* was completed in November 2012 in collaboration with the Sentinel Project on Pediatric Drug-Resistant Tuberculosis (http://sentinel-project.org/). The activity was proposed after the start of year two and was completed early in year three. This resource is available in both digital and print formats.

G. Activities and Results

Activity 1: Development of a Pediatric DR-TB Field Handbook

The *Management of Multidrug-Resistant Tuberculosis in Children: A Field Guide* was written by members of the Sentinel Project on Pediatric Drug-Resistant Tuberculosis with support from TB CARE II. The Sentinel Project was established by the Department of Global Health and Social Medicine at Harvard Medical School and the National Institute for Research in Tuberculosis in Chennai, India. More than 250 individuals from more than 50 countries have joined this partnership to collaborate on joint projects.

The field guide is available at: http://sentinel-project.org/treatment-guidance/ and https://drtbnetwork.org/management-multidrug-resistant-tuberculosis-children-field-guide.

H. Challenges

Children remain a largely neglected population when it comes to drug-resistant TB diagnosis and treatment; dissemination of this important information remains limited by its availability in English only.

I. Next steps/ Implications for Year 4 Activities

The field guide will be translated into Spanish and Russian through core funding in year four. A webinar series based on the field guide will be conducted via the DR-TB Training Network.

J. Dissemination of Lessons Learned

The field guide is being used as the basis for a post-graduate course called *Managing Children with drug-resistant tuberculosis: a practical approach* by the members of the Sentinel Project at the 44th World Conference on Lung Health in Paris, France. Each participant of the course will be given a copy of the field guide. The training material will be further refined after this experience and adapted to a webinar format for the pediatric series planned for 2014. To-date, more than1800 copies or 2000 available have been distributed to partners and per request through the DR-TB Training Network.

Year 3 Activities

4.8 PMDT Scale-up Meeting

A. Progress Against Expected Outcomes

Expected outcome 1: TB CARE PMDT Scale-up Document

The TB CARE PMDT scale-up document was completed.

B. Activities and Results

Activity 1: An internal TB CARE meeting to identify and discuss DR-TB scale-up challenges, the roles and approaches of TB CARE partners in supporting national TB programs and to develop consensus on how best to address priority issues critical to PMDT scale-up.

The PMDT scale-up meeting was held March 4-5, 2013 in Bethesda, MD. The two-day meeting was focused on four countries: Nigeria, Uzbekistan, Bangladesh, and Indonesia. Recommendations for scaling up and improving DR-TB services were made for each of the countries. A few priorities were also identified that could be addressed through core funding.

C. Challenges

The activity went smoothly and was conducted as planned.

D. Next steps/ Implications for Year 4 Activities

N/A

E. Dissemination of Lessons Learned

N/A

4.9 PMDT Fellowship

A. Progress Against Expected Outcomes

Expected outcome 1: Development of expert consultants

Five medical doctors working in TB successfully completed the PMDT fellowship at PIH sites in Lesotho and Peru. The Center of Excellence PMDT at the School of Public Health of the National University of Rwanda was unable to carry out the fellowship in year three.

B. Activities and Results

Activity 1: Fellowship in Peru

The Peru PMDT Fellowship was held from August 3-31, 2013 in Lima. There were three fellows:

- Andriy Dudnyk, the Regional Moderator of the project *Advocacy, social mobilization and communication in the fight against Tuberculosis* (GFATM), Assistant Professor in the Department of Tuberculosis, Clinical Immunology and Allergies at the National Pirogov Memorial Medical University, Ukraine.
- Isaya Jelly, a clinician in the MDR-TB Unit at Kibong'oto National Tuberculosis, Tanzania.
- Moyahabo Mabitsi, TB Programme Technical Advisor, Anova Health Institute, South Africa.

Activity 2: Fellowship in Lesotho

The Lesotho PMDT Fellowship was held from March 3-23, 2013 in Maseru. There were two fellows:

- Maureen Kamene Kimenye Mariita, National PMDT Coordinator, Disease Prevention & Control, Division of Leprosy, TB & Lung Disease, Ministry of Public Health & Sanitation, Kenya.
- Joseph Banda, Assistant Project Director, Jphiego, Zambia.

Activity 3: Fellowship in Rwanda

The CoE PMDT was unable to carry out the fellowship in year three. Initially there were concerns over the budget given the requirements of the School of Public Health of the National University of Rwanda in which it is located. Once the budget issues were resolved, it was difficult to identify fellows meeting the requirement that they come from one of the USAID TB priority countries – no applications were received meeting this criterion.

Activity 4: Y2 Fellows Follow-up interviews

Peru 2012 Fellows:

- Mirna Beltran Arzaga, Coordinator, Mycobacterial Management Program, Chihuahua, Mexico; Dr. Arzaga works in the same state as Dr. Acosta, one of the other fellows; the training has increased their cooperation. Dr. Arzaga appreciated the tools and methods she learned about, gained a better understanding from the patient's perspective and has maintained contact with the mentors for advice on complicated cases.
- Luis Acosta, Director Ciudad Juarez Health District TB Program, Chihuahua, Mexico; Dr. Acosta has been able to make changes that did not require a financial investment including introducing a system of monthly follow-up for all MDR-TB cases in his area of responsibility. He is eager to set up systems to support community-based care including recruiting and training community health workers, developing multi-disciplinary treatment teams, and social

support for patients in the long term but this will require additional funding. He has maintained contact with the mentors.

- Daniel Puga, Clinician, Spain; after the fellowship, Dr. Puga was employed by an NGO in Lesotho to manage a TB/HIV program. He felt that the fellowship directly led to this opportunity as it gave him valuable and relevant skills and knowledge. He felt well-prepared for his new role after seeing a well-functioning patient-centered, community-based program in action. He has maintained contact with the mentors.

Russia 2012 Fellows:

- Svetlana Korotchenko, Coordinator of the TB Dispensary of one district in Kiev, Ukraine; following the fellowship she was promoted to the MDR-TB Council of the city of Kiev. Dr. Korotchenko has applied many of the methods she learned about in Tomsk but for some others policy changes would be required in Ukraine. Her district is taking the lead on outpatient care.
- Gulniza Moldoeva, Head of TB Services for the Penitentiary Service Medical Unit, Kyrgyzstan; Dr Moldoeva was promoted to her current position after the training. She is working on improving the linkages between the penitentiary and civil health structures. She also gained more of an understanding of the treatment from the patient's point of view.
- Maya Omarova, Coordinator of the TB Dispensary, Pavoldar Oblast, Kazakhstan; Dr. Omarova was greatly impressed by the psychosocial support provided to patients in Tomsk and has set up a commission to help identify and support patients when they are struggling with treatment before they default. She was also motivated to put greater effort into mentoring young TB professionals.
- Todgiddin Kasirov, TB Specialist, National Center for Tuberculosis, Tajikistan; Dr. Kasirov joined the National MDR-TB Council after the training. He is now the point person for GeneXpert in the country and tracks the number of MDR-TB cases identified nationally. He applied the mentoring and coaching approaches he experienced in Tomsk to his own team of doctors and nurses.

C. Challenges

The intensive, hands-on training of the fellowship can only be provided to a small number of medical doctors at a time. This kind of training is invaluable in that it demonstrates what is possible and gives doctors the opportunity to work within a well-functioning system from which they can take ideas to implement in their own settings. This kind of training can also be structured to more directly target a particular program if several people from the same country participated together but funding and capacity at training centers are not currently able to meet demand.

D. Next steps/ Implications for Year 4 Activities

The six-month follow-up interviews will be conducted with the Lesotho 2013 fellows in November; for the Peru fellows it will take place in March 2014. This activity was not funded for year four.

E. Dissemination of Lessons Learned

Information about the fellowships and fellows is available on the DR-TB Training Network at https://drtbnetwork.org/fellowships.

4.9 PMDT Learning Site

A. Progress Against Expected Outcomes

Expected outcome 1: DR-TB Training

The DR-TB Training Network conducted 12 webinars in 2013, one series of 6 lectures in English and another series of 6 lectures in Russian on the same topics. There were 286 participation events in the first series representing 124 individuals from 40 countries and 357 participation events in the second series representing 135 individuals from 15 countries exceeding the target of 100 people trained. The target for the clinical case series was met with 13 new clinical cases published.

B. Activities and Results

Activity 1: Online training

The number one attraction on the DR-TB Training Network is the webinars delivered by TB experts from Harvard Medical School, Brigham and Women's Hospital, Partners In Health, KNCV Tuberculosis Foundation, and other leading institutions. The webinars are presented using Adobe Connect software. Each webinar is usually one hour in length and includes time for questions. Each webinar is recorded and can be viewed after the live event. To-date there have been three series of webinars, two in English, and one in Russian for a total of 18 lectures. These 18 lectures resulted in more than 1300 participation events representing 64 countries; there were 551 unique participants.

Activity 2: Case Discussion Series

The DR-TB Training Network developed, published and conducted online discussions for 13 new teaching cases dealing with the clinical management of MDR-TB – roughly one per month. Four of the cases were focused on side effects of MDR-TB treatment, including hearing loss, vestibular toxicity, medication-induced seizures, and gastrointestinal intolerance. There were three cases looking at special situations that complicate MDR-TB management: diabetes, pregnancy, and drug-addiction. Two cases examined indications for surgical intervention in MDR-TB. One case of extra-pulmonary TB was also discussed. The experts that comment on the cases are affiliated with TB CARE I and TB CARE II partner organizations or collaborators. Website usage tracking data shows that the case discussion in process is one of the most visited pages during any given month.
The cases have also been formatted in a compact version for download that can be used in training sessions. This compact version of each case has been translated into Spanish, French, and Russian, and is available on the website after proofreading.

Activity 3: Self-guided learning activities

This aspect of the DR-TB Training Network is still in its infancy. Three activities have been developed and are published through Articulate Online and then uploaded to the website. These interactive activities complement existing tools in the Resources section of the website. Currently, the self-study offerings include a tutorial about the *MDR-TB Patient Education Flipchart* and two MDR-TB Challenges based on the *Training Course on the Clinical Management of Multidrug-Resistant TB*.

C. Challenges

The much-anticipated Pediatric DR-TB webinar series had to be postponed; it is planned for year four. It is challenging to schedule to the webinars given the mobility of the TB experts involved and to find the most suitable time given that most of the participants are in Asia or Africa. For many would-be participants, their internet connection is inadequate for the Adobe Connect software and/or they have difficulty troubleshooting what the problem might be. Webinars require the use of a flash player and this can be an issue for some firewalls; also some browsers have their own

default flash player (i.e. Google Chrome) which then prevents Adobe from working properly. Every effort is made to ensure the webinars use as little bandwidth as possible (i.e. no video streaming) but this still remains a barrier to some users in resource-limited settings.

D. Next steps/ Implications for Year 4 Activities

The DR-TB Training Network activities will continue in year four with increased focus on the webinars and self-study activities; the case discussion series will continue at the same pace. With the exception of the Pediatric DR-TB webinar series, the format of the webinars will change in that several concurrent themes will be presented with individual lectures scheduled throughout the year. Offering webinars or other activities in multiple languages will be pursued whenever possible.

The communication/listserv aspects of the website will be up and running before the end of the first quarter of year four which will enable direct communication with its users to alert them of upcoming events and new resources. A survey is currently under development that will be sent to participants of the webinars to learn how they have used the information presented and if there has been impact on their work. The new communication features will also enable users of the site to provide direct feedback at any time.

E. Dissemination of Lessons Learned

The DR-TB Training Network was presented in a poster session during the 44th World Conference on Lung Health in Paris, France on November 1, 2013. The poster was titled *Expanding knowledge, enhancing practice, eliminating tuberculosis: an introduction to the DR-TB Training Network for health care workers*.

Please see the Appendix for usage data of the DR-TB Training Network website.

4.10 DR-TB Pocket Guide

A. Progress Against Expected Outcomes

Expected outcome 1: Updated MDR-TB pocket guide

The PIH Guide to the Medical Management of MDR-TB is in the final production stages. The pocket guide is a revision of the well known *The PIH Guide to the Medical Management of MDR-TB* (2003). The second edition draws from WHO international guidelines whenever possible; additionally, material and experiences from a host of institutions, including the TB CARE I and II partners, have also been included. The guide aims to provide practitioners with useful clinical information for the management of MDR-TB patients.

B. Activities and Results

Activity 1: Pocket guide for the Medical Management of MDR-TB (English)

The second edition of *The PIH Guide to the Medical Management of MDR-TB* was completed with the input of reviewers and contributors from several TB CARE I and II partners. This quick-reference clinical resource can be used by NTP programs and individual providers.

C. Challenges

The pocket guide's completion has been delayed. It took longer than anticipated to write, review, edit, and proofread at each production stage given the complexity of the content. Ensuring accuracy of the information is paramount.

D. Next steps/ Implications for Year 4 Activities

The pocket guide will be finalized in November 2013 and printed soon after. The pocket guide will be translated into Russian and French by TB CARE I. In year four, a mobile application will be developed to enable clinicians to reference the guide at any moment.

E. Dissemination of Lessons Learned

The second edition of The PIH Guide to the Medical Management of MDR-TB will be available in multiple formats: print, PDF, and as an online, searchable wiki on the DR-TB Training Network website. The guide will be distributed through TB CARE I and II partners, future conferences including the 18th Conference of the Union North America Region to be held in Boston in February 2014, and other suitable forums.

4.12 Community Programmatic Management of Drug Resistant Tuberculosis Planning Tool

A. Progress Against Expected Outcomes

During TB CARE II year three a tool was developed to support countries' planning efforts and implementation of MDR TB community level interventions. The tool aims to assist in the transition from initial planning stages to the development of an operational plan at the district level to implement decentralized MDR TB services. Additionally, the tool can aid in raising awareness for activities required in scaling up MDR TB treatment services in the community and provide evidence based advocacy for NTP programs, organizations, and donors working on MDR TB control.

B. Activities and Results

The tool document was awaiting finalization and approval by USAID at the end of the project year; activities will be complete early in Year 4. The tool is aligned with existing guidance from international organizations including: the World Health Organization (*Guidelines for the Programmatic Management of Drug-resistant TB*, WHO MDR planning Toolkit), the Green Light Committee, the Global Fund to Fight AIDS, Tuberculosis and Malaria (Stop TB Planning Tools for Global Fund Round 10 TB proposal preparation) and TB CARE II PIH-partner guidelines developed (*Community-Based Care for Drug-Resistant Tuberculosis: A guide for implementers)*.

C. Challenges

The development of the tool was supported by published bibliography and the experience gained by some projects implementing a community PMDT strategy. Few countries had documented their experiences at the time this tool was designed. It will be necessary to include new country experiences as soon as they are made available and adapt the tool accordingly.

D. Next steps/ Implications for Year 2 Activities

It will be appropriate to introduce the tool to NTP district managers, NTP central managers and relevant MDR stakeholders involved in planning a decentralization of MDR services in several countries and pilot test the tool considering different country contests and MDR models of care.

E. Dissemination of Lessons Learned

The community MDR TB tool will be published in the TB CARE II web page and will be distributed through the traditional channels in TB care countries.

TB/HIV

Year 1

4.2.1: Develop tools/strategies for increasing TB screening, prompt diagnosis, and access to treatment at HIV services

A. Progress Against Expected Outcomes

All key objectives under this activity were completed in Year 1 while advocacy continued in Year 2 through additional printing and dissemination of the Focused Antenatal Care + (FANC +) job aid and FANC fundal height measurement tape measure.

B. Activities and Results

Remaining funds continued to be used in Year 3 for additional printing and dissemination of the tape measures and FANC+ tools as well as to follow up with the countries who have received the tools in order to monitor distribution, usage, and collect feedback.

Year 2

5.1 Identify best practices for early initiation of ART for TB patients

A. Progress Against Expected Outcomes

Work on this activity was undertaken by TB CARE II team including URC, GTBI, and Jhpiego with significant contributions from TB CARE I (the Union) specifically related to identifying best practices developed in Zimbabwe.

B. Activities and Results

Work has taken place in three stages, as follows:

1. Develop background analysis and prepare for in-country assessments:
   A background review of existing information on successful programmatic models for increasing ART uptake among TB/HIV coninfected patients was conducted to highlight gaps and assist in drafting an initial outline of the model framework for successfully implementing programs geared at increasing ART initiation for co-infected patients. A brief survey was circulated among URC and Jhpiego field program teams to identify sites with important successes to share in terms of increasing ART initiation for TB cases. Based on the review and the information gaps identified, an assessment methodology and interview tools were developed to be used at the identified best practice sites to gather information to inform the framework. The assessment tools were modified slightly for each country setting.

2. Conduct in country assessments:
   In collaboration with the Union project team in Zimbabwe, an assessment visit was under taken by a team from GTBI in June 2012 targeting Union-supported sites in Zimbabwe to investigate factors associated with increases in ART uptake for TB patients. The findings were developed into a best practice report that was circulated among TB CARE II and the Union before being finalized.
   A second assessment visit took place in September targeting several high performing districts (districts which have had success in implementing recently policy changes geared

at increasing access to ART for TB patients) in two provinces in South Africa (Gauteng and KwaZulu Natal), conducted by URC field teams in South Africa in coordination with the NTP and district health management teams. A visit to a third high performing district in Eastern Cape was unable to take place as planned before the end of September and was rescheduled for early in Q1 of year 3, and was conducted instead in Q2 Y4. Once the information from all three districts was completed, the report for the South Africa visit was finalized and circulated with partners and USAID.

A third assessment took place in Swaziland Q1 to highlight successes related to the implementation of NARTIS (nurse-initiated ART policy) and the impact on co-infected patients, as well as other strategies. This was conducted by in-country URC field staff. Due to the longer-than-anticipated time required to secure Ministry and NTP approvals for the assessment (an IRB approval was also required), the assessment took longer to conducted, leading to delays in drafting, sharing, revising and disseminating the findings.

3. Develop and disseminate draft framework:
   The framework has been drafted and is being finalized.

C. Challenges

No significant challenges were experiences except for the time required to complete processes related to securing country buy-in and approvals for the assessment visits and findings.

D. Next steps/ Implications for Year 3 Activities

A follow up activity will be discussed in relation to the completion of the framework.

E. Dissemination of Lessons Learned

No dissemination has taken place so far; following completion of the best practice framework, the TB CARE II will aim to disseminate the findings widely.

HEALTH SYSTEM STRENGTHENING

Year 1

7.2.2 Create tools to enable annual strategic planning review/evaluation and build capacity of NTP to carry out these activities

A. Progress Against Expected Outcomes

The ethics tool was created using the World Health Organization's Guidance on Ethics of Tuberculosis Prevention, Care and Control along with instruments for the assessment of the pilot test of the tool.

B. Activities and Results

1. Desk Audit: A desk audit of ethical tools and related publications was completed in year
2. Development of Tool for the Assessment of Ethical TB Patient Management: The ethics tool was developed in year 1 and was reviewed by URC staff, WHO, and in-country Project Hope staff who would be implementing the pilot testing of the tool. Feedback was considered and revisions made.
3. Implementation of the ethics tool: Piloting of the ethics tool has been completed in Namibia and a final report was submitted on September 11 to GTBI. The report was sent to the Namibian Ministry of Health for further comment. Work in Mozambique in ongoing.
4. Summarize finding and recommendations: The summary report from Namibia will be reviewed. There is currently no summary from Mozambique.
5. Revise Tool for the Assessment of Ethical TB Patient Management: This activity has not yet been started.

C. Challenges

It took longer than anticipated to obtain approval for moving forward on this project in both Mozambique and Namibia. In Namibia, Project Hope had lack of staff to work on this project. In Mozambique, there was an expectation of this project serving for enhancing research on ethics in health care – the budget requested was too high and the research objective was beyond the scope of this TB CARE II funding. With that, coming to agreement about how to carry out the pilot testing took several months. In Mozambique there was also a public health worker strike which delayed the start of work as the persons pilot testing the tool were part of this group.

D. Next steps/ Implications for Year 2 Activities

We will review the report from Namibia and offer to assist in their plans to share the pilot- testing findings with their key stakeholders. We anticipate that the testing in Mozambique will be completed in the next 2 months.

E. Dissemination of Lessons Learned

1) We plan to share the revised final ethics tool as part of the implementation of an ethics training which has been funded for year 3.
2) Posting on TB Care II website
3) Poster and/or presentation at international meetings such as the UNION

Year 2

6.1 Health Insurance Toolkit

A. Progress Against Expected Outcomes

Substantial work on this activity got underway upon completion of the insurance case study activity (7.3). It is still ongoing at the end of Year 3.

B. Activities and Results

The original plan for this activity involved disseminating the findings of the insurance case studies and developing tools for countries to better incorporate TB services within UHC reforms. Activities included: 1. Introduce the toolkit to stakeholders in the target countries; 2. Present the toolkit at relevant regional and national meetings and conferences; 3. Assist countries to develop action plans for increasing use of insurance schemes for TB services.

In Quarter 2, in consultation with WHO, TB CARE II requested a modification to the activity plan as follows: 1. Participate in a WHO sponsored conference in Sao Paulo, Brazil on UHC and TB; disseminate findings of case studies and introduce manual/ toolkit draft to participants; 2. Finalize manual/ toolkit; 3. Develop short case studies on TB and NHI systems in Georgia and South Africa.

Work on the activity subsequently progressed as follows: findings of the insurance case studies continue to disseminated; and a draft of the manual for addressing TB service delivery in the context of National Health Insurance programs has been developed, though work is still ongoing. The TB CARE II project participated in a high level consultation on "Eliminating the Catastrophic Economic Burden of TB Universal Health Coverage and Social Protection Opportunities" which took place in Sao Paulo, Brazil from April-29- May 1, 2013. TB CARE II presented findings from the case studies on health insurance systems in high burden TB countries, and discussed a framework for utilizing insurance-based financing to reduce expenditures for TB patients and linkages with social support systems. The project supported a dialogue on best practices from existing publically-supported health insurance systems by engaging partners from Thailand (National Health Security organization) and the Philippines (PhilHealth). The development of policies and systems to support adoption of measures to reduce cost-related barriers to accessing TB services and to link TB patients to poverty-reduction measures which can help reduce their overall risk of acquiring TB will be an intrinsic focus of TB control efforts in the post-2015 TB strategy. The meeting included discussions which will lead to the strategy development for Pillar 2 (related to social protection and poverty alleviation) for the post-2015 TB strategy.

The project has worked on developing the methodologies and identifying key informants to develop the mini-case studies targeting the planned health insurance reforms and TB in Georgia and South Africa. Due to current changes in the political landscape in Georgia, it remains unclear whether previous plans for health reform will go forward, or in what form. Depending on how things resolve, TB CARE II may select another site to target in the case series. This activity will be continued in conjunction with the consultative meeting planned to be implemented under Activity 6.3.

C. Challenges

Discussions around challenges and gaps within national health insurance programs involve multiple actors beyond the NTP, and it is difficult to impact real improvements in service design or systems through a relatively modest activity such as this one. As there is little previous work that has been conducted explicitly around this issue, TB CARE II has viewed this activity as starting from the ground level and has focused on increasing dialogue and awareness of the need to examine coordinated structures between NHI programs and TB stakeholders, though it is difficult to see what the effect will be in the short term. Plans and steps have therefore necessarily evolved in reaction to developments in country level reforms and in reaction to the need to do a great deal of discussion and consensus building with stakeholders around this issue.

D. Next steps/ Implications for Year 4 Activities

The focus going forward will continue to be to work with additional high burden TB countries which are in the planning, design, or early implementation stages related to introducing NHI or universal coverage reforms, to ensure that dialogue around the impact of proposed changes on TB service provision and use, as planned in activity 6.3.

Year 3

6.2 Ethical TB Patient Management Training

A. Progress Against Expected Outcomes

This activity is led by TB CARE II partner GTBI, along with Project HOPE. As part of year 1 activities, an ethics tool was created using the World Health Organization's Guidance on Ethics of Tuberculosis Prevention, Care and Control along with instruments for the assessment of the pilot test of the tool. Pilot testing in one of two countries has taken place.

B. Activities and Results

There have been no activities to date on this project. Its start depends on the results of the year 1 project, to implement and pilot test the ethics tool.

C. Challenges

As with the year 1 project, there may be some delays with the approval process for implementation of the training as well as identifying staff to assist with this project in country.

D. Next steps/ Implications for Year 2 Activities

Not applicable.

E. Dissemination of Lessons Learned

After receiving feedback from the training coordinators and participants, we plan to make revisions and create a facilitator-led training guide for use by other countries.

6.3 Strengthening coverage for TB through Universal Health Care

A. Progress Against Expected Outcomes

Elements of this activity overlap and build on the Year 2 Activity 6.1. As discussed in that section, approaches to engaging country stakeholders around the role of TB services and TB programs in UHC reforms and the development of insurance based systems continue to evolve as plans for reform develop, for example around the new Stop TB strategy and the post-MDG agenda. This work will continue into Year 4.

B. Activities and Results

Activity 1. Manual on TB service integration within NHI programs adapted in two countries. The manual has been drafted as part of the Year 2 portion of the activity and continues to be refined. As the additional mini-case studies are developed, content will be revised and refined. The manual will be discussed with stakeholders during the workshop below and finalized.
Activity 2. Workshop on strategies to improve successful delivery of TB services within insurance programs. This workshop is currently planned to take place in early 2014 (January or February) with a critical focus on South East Asia.

C. Challenges

Please see the section addressing activity 6.1.

D. Next steps/ Implications for Year 4 Activities

Not applicable.

E. Dissemination of Lessons Learned

Dissemination of lessons and findings is a critical component of this activity. The project is seeking every opportunity to engage more and more diverse stakeholders in discussions regarding the findings of the case studies, both through our international networks and through URC's field programs.

ADMINISTRATION OF CORE ACTIVITIES

Administrative Challenges

In previous years, TB CARE II conducted the infection control activity focused around identifying and developing building design case studies in conjunction with Partners In Health, which utilized the specialized expertise of their subsidiary MASS Design Group. During the course of the year, MASS Design became wholly independent of PIH. As a result, TB CARE II conducted an open competition for a partner able to conduct this activity. Following review of the responses, MASS Design was selected to continue and the PMSG undertook the process to bring them on as a full sub-partner. The overall process took considerable time, and work on this activity was not truly started until Q4. However, a revised timeline was developed to carry the activity forward during Year 4, using remaining funds. Work is now on track.

Transitions between Year 2 and Year 3 activities did not happen at one smooth moment during the year, but rather were staggered as each activity faced different constraints caused by delayed communications, approvals, or simply longer-than-anticipated work requirements. Nevertheless, activity across the board was steady, and most issues were able to be resolved on a case-by-case basis. Several activities required further detailed discussions with USAID/W and Missions to get the required approvals and experienced considerable delays, including the IC Activity 3.9, Tajikistan Demonstration site, which is now on track effectively as a Year 4 activity.

Similarly, following the change in the funding regulations for Russia, plans to conduct a FAST activity there had to be revised, and time was spent identifying and agreeing on a new activity site. Vietnam was identified as an appropriate site in consultation with USAID/W, CDC, and TB CARE I. A workplan was developed and discussed and implementation will take place from Q1 Y4.

Lessons and Administrative Best Practices

The project put an even greater effort this year on documenting and disseminating new materials and tools developed, as well as sharing successes. The Program Management Support Group has continued to look for the best ways to capture and share information, and in the meantime has streamlined processes for circulating activity reports and monthly updates. The monthly updates, which serve almost as a targeted newsletter distributed to a wide project listserv, have been particularly helpful in encouraging staff and partners to parse and package their results and have assisted the PMSG to disseminate outcomes.

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.

TB CARE II conducted an initial environmental review alongside the development of the Year 3 core workplan, and continued to communicate with consortium members during the course of the year to provide information on the project's environmental monitoring process and to follow for all activities at the country and core levels.

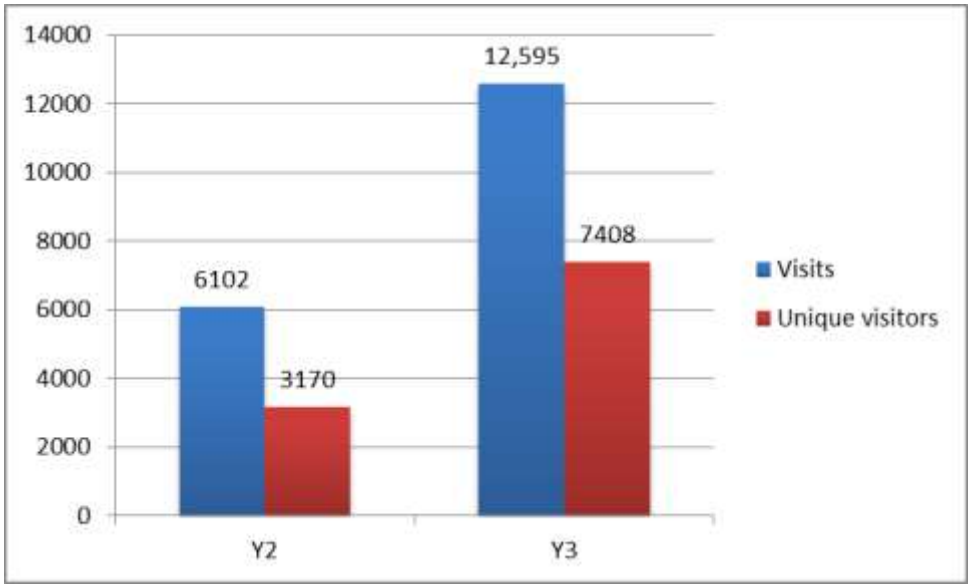
No activities in the core workplan were identified as carrying potential environmental threats, and as a result an Environmental Monitoring and Mitigation Plan was not developed for the core workplan.

APPENDIX

DR-TB Training Network Analytics

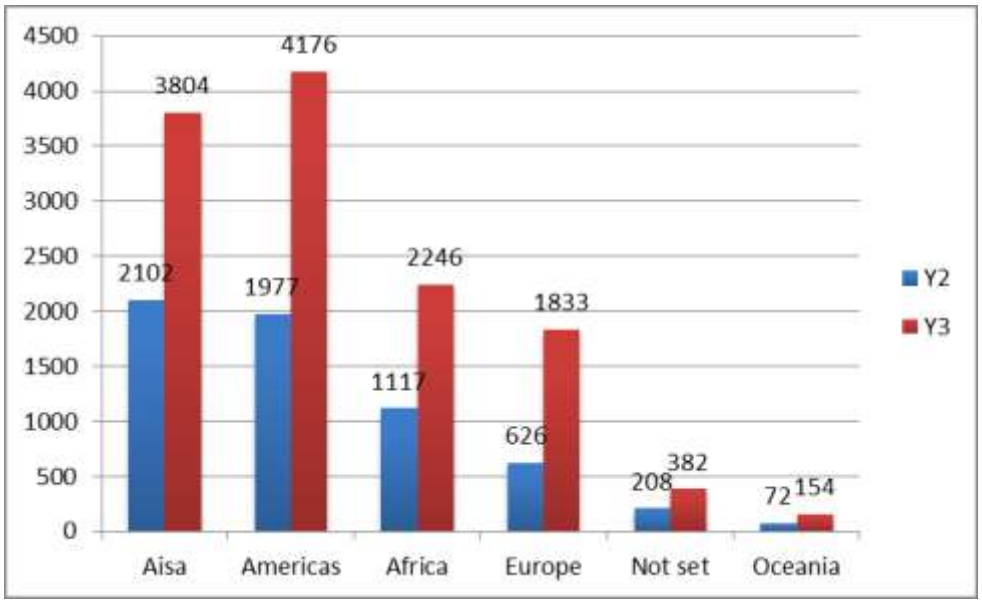
Visitor data is derived from the website's Google Analytics account.
Webinar data is derived from Adobe Connect reports.

Number of Visits and Unique Visitors – Y2 to Y3 Comparison



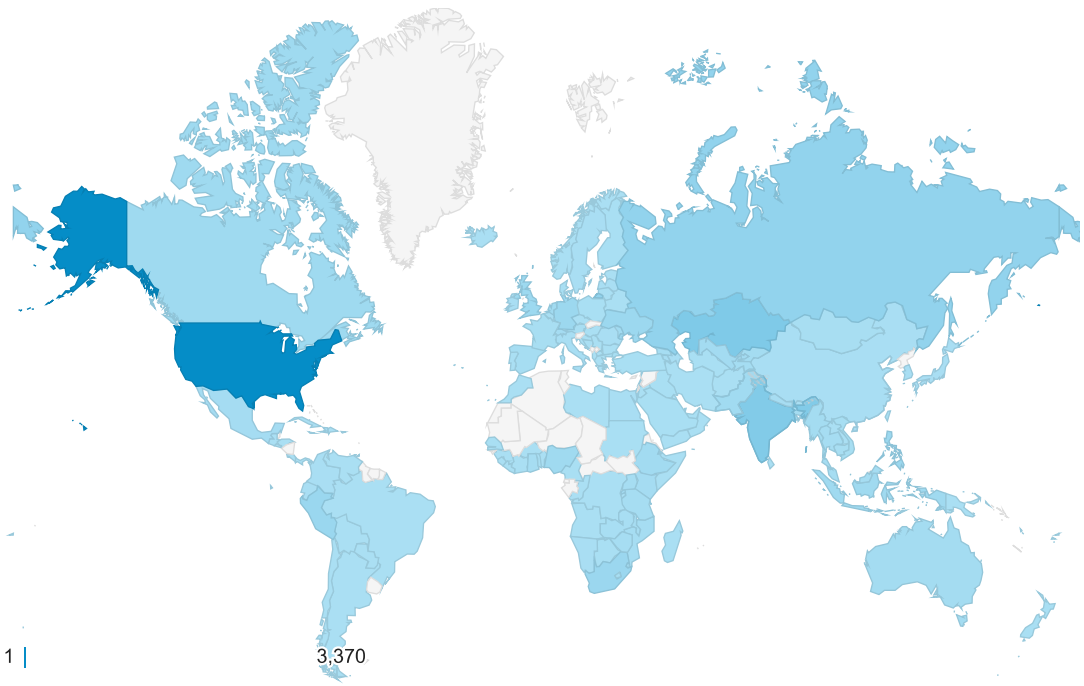
Site traffic and number of unique visitors has doubled in year three. Page views increased from 25,538 in year two, to 42,283 in year three.

Visit Origin by Continent – Y2 to Y3 Comparison



Visits have increased from all continents.

Visit Origin by Country – Y3

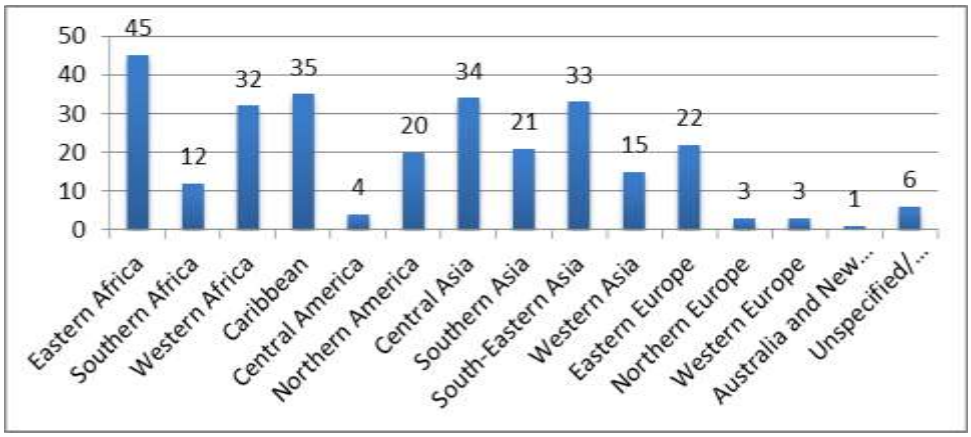


Visits originated from 157 countries in year three.

Characteristics of Y3 webinar participants

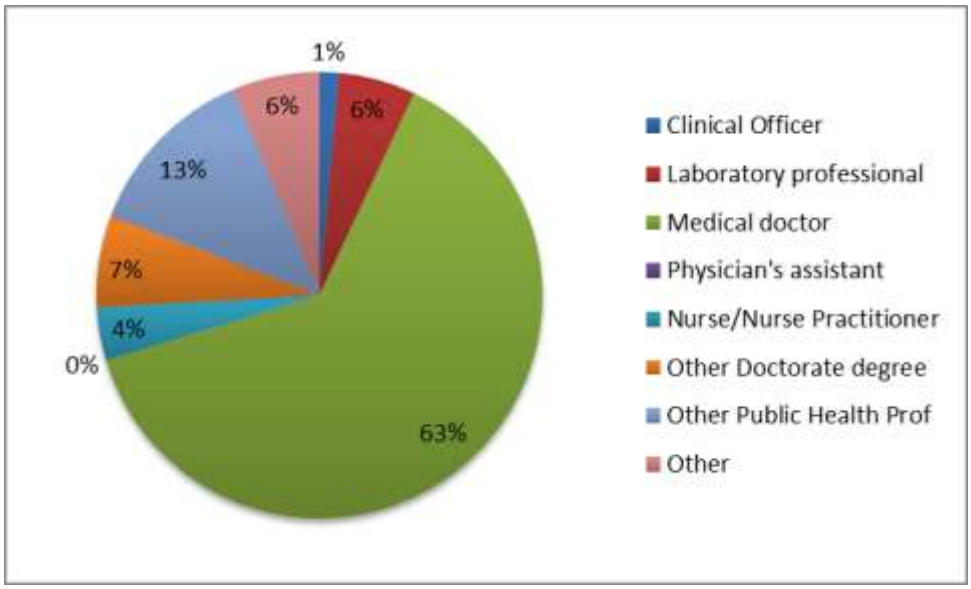
Series 1 – March 12-28, 2013 – English – 286 participation events representing 124 individual participants

Location



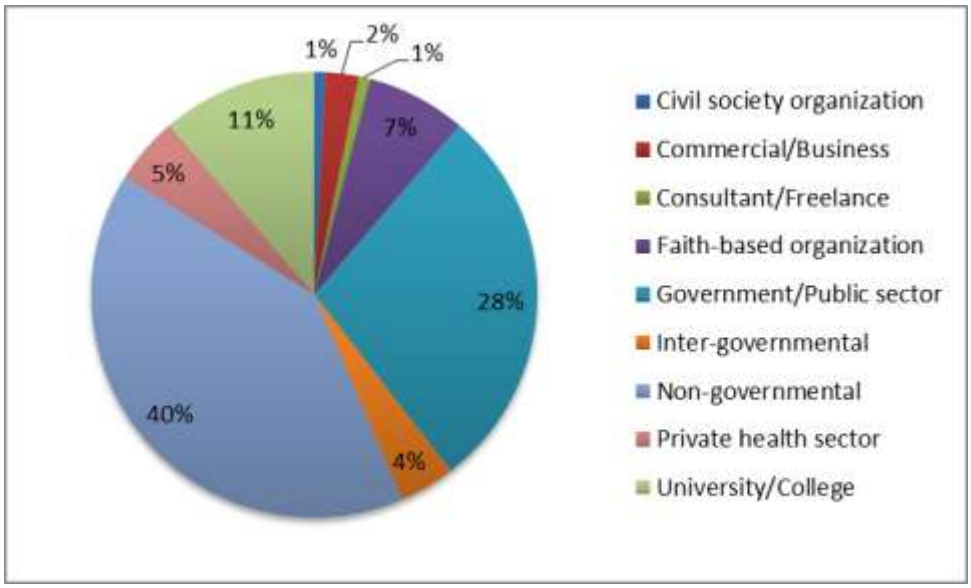
Asia was well-represented with 36% of the participation; Africa followed with 31% of the participation. In total, 40 countries are represented.

Healthcare cadre of 124 unique participants



The majority of participants are medical doctors.

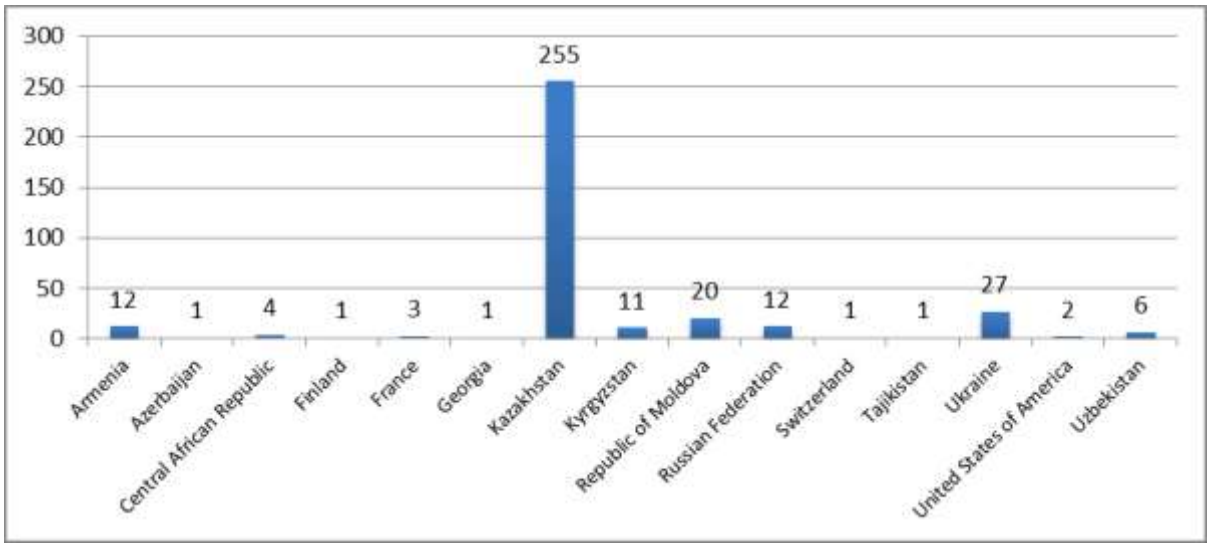
Employment sector of 124 unique participants



The two sectors most represented are individuals employed by NGOs and those employed in the public health sector.

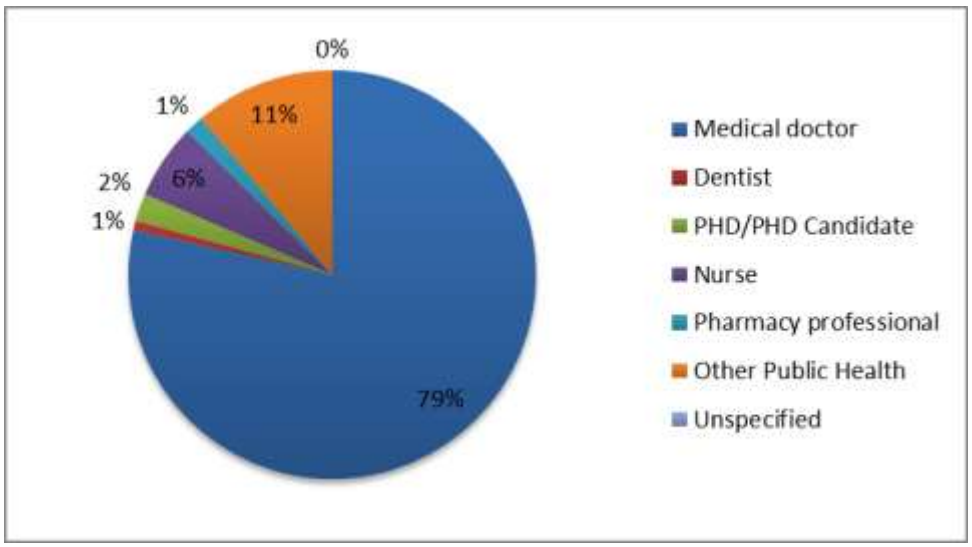
Series 2 – May 14-30, 2013 – Russian – 357 participation events representing 135 individual participants

Location



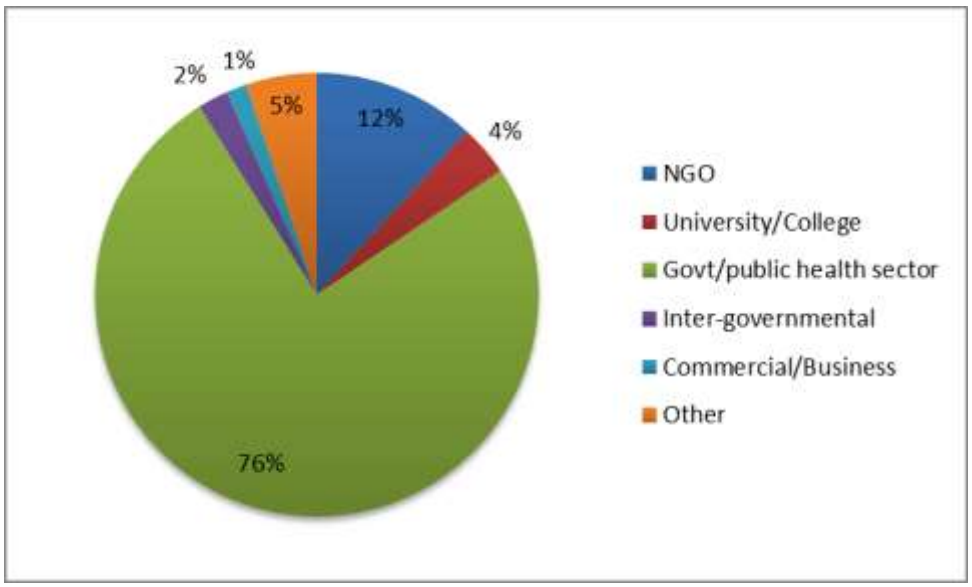
The majority of participants were from Kazakhstan; in total, 15 countries are represented.

Healthcare cadre of 135 unique participants



The majority of participants are medical doctors.

Employment sector of 135 unique participants



The main sector represented is the public health sector.

Webinar presentations – Downloads after live event	Y3	Ever
2012 Management of side-effects during MDR-TB treatment	187	236
2012 Drug-resistant tuberculosis: A historical overview	166	296
2012 Second line medications for MDR-TB treatment; new drugs in the pipeline	120	173
2012 Basics of transmission control in an era of MDR-TB treatment	110	235
2012 Amplification and development of drug resistance: An overview	99	155
2012 Designing an MDR-TB treatment regimen	93	150
2013 Course Introduction	96	
2013 An overview of TB laboratory strengthening	75	
2013 Treatment of MDR/XDR-TB: Patient selection and regimen design	83	
2013 Reducing TB transmission in high-burden settings	55	
2013 Drug management for program implementation: how to start and expand	31	
2013 Community-based care for MDR-TB	43	
2013 Quality of DR-TB care: activities that improve adherence and overall treatment outcomes	36	
2013 An overview of TB laboratory strengthening - RUSSIAN	74	
2013 Treatment of MDR/XDR-TB: Patient selection and regimen design - RUSSIAN	33	
2013 Reducing TB transmission in high-burden settings - RUSSIAN	27	
2013 Drug management for program implementation: how to start and expand - RUSSIAN	21	
2013 Community-based care for MDR-TB - RUSSIAN	17	
2013 Quality of DR-TB care: activities that improve adherence and overall treatment outcomes - RUSSIAN	17	

Resources - Downloads	Y3
2012 Community-Based Care for Drug-Resistant Tuberculosis: A Guide for Implementers	79
2012 Tracking Tool for TB Patients who meet the Criteria to be Screened for MDR-TB	37
2012 Training Course on the Clinical Management of Multidrug-Resistant TB - Participant Manual	72
2012 Training Course on the Clinical Management of Multidrug-Resistant TB - Facilitator Manual	69
2012 Training Course on the Clinical Management of Multidrug-Resistant TB - Pre-Test	39
2012 Training Course on the Clinical Management of Multidrug-Resistant TB - Post-Test	39
2012 Training Course Session 3 - Identifying Cases of MDR-TB	65
2012 Training Course Session 8 - MDR-TB in Children	37
2012 Management of Multidrug-Resistant Tuberculosis in Children: A Field Guide	21
2013 FAST TB Infection Control Strategy Core Package	33

Some of the resource downloads cannot be tracked by Google Analytics due to their format (i.e. PPTX).