



# TUBERCULOSIS PREVENTION PROJECT

**FY 2014: Annual Report**  
**October 2013 – September 2014**  
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## Table of contents

List of Acronyms.....	1
I. Executive Summary.....	4
II. Introduction.....	5
A. USAID Georgia Tuberculosis Prevention Project Objectives .....	5
B. Overview of Activities/ Results .....	6
III. Results by Objective .....	8
A. Objective 1: Improve Early Detection of Presumptive TB Cases.....	8
B. Objective 2: Strengthening the Quality of Full Implementation of DOTS and DOTS plus .....	11
C. Objective 3: Provide Limited Assistance to Recently Established Private Treatment Sites Nationwide in Updating Physical Infrastructure to meet TB Best Standards and to Improve Infection Control .....	19
IV. Best Practices/Success Stories .....	20
a. Strengthening national TB program.....	<b>Error! Bookmark not defined.</b>
b. Introducing innovative tools for managing TB patients.....	<b>Error! Bookmark not defined.</b>
d. Collaboration with the GF TB Project .....	<b>Error! Bookmark not defined.</b>
44th Union World Conference on Lung Health.....	21
V. Challenges.....	21
VI. Monitoring and Progress against Indicators.....	21
A. Facility level data analysis.....	26
B. Baseline outcome indicators .....	29
VII. Project Administration .....	36
VIII. Budget and Expenditures .....	37
IX. Key Activities for FY2014 .....	37
X. Appendices.....	38
X.I. List of deliverables produced in Year 2 .....	38
X. II. Focus areas and achievements within completed or ongoing small grants programs .....	40
X.III Pictures of Events .....	41



## LIST OF ACRONYMS

ACSM	Advocacy, Communications, and Social Mobilization
AFB	Acid- Fast Bacilli
AIDS	Acquired Immune Deficiency Syndrome
AOTR	Agreement Officer's Technical Representative
BCC	Behavior Change Communications
BCG	Bacille Calmette-Guerin
CCM	Country Coordinating Mechanism
CDR	Case Detection Rate
CME	Continuing Medical Education
CPD	Continuous Professional Development
CPF	Continuous Professional Feedback
DOTS	Directly Observed Treatment Short-course Strategy
DR TB	Drug Resistant Tuberculosis
DQA	Data Quality Audit
DST	Drug Sensitivity Testing
e-MIS	e-Health management information system
EC	European Commission
EDR	Electronic Drug Register
EQA	External Quality Assurance
EURACT	European Academy of Teachers in General Practice and Family Medicine
FDC	Fixed Dose Combination
FM	Family Medicine
FP	Family Physicians
GFATM	Global Fund to Fight AIDS, TB, and Malaria
GFMA	Georgia Family Medicine Association
GF	Global Fund
GMCU	Georgian Maternal and Child Care Union
GPN	General Practice Nurse
GHI	Global Health Initiative
GLC	Green Light Committee
GOG	Government of Georgia
GP	General Practitioner
GSC	Grants Selection Committee
HBC	High Burden Country
HC	Health Center
HCI	Health Care Improvement Project



HIS	Health Information System
HIV	Human immunodeficiency virus
HMIS	Health Management Information System
HSSP	Health Systems Strengthening Project
HPDP	Health Promotion and Disease Prevention
HR	Human Resources
IC	Infection Control
IEE	Initial Environmental Examination
IUATLD	International Union against Tuberculosis and Lung Disease
KAP	Knowledge, Attitudes, and Practices
MCQ	Multiple Choice Questionnaire
MDG	Millennium Development Goals
MDR TB	Multidrug-resistant Tuberculosis
M&E	Monitoring and Evaluation
MoE	Ministry of Education
MoLHSA	Ministry of Labour, Health and Social Affairs of Georgia
MoCLA	Ministry of Corrections and Legal Assistance of Georgia
MoU	Memorandum of Understanding
NCDCPH	National Center of Disease Control and Public Health
NCTLD	National Center for Tuberculosis and Lung Disease
NGO	Non-governmental Organization
NTP	National Tuberculosis Program
OR	Operational Research
PCP	Primary Care Provider
PHC	Primary Health Care
PMDT	Programmatic Management of Drug-Resistant TB
PMIS	Project Management Information System
PMP	Performance Monitoring Plan
PPM	Public Private Mix
PR	Principal Recipient
PSA	Public Service Announcement
QA	Quality Assurance
QI	Quality Improvement
RFA	Request for Applications
SLD	Second Line Drugs
TAT	Turnaround Time
TB	Tuberculosis



TNA	Training Needs Assessment
TPP	Tuberculosis Prevention Project, USAID Georgia
TSMU	Tbilisi State Medical University
TSR	Treatment Success Rate
TST	Tuberculin Skin Test
URC	University Research Co., LLC
USAID	United States Agency for International Development
USG	United States Government
VCT	Voluntary Counseling and Testing
WONCA	World Organization of National Colleges, Academies and Academic Associations of General Practitioners/Family Physicians
XDR TB	Extensively Drug-Resistant Tuberculosis



## **I. Executive Summary**

This report outlines activities undertaken during Year 3 of the USAID Tuberculosis Prevention Project (TPP) implementation from October 1<sup>st</sup> 2013 to September 30<sup>th</sup> 2014. During Year 3 the project made significant steps forward and reached tangible results described below. The most important achievements of the year include the assistance provided to the Ministry of Labour, Health and Social Affairs to enable a revision of the state TB program and strengthening national TB response development, as well as the implementation of the HMIS module and an mHealth application.

Key milestones under each objectives of this period include:

- **Objective 1: Improve early detection of presumptive tuberculosis (TB) cases**
  - 515 family physicians and 512 general practice nurses employed in Tbilisi, Kakheti, Guria, Samegrelo-ZemoSvaneti, Imereti and Mtskheta-Mtianeti regions were trained in TB prevention, early detection, referral and long-term support.
  - Performance appraisal of 257 family physicians and 261 nurses conducted in Tbilisi, Imereti, Kakheti and Mtskheta-Mtianeti regions.
  - 6 adult and 9 pediatric clinical case studies were developed, posted on the project website, printed and distributed to TB specialists and PHC providers.
  - World TB day campaign conducted
- **Objective 2: Strengthen the quality of full implementation of DOTS and DOTS plus**
  - Revised TB-related legislation draft submitted to the Ministry of Labour, Health and Social Affairs.
  - 10 lab technicians trained in Xpert MTB/RIF test for rapid detection of TB and Rifampicin resistance in pulmonary, extra-pulmonary and pediatric TB cases
  - 21 lab technicians trained in bacterioscopy Diagnosis of Tuberculosis
  - 4 quality improvement collaborative sessions were held nationwide for TB specialists, PHC providers, public health specialists, and managers.
  - Pediatric TB management guideline was developed and approved by the State Guideline Accreditation Board at the Ministry of Labour, Health and Social Affairs.
  - Pediatric TB protocols developed and distributed.
  - Journal club meetings conducted for TB specialists.
  - 12 peer-educators representing Georgian Orthodox Church trained.
  - Front line professionals trained in early detection and management of pediatric TB
  - 129 teachers trained, 40 seminars arranged at schools on TB policies and stigma reduction strategies
  - 32 journalists trained in TB policies and stigma reduction strategies
  - 1 TV roll developed and aired and 6 TV talk-shows covering TB related topics aired.
  - More than 30,000 copies of informational materials including job-aids, brochures for PHC providers, brochures for patients, postcards, leaflets, calendars, posters, stickers printed and distributed.
  - TB HMIS module has been implemented.
  - TB mHealth application developed for epidemiologists
  - 6 small grants have been awarded and are implemented by the local NGOs and professional associations.
- **Objective 3: Provide limited assistance to recently established private treatment sites nationwide in updating physical infrastructure to meet TB standards and to improve infection control**
  - Infection control curriculum, handbook and costing tool developed
  - 165 district hospital managers and epidemiologists trained in TB infection control



## **II. Introduction**

### **A. USAID Georgia Tuberculosis Prevention Project Objectives**

The USAID Georgia Tuberculosis Prevention Project (TPP) is a four-year project that aims to contribute to achieving the overall USAID/Georgia and Government of Georgia's objective to **reduce the number of all tuberculosis (TB) cases in the country, thereby achieving its Millennium Development Goals (MDGs)**. The project goal is being achieved through the following three objectives:

- *Objective 1: Improve early detection of TB suspected cases in general health facilities;*

The competency framework for FPs and general practice nurses adopted by the MOLHSA mandates them to provide comprehensive TB care in the community including early identification, referral, and follow-up. In order to build competencies of FPs and nurses in TB suspect case management and community – based DOT, the TPP team conducted a training needs assessment survey and revised the short-term modular course according to the assessment results. The course has been updated annually to ensure compliance with the most recent evidence-based recommendations. In addition, as part of the National TB Strategy effort, the TPP team works with MOLHSA/NTP, the NCDCPH, Country Coordinating Mechanism (CCM), and other stakeholders to develop evidence-based approaches encouraging GPs to provide TB diagnosis and referral services.

- *Objective 2: Strengthen the quality of full implementation of Directly Observed Treatment Short-course Strategy (DOTS) and DOTS plus nationwide;*

The TPP team works with the MOLHSA/NTP to roll out a comprehensive package of TB interventions to strengthen the full implementation of DOTS and DOTS plus nationwide. The objective is to ensure that providers routinely adhere to effective, standardized treatment guidelines, as a means to improve treatment outcomes and reduce drug resistance. The TPP team in collaboration with the Georgia Association of TB and Lung Specialists supports introduction of adult and pediatric clinical practice guidelines and protocols on TB diagnosis and management and implements quality improvement tools at a facility level. In addition to provider capacity, the project works to address health sector issues related to supporting quality DOTS. This includes support to strengthening the policy environment and program management through training and capacity development of MOLHSA, NTP, and NCDCPH, ensuring regulatory mechanisms are in place, engaging all providers in providing quality DOTS, and expanding partnerships with communities and NGOs to support delivery of TB services.

- *Objective 3: Provide limited assistance to recently established private treatment sites nationwide in updating physical infrastructure to meet TB best practice standards, and to improve infection control.*

As a result of ongoing reforms, the majority of the district and regional TB clinics and dispensaries have been integrated into private general and multi-profile hospitals and primary care clinics. Sixty-five TB care points were established under the organizational umbrella of the general health clinics across the country. Those services are linked and provide supervision of family physicians and nurses implementing MDR TB care at a community level. As a result of relocation of TB service points to general hospitals, the need to strengthen IC measures increased dramatically. TPP works with MoLHSA and private facility owners on developing effective strategies for improvement of infection control measures at general health facilities providing TB services.



## **B. Overview of Activities/ Results**

In Year 3, the project team worked closely with MoLHSA, NCDCPH, private hospitals, outpatient clinic networks and Family Medicine and TB specialists' professional associations to promote quality TB service delivery within the integrated model of care.

TPP continued trainings in early TB detection and management in general practice. The training has been delivered by the Georgia Family Medicine Association (GFMA) and the Association of TB and Lung Specialists. In Year 3, 1017 family physicians and nurses attended the course. This initiative supports both capacity building of local providers as well as strengthening professional bodies. TPP employed adequate tools for continuous performance evaluation and professional feedback to training professionals to ensure sustainability of these efforts. The performance appraisal of 257 family physicians and 261 nurses in FY2014 proved the effectiveness of the training program in terms of developing adequate competencies to make timely recognition of presumptive TB and refer them to TB specialists. The primary care professionals received a compilation of clinical case studies to serve as a knowledge refresher and support decision making in every day practice.

In Year 3, the TPP has also initiated various activities aimed at achieving further positive changes in the quality of TB services:

- (i) Strengthening identification and management of pediatric TB cases has been among TPP implementation priorities in FY2014. The TPP team, in collaboration with the Georgia Association of TB and Lung Specialists, elaborated clinical practice guidelines and protocols on pediatric TB diagnosis and management. The guideline was endorsed by MoLHSA and all pediatric TB specialists were trained.
- (ii) TPP continued to support the establishment of quality improvement collaboratives within large private networks. Following the formation of quality teams and introduction of the clinical audit methodology TPP regional coordinators conducted visits to 40 TB service sites. The audit data from individual health facilities are accumulated at the health service delivery network level and discussed during the quality improvement collaborative meetings on a quarterly basis.
- (iii) The TPP in collaboration with USAID/HSSP has developed an electronic TB Health Information System module to support adequate programmatic data collection and analyses to inform the national program planning and policymaking. TPP has also introduced a tablet-based application for epidemiologists, which includes a patient education module and is time- and geo-tagged. These technologies will promote a comprehensive approach to patient follow up that is critical during the ambulatory stage of care.
- (iv) The URC team has provided technical assistance to local NGOs to strengthen their capacity in designing and implementing TB prevention and control programs. In addition, it also provided 6 small grants to local institutions to implement community-level initiatives to improve TB awareness and fight stigma against TB.



Key results achieved in FY2014 are outlined in **Table 1**.

**Table 1. Key results of USAID Georgia TB Prevention Project in FY2014**

Objectives	Results
<p><b>Objective 1: Improve early detection of suspected tuberculosis (TB) Cases</b></p>	<ul style="list-style-type: none"> <li>• 1017 practitioners (197 FPs and 54 nurses in Tbilisi, 84 FPs and 91 nurses in Guria, 7 FPs and 32 nurses in Mtskheta-Mtianeti, 135 FPs and 101 nurses in Imereti and 92 FPs and 224 nurses in Kakheti) were trained in “Early Detection and Management of TB at PHC level”</li> <li>• 40 epidemiologists of NCDC trained in the use of android based application for patient education</li> <li>• 165 district hospital managers and epidemiologists trained in TB infection control</li> <li>• 330 job aids on TB detection were reprinted and disseminated to frontline professionals.</li> <li>• 6 adult and 9 pediatric clinical case studies were developed, posted on the website, printed and distributed to TB specialists and PHC providers</li> <li>• Performance appraisals in TB service delivery was conducted for 257 family physicians and 261 nurses</li> <li>• Four communication campaigns implemented               <ul style="list-style-type: none"> <li>○ World TB day campaign on March 23<sup>th</sup></li> <li>○ Pediatric TB</li> <li>○ Youth Awareness Raising regarding TB</li> <li>○ Georgian Orthodox Church for TB Prevention</li> </ul> </li> </ul>
<p><b>Objective 2: Strengthen the quality of full implementation of DOTS and DOTS plus</b></p>	<ul style="list-style-type: none"> <li>• Revised TB related legislation draft submitted to the Ministry of Labour, Health and Social Affairs</li> <li>• 10 lab technicians trained in Xpert MTB/RIF test for rapid detection of TB and Rifampicin resistance in Pulmonary, Extrapulmonary and Pediatric TB cases</li> <li>• 21 lab technicians trained in Bacterioscopy Diagnosis of Tuberculosis</li> <li>• Three new quality improvement collaboratives were established (In Tbilisi, Kakheti and Guria).</li> <li>• Pediatric TB management guideline and related protocols were approved by the Ministry of Labour, Health and Social Affairs.</li> <li>• 26 TB specialists trained in pediatric TB management</li> <li>• Journal Club meeting for TB specialists conducted.</li> <li>• 142 front line professionals trained in early detection and management of pediatric TB</li> <li>• 129 teachers and 32 journalists trained, 40 seminars arranged at schools on TB policies and stigma reduction strategies</li> <li>• TB HMIS module has been implemented.</li> <li>• mHealth application was developed</li> <li>• 6 small grants have been awarded and are implemented by the local NGOs and professional associations</li> </ul>
<p><b>Objective 3: Provide limited assistance to recently established private treatment</b></p>	<ul style="list-style-type: none"> <li>• Infection control curriculum and training package have been developed</li> <li>• A small grant project has been implemented to build up technical</li> </ul>



**sites nationwide in updating physical infrastructure to meet TB standards and to improve infection control**

and human capacity for TB-IC to improve TB-IC procedures and reduce number of TB infection among HCW, who are exposed to higher risk than general population, reduce TB transmission

### **III. Results by Objective**

#### **A. Objective 1: Improve Early Detection of Presumptive TB Cases**

##### **1. Trained PHC staff to recognize TB symptoms and test presumptive cases**

Studies in many settings have demonstrated that the involvement of private practitioners can help increase case detection while maintaining or improving treatment outcomes. Based on the experience gained by TPP through training evaluation and performance appraisal, the importance of advocacy and facilitation of a positive dialogue with GPs cannot be overstated.

In order to strengthen capacity of primary care providers in early detection and management of presumptive TB cases, URC renewed an agreement with the Georgian Family Medicine Association to provide training for family physicians and general practice nurses. The course objectives are as follows: 1) identify TB suspects during the early stages of the disease, 2) ensure timely referral to specialized TB services for early initiation of treatment according to the standard guidelines, and 3) provide necessary follow up to reduce treatment default. The course made a particular emphasis on developing counseling skills of physicians and nurses.

In year 3 the project trained 1017 providers [515 family Physicians and 502 Nurses] from Tbilisi, Mtskheta-Mtianeti, Kekheti, Imereti and Guria regions. Eleven (11) two-day training sessions were conducted for 64 small teaching groups. In total, the project trained 1800 PCPs and nurses or 25% of all PHC providers countrywide and achieved 90% coverage in 5 target regions with the highest TB burden. As in previous years, the course was highly in demand and very positively evaluated by the participants.

The above-mentioned training program was planned and implemented with close involvement and collaboration of all stakeholders including the professional associations, NCTBLD, MOLHSA, and the private health care providers.

The TPP team provided monitoring of training in all regions, attended group sessions, and interviewed trainees. The monitoring team positively evaluated various aspects of the training course such as high interest and active participation of trainees, and motivation and commitment of trainers to deliver high quality sessions. The trainees' feedback indicated that they were supportive of the training and appreciative of both the information provided and the way in which it was delivered. The highest rating of "5" was given by 71% of FPs and 83% of GPNs.

In order to achieve a wider coverage and target a greater proportion of FPs and GPNs particularly in rural areas, the TPP will extend the training and cover Kvemo Kartli, Shida Kartli and Samtskhe Javakheti regions during the next year.

##### **2. Developed innovative strategies for ongoing support of PCP to refer TB presumptive cases to TB specialists**

###### **a) Clinical Case Discussions**

Building on the positive feedback on posted and distributed clinical studies for providing a detailed, analytical report of particular aspects in TB diagnosis and treatment, accompanied by professional



advice, the TPP continued work on clinical case studies providing descriptive, exploratory and explanatory analysis of real clinical cases. A compilation of 15 new examples of TB cases (9 child and 6 adult) were developed. These case studies are based on the synthesis of evidence obtained from medical records including interviews of physicians and nurses, case histories, test results and allow for in-depth, multi-faceted exploration of issues requiring practical action. They provide engaging, authentic cases in clinical practice found in different regions of Georgia, give valuable insight and note the common mistakes and problems that GPs can encounter. By presenting clinical issues in the context of a patient's situation, case studies are an effective tool for demonstrating clinical decision-making. The case studies are available electronically at [www.tpp.ge](http://www.tpp.ge). 1000 booklets with the case studies were printed and have been distributed to family physicians, pediatricians and general practice nurses.

### **3. Performance appraisal and continuous professional feedback to FM practitioners in TB service delivery**

The performance appraisal of family physicians and nurses aims to improve quality of TB care provided by FPs and nurses by evaluating the degree to which family physicians and nurses can translate knowledge received through formal training programs into practice and assessing if their performance is in line with international and national evidence-based recommendations concerning TB care. The appraisal sessions are not limited to evaluations only, but provide teaching and mentorships opportunities. From the project perspective, the value of this activity is also in the development of the appraisal system, format/ tools as well as the engagement and capacity development of the appraisers.

Building on the last year experience TPP updated the appraisal instrument and initiated a second round of performance appraisal exercise in May 2014. A team composed of a family physician, a nurse and a TB specialist made PHC site visits to observe the practice and provide professional feedback according to the predefined criteria. In total 140 family physicians and 151 nurses were visited in Tbilisi, Imereti, Mtskheta-Mtianeti and Kakheti regions.

The results of appraisees satisfaction survey shows that they have appreciated this opportunity and are willing to have it again. The findings of FY 2014 appraisal given below are very similar of assessments conducted in FY2013 indicating at the systemic issues related to overall performance of primary care services, namely:

- The training program has had a positive impact in terms of developing adequate competencies to make timely recognition of TB suspects and refer them to TB specialists; Knowledge on follow-up care has been applied when possible; Emphasis on drug side effect management indicate that FPs and GPNs pay more attention to this area;
- Training resulted in introducing some approaches towards patient-centered TB care at the services sites such as:
  - creating a patient friendly environment and make DOT sessions more patient oriented;
  - improving communication with patients and their families;
- Training has had positive impact on FPs and GPNs attitude towards TB diagnosis and management by building self-confidence and responsibility;
- FPs should build their competencies in patient counseling



- Along with greater involvement in DOT monitoring FPs and GPNs should improve their knowledge and skills to effectively manage TB drug side effects. Physicians mentioned that these areas should be explored more in depth during the training.
- Training developed good understanding of teamwork in TB care and stimulated building of professional linkages between primary care and TB specialized service teams.

The trainings shed light on some of the systemic factors which prevent FPs and nurses from exercising newly acquired skills and competencies related to TB detection and long-term care. These include lack of adequate IC measures, low financial motivation, lack of patient education materials and weak linkages with specialized services. These factors need to be addressed through adequate policy and program interventions. TTP team will continue working with MoLHSA on elaborating effective strategies to support integration of TB into primary care service package

#### **4. BCC/ACSM Activities**

##### ***a) World TB Day campaign***

The TPP, in coordination with the Ministry of Labor, Health and Social Affairs (MOLHSA), the National Center for Disease Control and Public Health (NCDC&PH) and the National Center for Tuberculosis and Lung Diseases (NCTBLD) hosted several activities to mark World TB Day 2014, with messages geared toward all stakeholders, including policymakers, health care workers, patients, and society at large.

On March 24, 2014, TPP hosted a successful high-level meeting attended by more than 100 participants from a variety of public and civil society organizations representing the country's major players in public health. Attendants included representatives from the Healthcare and Social Issues Committee of Parliament of Georgia, the Ministry of Labor Health and Social Affairs (MoLHSA), Ministry of Corrections and Legal Assistance of Georgia (MCLA), USAID, NCDC&PH, National Center for Tuberculosis and Lung Diseases (NCTBLD) and students from TSMU. The stakeholders discussed and analyzed the global trends, progress and gaps in fighting TB in Georgia, implementation of National TB program in prisons, contribution of USAID TB Prevention Project, and to collaborate on future activities aimed at preventing the spread of TB. The conference was broadcasted by different Georgian TV channels.

The World TB Day was marked in the prisons as well. An event took place for which 81 books were purchased and prominent writers attended the presentation to promote TB detection and treatment in penitentiary facilities.

TPP developed a lively PSA on childhood TB in order to raise awareness and reduce stigma. A video roll was launched on March 20th.

##### ***b) ACSM activities implemented under the small grants program***

Georgian Health Promotion and Education Network conducts intensive information campaign to raise awareness regarding TB in youth. The program captures development and distribution of into materials specifically targeted for youth, training of teachers and journalists, holding informational meetings at universities and implementation of awareness raising activities at schools throughout whole Georgia.



The Center of Bioethics Studies and Culture developed and distributed printed materials and conducted information and education meetings with priests, monks, nuns, parishioners, internally displaced and socially vulnerable population.

## **B. Objective 2: Strengthening the Quality of Full Implementation of DOTS and DOTS plus**

### **1. National Pediatric TB Management Guideline**

TPP facilitated development of the first national pediatric TB guideline in Georgia. The guideline aims to establish standards for high-quality treatment of tuberculosis in children by providing evidence-based recommendations while considering the risks and benefits, acceptability, and feasibility.

The guideline development process was guided by the sound methodology developed by MoLHSA in partnership with the National Institute for Health and Clinical Excellence of Great Britain. The guidelines and protocols were elaborated by the multidisciplinary team, widely consulted by practicing physicians and nurses and reviewed by local and international experts. The guideline identifies, summarizes and evaluates the highest quality evidence and most current data about pediatric TB prevention, diagnosis, prognosis and therapy, including dosage of medications. It defines the most important questions related to clinical practice and identifies possible decision options and their outcomes. The guideline package includes the parents' version "What should parents know about childhood tuberculosis". It presents information in an easily understandable way. The National Guideline Accreditation Board at Ministry of Labour, Health and Social Affairs of Georgia adopted the pediatric TB management guideline and protocols on May 19, 2014 (Decree #01-116/o).

### **2. Train TB specialists in pediatric TB management**

Considering the need for improving quality of TB care for children, TPP invited the international expert Dr. Jennifer Furin to conduct training for pediatric TB specialists in Georgia. The training took place on July 1-3, 2014. Twenty-six TB specialists attended a 3-day training course, capturing lectures and specially developed case discussions. Trained local experts will disseminate the evidence-based information included in the guideline further to local physicians and nurses through additional training sessions and workshops in FY2015.

### **3. Promoting Quality Improvement Collaboratives**

TPP continued work on quality improvement collaborative (QIC), developed a quality improvement handbook describing quality improvement systems, tools, and offering specific measurable indicators to assess quality of TB services, established 3 new collaboratives and developed a training package for the third learning session. The sessions were devoted to the following topics: (a) new responsibilities of epidemiologists in TB management including tracing of TB contacts, ex-prisoners and patients lost to follow up; (b) findings of clinical audit at selected TB sites; (c) findings of performance appraisals of family medicine teams in TB service delivery and (d) TB HMIS module. The sessions were conducted in Tbilisi (on November 27, 28, 29, 2013) and Telavi (on December 3, 2013) and were attended by family physicians, TB specialists, nurses, managers,



and public health officials. The sessions covered MyFamilyClinic, GeoHospitals, Medical Park, Medalfa and Archimedes network facilities.

#### **4. Ongoing Support Activities to TB Professionals**

On December 20, 2013 the TPP arranged a professional meeting “NGO experience in TB prevention” for a wide group of stakeholders to present the best practices and lessons learned by the implementers of small grants program. TB specialists, primary care providers, current and prospective grant applicants were invited. All six current small grant implementers made presentations. The presented lessons learned involved sharing knowledge about the achievements, elements of specific project phases that went according to plan, the parts that could be improved on. The meeting facilitated both sharing information and active discussion on ongoing initiatives, thus it increased the visibility and generated interest among TB professionals to the small grants program.

#### **5. TPP’s Small Grants Program**

During the Year 3 four small grant projects initiated in year 2 were completed, namely:

##### ***a) Partnership of Social Initiatives: Improving TB Control by Removing Health System Barriers***

The purpose of this grant program was to build and strengthen linkages between health care facilities providing TB care and communities through active outreach by demonstration of how to enhance the effectiveness and efficiency of TB control by removing Georgia’s private health system barriers and to demonstrate a new long-term equitable and sustainable model for TB control. The project team conducted a survey on barriers to integration of TB services into the general health care system. More specifically, the survey aimed to identify how the governance, service organization, and procedures, including type and level of service organization, financing, and provider-payment mechanisms practiced in the private health system models, create incentives and barriers that affect the delivery of quality TB service. A total of 10,000 pamphlets were delivered to public service centers countrywide for further distribution.

The PSI team intended to elaborate recommendations for private providers on implementation of the new TB state program at their respective care settings as part of their small grants work plan. Due to delays in the state program revision and approval by the Government of Georgia, PSI could not make any progress on this direction. While all other program deliverables were successfully accomplished in the period since the program launch in FY 2012, in consultations with the TPP team PSI decided to close the program without achieving deliverable 4 (developing recommendations to promote effective governance of the district TB services within the new TB state program and training 50 private network managers in application of recommendations aimed at improving governance of the new State TB Program at a district level).

##### ***b) Georgian Phthisiologists and Pulmonologists Association: Improving early detection of suspected pulmonary and extra-pulmonary TB cases in public-private sector***

The project aimed to improve early detection of presumptive pulmonary and extra-pulmonary TB cases in multi-profile medical facilities through:

- Supporting professional development of specialized health-care workers (creating job-aids and protocols for TB differential diagnosis);
- Conducting relevant specialized trainings for health care professionals from different fields;



- Establishing strong linkages between NTP and specialized sector.

All activities and deliverables that were planned for the project lifetime were successfully accomplished according to the schedule.

- GPPA elaborated the training materials, agendas, pre- and post-tests job-aids, protocols, and algorithms for pulmonary and extra-pulmonary presumptive TB cases diagnosis and further management of pulmonary and extra-pulmonary presumptive TB cases
- In July-December, 2013 10 training sessions were conducted and total of 128 health professionals were trained in the modern aspects of TB diagnosis and differential diagnosis. The trainings were conducted at following sites: Chachava's Perinatal and ObGyn Scientific Research Center, Sepsis Center, multi-profile private clinic "Ultramedi" and Rheumatology Center.
- In order to strengthen linkages between the TB program and the public-private sector and promote referral of patients, GPPA elaborated a special patient referral flyer. The flyer was distributed to the trained professionals and the National center for TB and Lung Diseases' has started receiving patients with the above-mentioned flyers.

### **c) The Center of Bioethics Studies and Culture (CBSC): Georgian Orthodox Church for TB Prevention**

The overall goal of the project was to reduce community transmission of TB. The CBSC team worked with the Patriarchate of Georgia and targets representatives of eparchy and priests, parishioners, internally displaced people, and newly released prisoners with TB awareness raising activities.

All the project output and outcome indicators have been met or exceeded. CBSC developed a comprehensive informational package and conducted a countywide ACSM campaign with the focus on religious leaders and hard to reach groups such as monks, nuns and parishioners, including former prisoners. The project team has elaborated two types of posters and printed 500 copies of each, information brochure for general population - 2000 copies, information brochure for former prisoners - 5000 copies, information leaflet – 10000 copies. These materials focused on disease transmission and importance of treatment adherence. In addition, two video reels were developed and shot. Both of these reels were aimed at supporting patients and decreasing stigma. Video reels were broadcasted on three channels: Public Broadcaster, Ertulovneba and Imedi TV.

Fourteen meetings were conducted in eparchies and were attended by 1570 persons. In total, 53 persons (14 reverends and 39 priests) were selected in their respective regions. They were trained to serve as a peer educator and support in implementation of the project objectives. Since then peer educators conducted 24 info sessions in the respective regions. These religious leaders are well-respected by the communities and take an active role in educating them about the spread of TB, as well as about its treatment and prevention in order to diminish TB-related stigma. Because they hold the trust of their parish, the behaviors they promote are more readily accepted. Demonstrated commitment of the religious peer educators and approval by the head of Georgian Orthodox Church will substantially promote sustainability of the project achievements. Videos reflecting the meetings can be found at <http://www.youtube.com/watch?v=jzxNaOiBOM0> .

The project team conducted 22 meetings and 11 medical examination sessions in monasteries. Due to the special lifestyle, this group of people is one of the most hard to reach. In total 341 monks and 46 nuns have been examined, from which 11 monks and 1 nun were referred to health services as having symptoms presumptive of TB. Medical examinations for active case finding were also conducted in eparchies. In total 930 monks, nuns and parishioners were examined during 14 sessions, from which 23 were referred to health services for presumptive TB.



In addition, CBSC developed a database of 947 former prisoners and sent it to social services to facilitate their social integration and especially, opportunity to find a job.

#### **d) Georgian Health Promotion and Education Foundation: Conduct Intensive Information Campaign and Raise Awareness**

The overall goal of the project was to raise awareness of TB for patients, their family members and medical workers, as well as of the general population regarding TB in Georgia.

Specific objectives of the project were:

- To elaborate information and promotion materials regarding TB
- To conduct information and awareness raising activities in 11 regions of Georgia. This will include training for journalists.

The following activities were implemented in accordance with the project plan:

- Preparation and publishing of information materials: leaflets for general population about TB (3000 copies); sticker with slogans (5000 copies); poster with slogans and 2014 calendar (1000 copies); scrolling stander with slogans (2 items); T-shirts with slogans (200 items); 1 social video and 1 audio clip; advocacy toolkit for NGOs, PPT presentations, curriculum and material for media-training have been developed
- 13 trainings sessions were conducted for journalists, NGOs, public health offices. The trainings were attended by 201 civil society representatives and public health officers and 32 journalists who received information about TB, as well as about advocacy and also developed practical skills for advocating tuberculosis issues.
- Informational meetings were conducted at universities and other educational facilities in Tbilisi and 10 regions of Georgia. About 750 students and pupils have participated in the meetings and received information about tuberculosis issues.
- GHPEF organized 11 street actions in following towns: Kutaisi, Batumi, Zugdidi, Ambrolauri, Ozurgeti, Akhaltsikhe, Gori, Telavi, Rustavi, Mtskheta and Tbilisi. In street actions there participated students and pupils of mentioned towns, totally around 300 persons. They have distributed information materials (leaflets, posters and stickers) among public.
- Seven talk-shows and reportages were placed in different regional media sources. 6 talk-shows were organized in internet TV and radio “Obieqtivi”.

In 2014 following an open call for applications, six new small grant projects were initiated, starting on April 2 for the duration of one year till the March 15, 2015. As in previous rounds, TPP has provided comprehensive technical and management support to ensure grantees have access to the most up-to-date and high quality TB information and approaches, to strengthen their lasting ability to contribute to TB control efforts. The new grants projects are described below:

#### **a) Health Research Union: Strengthening Capacity in Tuberculosis Control at the Community Level**

The project aims at improvement of TB control at the community level through the increased leadership and participation of public health centers and proper linkages between preventive, diagnostic, clinical and community support functions.

In order to ensure that the training curriculum and the subsequent training workshops are directly targeted to cover topics and programs areas perceived as weaknesses or areas of uncertainty by the PHC personnel, the project team conducted two focus group discussions with the



representatives of PHC centers. The discussions revealed some inherited misperceptions and knowledge gaps that are barriers for PH centers' in performing their functions in TB control at the district level. Proceeding from the information obtained from the focus groups, the 16-hour training curriculum, training materials and presentations were designed specifically targeting public health aspects of TB control. In addition to training materials and presentations developed for the workshops, the HRU team also developed a TB control manual specifically designed for public health personnel. The manual includes all major public health topics in relation to Tuberculosis that are also included in the training curriculum. The manual is based on the evidence-based data, WHO and US/CDC recommendations and guidelines.

**b) Georgian Phthisiologists and Pulmonologists Association: Improving early detection of presumptive TB cases in multi-profile medical facilities through supporting professional development of specialized health-care professionals.**

The purpose of the project is to improve early detection of presumptive pulmonary, extra-pulmonary and childhood TB cases in multi-profile medical facilities. This will be achieved through the following objectives:

- Increasing knowledge of frontline health care professionals in borderline specialties in modern aspects of TB diagnosis and differential diagnosis;
- Increasing referral of suspected pulmonary and extra-pulmonary TB cases from public-private sector to TB services in Tbilisi;
- Establishing strong linkages between National TB Program and public-private sector.

During the reporting period a working group was created, functions and responsibilities were distributed, the scope of work was defined and the working group meeting schedule established. A range of materials were developed covering childhood TB presumptive case protocol and presentation on childhood TB presumptive case management were developed. Two job-aids, one for obstetricians and gynecologists and one for neonatologists that will cover major aspects of perinatal, intranatal and postnatal management of TB were elaborated and the Patient Referral Flyer was updated. Four training sessions were conducted in Tbilisi at multi-profile Referral Hospital 2012 and Center for Endocrinology, Metabology and Diatology "Enmedic". In total 96 frontline professionals were trained. Each of the trainings consisted of general introductory section and relevant field specific part. The introduction includes information regarding TB situation worldwide and specifically in Georgia, current challenges and gaps in TB diagnosis and treatment and aims at refreshing participants' baseline knowledge regarding TB. The field specific part is focused on the professional interest of attendants of particular training and covered diagnosis and differential diagnosis of TB.

**c) Health Promotion and Education Foundation: Community Level Information Campaign and Youth Awareness Raising regarding TB in Georgia.**

The purpose of the project is to raise awareness of youth in all regions of Georgia. This will be achieved through three objective, namely:

- To elaborate information and promotion materials regarding TB specifically for youth
- To elaborate special methodical guideline for teachers and build their capacity
- To conduct information and awareness raising activities in 105 schools throughout whole Georgia.



GHPEF organized focus group discussions in Tbilisi, Kutaisi and Sachkhere with participation from pupils and teachers and evaluated several slogans and messages to identify the most preferable slogans to be used in the information materials. The project team prepared and printed 150 copies of the methodological guideline for teachers, 20,000 copies of leaflets, 1,000 copies of table calendar and 500 T-shirts. Additionally, 250 CDs with all presentations and information materials elaborated for the project, as well as the video clips developed by TPP were produced. In close cooperation with the Ministry of Education and respective resource-centers, and with active involvement of Teachers Professional Development Center (TPDC), GHPEF organized 2 trainings of teachers in Tbilisi (17-18 September) and 2 trainings of teachers in Kutaisi (20 September, morning and afternoon sessions). Trainings were organized in the premises of TPDC and were attended by 129 teachers in total. The project team has started organization of information seminars in schools. As of 3 October, 2014 seminars were organized in about 40 schools and covered 4 different regions.

#### **d) The Center of Bioethics Studies and Culture: Georgian Orthodox Church Against Tuberculosis**

The purpose of this grant is to build on previous work to reduce community transmission of TB and thus contribute to decreasing incidence and prevalence of TB in Georgia.

CBSC team conducted meetings and visited the different eparchies. During the meetings, information leaflets and booklets were disseminated and clergy were able to ask questions. In each eparchy peer educators were selected on a voluntary basis. In total 12 priests and 5 nuns and monks have been selected and trained. They agreed to spread appropriate information regarding TB and thus support in implementation of project targets.

Since the project inception, 4 meetings were conducted at the theological boarding schools and 2 meetings at Tamar's University. The project team discussed the disease prevention and importance of community involvement in TB control. The participants raised a number of issues related to the stigma and disease transmission, which was addressed and answered by the project team. The project team also visited 2 housing entities for socially vulnerable populations in Tbilisi and provided them with the key messages about TB disease spread and prevention measures and distributed information materials. In addition, informational lectures and talk-shows were created and aired on TV channel "Ertulovneba".

#### **e) Center for Information and Counseling on Reproductive Health – Tanadgoma: Ensuring adherence to Tuberculosis treatment among former prisoners**

The project intends to target former prisoners as a risk group due to exposure to TB, former prisoners who are under treatment on TB at the moment of release, family members of the former prisoners and penitentiary department staff in order to support treatment adherence as well as contact and default tracing among former prisoners who are under treatment after release.

Tanadgoma case managers and project coordinators, in consultation with the experts of NCTBLD, created a booklet on TB prevention, treatment and adherence issues. The text of the booklet has been developed and tested by former inmates who were treated or are under the treatment (12 persons in total). The comments and suggestions have been incorporated. The booklet will be printed and distributed during the next quarter.

Pre-release counseling package has been developed and piloted. The package will be used for training of the social workers of the penitentiary department and for individual counseling sessions at Ksani prison N19.



## **6. Health Management Information System**

The TPP in collaboration with USAID/HSSP has developed an electronic TB Health Information System module to support adequate programmatic data collection and analyses to inform the national program planning and policymaking. The TB software package was field tested in October-November 2013. The TPP provided training for TB specialists on use of the e-TB module in FY2014. The TPP purchased 85 laptops health facilities involved in the TB State Program. TPP regional coordinators have been supporting local TB team to enter the data into the module. The pilot will continue in FY2015.

## **7. Strengthening tools for managing TB patients**

USAID TB Prevention Project intends to introduce new tools and mobile technologies to improve MDR treatment compliance. Many countries use phones, tablets, laptops to provide healthcare solutions, whether this is for prevention, providing medical information, or monitoring chronic conditions. This approach, known as mHealth enables for optimization of communication, sharing, and exchanges of information, images, and data among healthcare professionals, and with the patient, wherever they are located. In developing countries, mHealth is a possible response to promote access to healthcare and preventive services.

The mHealth TB program in Georgia is based on TB Health Management Information System (HMIS) module composed of TB case registration, laboratory tests results, prescription and treatment monitoring components. It can be developed further as necessary and linked to any mobile technologies including tablets and cell phones. The system can be used for generating reminder messages for health care providers and patients and automatically integrating information received via SMS. In FY2014 TPP has introduced a tablet based application for epidemiologists which includes a patient education module and is time and geo-tagged. Tablets were provided to all epidemiologists involved in the TB program countrywide. The TPP will develop the mHealth application further to enable quick data exchange on new TB cases between various providers and minimize the time from TB case notification to taking necessary actions for active identification of contacts.

## **8. Strengthening regulatory framework for TB Control in Georgia**

A focus of the Stop TB Initiative is to address ways to strengthen health legislation and regulation in order to better support the vital efforts to strengthen tuberculosis prevention and control. A crucial expression of political will is to have in place up-to-date legislation on communicable diseases control and, based on that, to adopt regulations which apply the principles and provisions of that legislation to TB control. The legislation and regulations together serve to support and sustain a dedicated public health strategy for TB control, exemplified by DOTS. In line with the above mentioned the TPP supports the Health and Social Issues Committee, Parliament of Georgia in development of regulatory framework to promote TB control in the country. Based on the assessment of the major gaps to be addressed by the regulatory framework, international experience and extensive consultations with local and international experts and a broad stakeholder group, the working group elaborated the draft law on TB control and submitted to the Committee and other stakeholders. The policy dialogue will continue in FY2015. WHO experts will be involved with a specific focus on human rights and discrimination.

## **9. Developing Tuberculosis Laboratory Services Strengthening Plan**

Georgia's recently re-organized laboratory network consists of the National Reference Laboratory (NRL) in the capital, a regional laboratory in Kutaisi, eight peripheral smear microscopy



laboratories in the civilian sector and two in the prison system. The National Center for Tuberculosis and Lung Diseases is responsible for the NRL and the prison laboratories, while the National Center for Disease Control is responsible for the regional and civilian peripheral laboratories, as well as collection of specimens from 65 local TB service points and transporting samples to peripheral laboratories for smear microscopy, and to Kutaisi and NRL for culture and drug susceptibility testing (DST).

Although the country has implemented new technologies successfully, no plan was available for strengthening and sustaining the laboratory network for the immediate future or after 2015 when donor support is anticipated to decrease. TPP contracted an international consultant, Dr. Giorgio Roscigno to assess the current lab capacity and its functional characteristics and develop TB laboratory network strengthening plan for Georgia covering all major aspect of TB laboratory services including quality, laboratory norms and standards, turnaround times, selection of patients and algorithms, bio-safety, deployment of new technology, specimen transport, EQA, human resources, supervision, information system, reagents and consumables, equipment maintenance. In line with the agreed scope of work TB laboratory network assessment report, including current lab capacity and its functional characteristics, key gaps and priority areas for improvement and TB laboratory network development plan for 2015-2020 have been elaborated. The report was shared with the National Center for Disease Control and Public Health, National Reference Lab and Global Laboratory Initiative Mission representative Ms. Leen Rigouts visiting Georgia in July-August 2014. The comments were discussed and incorporated and will be reflected into the National TB Strategy for 2016-2020 which is currently being elaborated by the stakeholder working group under the auspices of CCM.

## **10. Building human resource capacity for TB laboratories**

### ***a) Training in Xpert MTB/RIF test for rapid detection of TB and Rifampicin resistance in Pulmonary, Extrapulmonary and Pediatric TB cases***

A high-quality laboratory system that uses modern diagnostics is a prerequisite for early, rapid and accurate detection of TB. The lack of diagnostic capacity has been a crucial barrier preventing an effective response to the challenges of HIV-associated and drug resistant TB, with only about 18% of the estimated global burden of MDR-TB and an even smaller fraction of extensively drug-resistant TB (XDR-TB) cases being detected. An expanded capacity to diagnose TB and MDR-TB is a global priority for TB control.

Considering the importance of rapid and quality TB diagnosis at laboratory level USAID Georgia Tuberculosis Prevention Project supported educational activities and based on the newly designed program conducted trainings for 10 laboratory technicians, who currently work on diagnosis of TB by Xpert MTB/RIF. The goal of this training program is to improve quality of TB diagnostic services by improving skills and knowledge of laboratory technicians in Xpert MTB/RIF testing. One day (8 hours) training was delivered at the Reference-laboratory of the National Center for Tuberculosis and Lung Diseases in 2 small groups. TPP Regional coordinator Tamar Zurashvili provided monitoring of the trainings in Tbilisi. The venue for trainings was absolutely convenient for receiving of the necessary practical skills. Interactive training methods were used and the participants were fully engaged.

### ***b) Training in TB Microscopy***

In Georgia, like many countries with a high prevalence of TB, direct sputum smear microscopy remains the most cost effective tool for diagnosing patients with infectious tuberculosis and for



monitoring their progress on treatment. The World Health Organization strategy for tuberculosis control (DOTS) relies on a network of laboratories that provide acid fast bacilli (AFB) sputum smear microscopy. Microscopy errors are likely to result in failure to detect persons with infectious TB who will then continue to spread infection in the community, or unnecessary treatment for “non-cases.” Errors in reading follow up smears can result in patients being placed on prolonged treatment or retreatment, or in treatment discontinued prematurely. Therefore, quality assurance of laboratory services, including AFB sputum smear microscopy, is essential.

One of the essential means to quality of smear microscopy services is to provide on-going training of laboratory staff of a regular basis. The Global Fund TB project was supporting the NTP to conduct annual refresher courses for lab technicians. In 2013 GF ceased the training component. In order to cover this gap USAID TB Prevention Project included the training for lab technician in FY2014 work plan.

Twenty one laboratory technicians from NCDL laboratories and penitentiary system were trained in TB microscopy to improve quality of TB diagnostic services. Three days (24 hours) training course was delivered in 4 small groups with 5-6 trainees in each. The program captured slide show presentations and specially prepared practical sessions. TPP Regional coordinator Tamar Zurashvili provided monitoring of the trainings in Tbilisi. In the Reference-laboratory of the National Center for Tuberculosis and Lung Diseases venue for trainings was adequate for skills training. Training was based on interactive learning methods and all participants were fully engaged in discussions and practical work.

### *c) Training in LED microscopy*

Following WHO recommendations on a wider use of Fluorescent light-emitting diode (LED) microscopy for diagnosis of tuberculosis, NCTBLD introduced the method in 2012. The LED microscopy has qualitative, operational and cost advantages over both conventional fluorescence and Ziehl-Neelsen microscopy. Since introduction last year, NCTBLD director and the Supranational Laboratory consultant identified the staff needs for additional training in use of LED technology and asked for TPP support. Training capacity is not available locally. The nearest location where the training can be obtained is Baku, Azerbaijan. NCTBLD has established cooperation with Ministry of Justice/Specialized Treatment Institution/Laboratory of the Medical Service (Bina district, Baku, Azerbaijan). USAID/Georgia TB Prevention Project financially supported 3 days trainings of 4 laboratory technicians from reference laboratory of NCTLD. Training was conducted in March 2014, in Baku.

## **C. Objective 3: Provide Limited Assistance to Recently Established Private Treatment Sites Nationwide in Updating Physical Infrastructure to meet TB Best Standards and to Improve Infection Control**

In Year 4, the Health Research Union implemented a small grant project "Improve Tuberculosis-related Infection Control Practices in Hospital Settings". The activities carried out within this project improved the awareness and technical skills of hospital managers and epidemiologists (or other personnel responsible for IC control) in appropriate TB-IC planning, implementation and monitoring at healthcare settings. In total 165 individuals were trained on TB-IC from the selected healthcare facilities from different regions of Georgia, including hospital managers and persons responsible for IC in a facility (epidemiologists, nurses etc.). Evidence based guiding materials and tools for TB-IC at healthcare facilities including manual on TB infection control, model terms of reference for hospital infection control committees, sample of facility action plan for TB infection control and TB



patient detection and referral pathways were specifically developed, printed and distributed among training participants. Participating facilities were supported in establishment and strengthening TB-IC measures within target facilities. TB-IC costing tool was developed based on the review of international evidence, methodological guidance and good practices; it was tested and adopted to local conditions and disseminated among all participating facilities.

## **IV. Best Practices/Success Stories**

### **Strengthening Country Coordination Mechanism in Georgia**

Dr. T.Gabunia, CoP of Tuberculosis Prevention Project has been elected as a vice chair of the Country Coordination Mechanism (CCM) chaired by the Minister of Labour, Health and Social Affairs of Georgia. The CCM aims to promote country ownership, foster innovative partnerships to fight the three diseases, encourage in-country formulation and implementation, build upon national policies, priorities and partnerships, and promote accountability and transparency. The vice chair will lead the work to strengthen the role and capacity of CCM in line with the new recommendations.

### **Promoting multi-lateral collaboration to strengthen national TB response**

- Collaboration with the Ministry of Labour, Health and Social Affairs

TPP provided technical assistance to MOLHSA in evaluation of National TB Program 2013, followed by revision and updating the NTP in 2014. Namely, health needs, current practices, existing gaps, system delivery capacity, budgeting issues and operational constraints were analyzed and solutions including program management and a monitoring framework were suggested through extensive consultation and coordination facilitated by TPP. The revised NTP will promote an optimized TB response and strengthen NTP implementation, monitoring and evaluation efforts.

- Collaboration with the Ministry of Corrections and Legal Assistance of Georgia

Following the discussion of gaps identified through situation analysis concerning TB National response related legislation and in line with the recommendation issued by the European Committee for the Prevention of Torture (CPT) Ministry of Corrections and Legal Assistance of Georgia changed the TB regulations and adapted TB infrastructure in a way that pre-trial prisoners are equally able to access the same standard of TB services in the TB Center as convicted inmates. In June 2014 the first group of pre-trial prisoners were enrolled in TB program.

- Collaboration with the NCDCPH as principle recipient of the GF project and introduction of innovative tools

In order to improve TB treatment compliance for achieving better clinical outcomes and decreasing the risk of drug resistance TPP developed a cash incentives scheme, including design requirements, description of the incentives scheme, target groups and conditionalities, step by step implementation mechanisms and roles of responsible entities. Besides, HMIS module elaborated by TPP enables real time monitoring of patient adherence and generates the list of patients who are eligible for receiving cash incentives. These features have been successfully used by the NCDCPH as principle recipient of the Global Fund project to administer the cash incentive scheme. In addition, TPP printed leaflets explaining terms and conditions of cash incentives for patients. These leaflets are distributed at TB sites to ensure adequate patient information and motivation.



NCDCPH staff was recently mandated to conduct intensive contact tracing, encourage referral of high-risk individuals to TB services and support non-adherent patients to complete treatment. TPP developed an android based mHealth application to facilitate reporting of patient data and recording of TB DOT treatment, improve patient management and support decreases in lost-to-follow-up and also provide forum for improved patient education and counseling. TPP also trained and equipped NCDCPH epidemiologists to fulfill their obligations.

- Collaboration with research institutions

TPP team attended U.S.-Georgia Program-Development Workshop on HIV/AIDS, Tuberculosis (TB) and Hepatitis conducted in Tbilisi at June 16-18, 2014. The workshop aimed to share current research findings in the area of HIV/AIDS, TB and Hepatitis (including HIV-TB and HIV-Hepatitis co-infections) and to foster existing and future research collaborations that engage investigators and institutions in Georgia and the United States. The workshop included invited talks and poster sessions and covered epidemiology, prevention and control, treatment and cure as well as research tools such as genomics and bioinformatics. TPP team had three poster presentations: "Knowledge, attitude and practice survey for tuberculosis among high risk groups and general population in Georgia, 2012" (T. Gabunia), "Role of Primary Care providers in detection and follow-up treatment of Tuberculosis in Georgia" (N. Solomonias) and "Smoking increases the risk of poor tuberculosis treatment outcomes" (M. Gegia).

#### **44th Union World Conference on Lung Health**

The USAID Georgia TB Prevention Project (TPP) team members - Tamar Gabunia, COP, Medea Gegia, Clinical Advisor and Tsira Chakhaia, ACSM Advisor attended the 44th Union World Conference on Lung Health, which was held at the Palais des Congrès in Paris, France on 30 October–3 November 2013. The conference theme was "Shared Air, Safe Air?" which reflects growing concerns about the need to improve the quality of the care for both healthy and vulnerable persons. The TPP representatives made presentations on systemic barriers that prevent integration of TB into general health system, the importance of active screening and contact tracing, TB related knowledge, skills and attitudes among high risk groups in Georgia and the role of primary care providers in TB detection and follow up treatment. TPP ACSM Materials reflecting the TPP activities were exhibited at the URC exhibition booth. The presented materials attracted attention and were acknowledged by colleagues, for instance the TPP site link is added to the list of useful sites by the Health Development Center "AFI" at [http://afi.md/en/list/0/About\\_TB/item/id/14/cat/9999](http://afi.md/en/list/0/About_TB/item/id/14/cat/9999).

## **V. Challenges**

The key challenge during implementation was ongoing restructuring of health care system, including the Ministry of Labour, Health and Social Affairs, National Center for Disease Control and Public Health, insurance companies, continuing uncertainty regarding the government entity responsible for the National TB response and high level of turnover of corresponding officials hampers adequate collaboration with governmental counterparts and timely decision-making.

## **VI. Monitoring and Progress against Indicators**

Project monitoring was provided to track performance against key input, output, and outcome indicators as defined by the Project Monitoring Plan. The TB project team conducted ongoing monitoring and assessments of all activities implemented by the project staff or subcontractor organizations to: (1) identify project activities that are progressing as planned and should be continued; (2) introduce corrections to activities that are not progressing as planned; and (3) detect interventions that needed modification to produce desired impact.



The TB project team produced monthly, quarterly, and annual reports highlighting achievements on various indicators. These reports/vignettes are stored in the PMIS database to allow rapid retrieval for reports and presentations.

As presented in **Table 2** most of the targets were achieved. However, due to political, technical and administrative barriers, progress was delayed or lacking for the following indicators:

- Regional training center is not functional and therefore no workshops could be supported.
- Preparatory activities for training for current and former TB patients have been implemented and the training will take place in the next year. Due to high level of stigma these activities took longer than planned.
- The project experience showed that the physicians and nurses prefer to use printed materials rather than electronic versions, so it was decided to decrease the amount of produced CDs.
- Average number of TB patients accessing key services in each clinic- screening, diagnosis, treatment did not increase as planned or even decreased. This is explained by the significant decline of both incidence and prevalence of TB in Georgia. For instance, number of contacts screened by each facility on average decreased but during the same period the number of contacts investigated per TB patient increased.

Table 2: Illustrative Performance Monitoring Plan				
Objective 1. Improve early detection of suspected TB cases (early diagnostics) in general health facilities				
Output Indicator				
Indicator	Data Source	Frequency	Year 3 Target	Year 3 Actual
<b>1.1. Train primary health care doctors, nurses and other general health staff to recognize symptoms and test suspected cases (training and support of PCPs )</b>				
# of management improvement collaborative meetings	Project Report	Quarterly	4	4
# of service delivery improvement collaboratives formed at regional levels	Project Report	Quarterly	3	3
# of regional service delivery improvement collaborative meetings	Project Report	Quarterly	28	43
# of service delivery improvement teams formed at facility levels	Project Report	Semi-Annual	10	10
# of TB training modules (to Identify TB suspects in the early stage of disease) for family physicians developed/ revised	Project Report	Annually	1	1
# of TB training modules (to Identify TB suspects in the early stage of disease) for general practice nurses developed/ revised	Project Report	Annually	1	1
# of Family doctors trained in identification of TB suspects in the early stage of disease	Project Report	Quarterly	500	515
# of General nurses trained in identification of TB suspects in the early stage of disease	Project Report	Quarterly	500	502
# performance appraisal visits conducted to family physicians and general practice nurses	Project Report	Annually	250	257
<b>1.2. Ensure use of a standard TB case detection module in all pre- and in-service training curricula for general practitioners</b>				



# of consultative meetings held with MoE, Tbilisi State Medical University, professional associations and other key stakeholders to review/update TB case detection module in pre-and in-service training curricula for general practitioners	Project Report	Quarterly	TBD	4
# of teachers retrained on new topics/methods of the TB case detection module in pre-and in-service training curricula for general practitioners (stratified by pre-and in-service trainings)	Project Report	Quarterly	50	50
# of Distance-learning courses and innovative approaches to improve attendance to TB training modules and rotations are developed	Project Report	Annually	2	1
<b>1.3. Assist in the creation of a national strategy that encourages general practitioners to identify and diagnose suspected TB cases in general health facilities for further referral to the NTP</b>				
# of well-performed PHC teams (family doctors and nurses) participated in workshops and capacity building activities at Regional TB Training Center in Georgia	Project Report	Annually	20	0
# of CDs with new literature, web-based and case-based modules for PCPs (to support them to refer TB suspect cases to TB specialists) are developed and distributed to health care facilities	Project Report	Annually	2000	250
# of Paper bulletins, massaged pens, mugs, calendars and etc for PCPs (to support them to refer TB suspect cases to TB specialists) developed and distributed to health care facilities	Project Report	Annually	2000	1000 pediatric TB guidelines, 2500 pediatric TB protocols
# of meetings conducted with key stakeholders (MoLHSA, HSSP, Private Insurance Companies, Georgian Insurance Association, Service Providers and etc) to integrating TB case detection and referral services by PCPs into the standard benefit packages of private and state funded health insurance schemes	Project Report	Quarterly	4	4
<b>1.4. Develop information materials (brochures and posters) and public service announcements (PSA) to educate the public on the importance of detecting early signs of TB</b>				
KAP survey conducted	Survey report	Annually		
# of TV, radio and web-based campaigns and club discussions conducted to inform the general public about the early signs of TB and available resources	Project Report	Quarterly	4	4
# of Printed materials distributed to the general public in common areas such as banks, grocery stores, bars and restaurants	Project Report	Quarterly	TBD	3000 info leaflets, 20000 info flyer for youth, 1000 calendars
<b>1.5. Reduce the stigma of TB through PSAs and informational materials</b>				
# of current and former TB patients trained to deliver positive messages to the public about TB diagnosis and treatment.	Project Report	Annually	250	
# of local leaders, cured TB patients delivering TB stigma reduction massages	Project Report		TBD	12
# of PSA and community events held to deliver stigma-reduction and awareness building communication messages	Project Report	Annually	12	31
# of brochures, posters, "I am The Best" T-shirts, mobile massages, TV, radio and web-based information distributed to deliver stigma-reduction and awareness building communication massages	Project Report	Annually	200T-Shirts 4000 brochures 200 posters on cough hygiene 1000 flyers	650 T-Shirts, 75 carves, 200 posters, 300 pins, 1 banner, 2000 brochures for parents, 18000 flyers for sensitive patients, 2400 flyers for MDR patients, 1 animated clip, lecture of TV, 8 talk-shows



Outcome/Impact Indicator				
# of patients with suspected TB referred from primary care providers for TB diagnosis (stratified by length of TB suspected symptoms, by regions/districts)	Multiple Sources	Annually	40% increase at baseline	Average Georgia 194 per month (300% increase)
% of TB+ cases in total number of suspected TB patients referred from primary care providers	Multiple Sources	Annually	40% increase at baseline	14% (250% increase)
Case notification rate in new sputum smear positive pulmonary TB cases per 100,000 population nationally	TB surveillance database (2010 baseline 48)	Annually	54	30
#/% of PHC teams which refer patients with suspected TB symptoms to TB services within two weeks of onset of symptoms	Multiple Sources	Annually	40% increase at baseline	44 PHC teams per month on average (baseline 12 teams)

**Objective 2: Strengthen the quality of full implementation of DOTS and DOTS plus nationwide**

Output Indicator				
Indicator	Data Source	Frequency	Year 3 Target	Year 3 Actual
<b>2.1. Expand geographically to cover nationwide quality DOTS and DOTS plus services through technical assistance and training of medical personnel and supportive supervision</b>				
# of outpatient TB service providers evaluated through supportive supervision visits	Project Report	Annually	200	200
Performance appraisal report available	Technical Report	Annually	Yes	Yes
# of diagnostic facility staff trained in QA issues	Project Report	Quarterly	25	25
# of DQA visits to facilities to assess the quality of data by indicators and validate reported information across different levels of the health system	Project Report	Annually	TBD	200
# of TB patients enrolled in mHealth initiative on a pilot basis	Project Report	Annually	TBD	
# of TB patients counseled after they leave penitentiary system	Project Report	Annually	TBD	
# of TB specialist, nurses and laboratory staff trained in the use of WHO's TB definitions	Project Report	Annually	-	-
# of TB specialists and nurses trained in managing mental disorders among TB patients	Project Report	Annually	-	-
<b>2.2. Provide technical support to NTP in training, management, infection control, monitoring and evaluation, policy and strategy formulation, development of the TB strategic plan (2013 – 2015), and operations research</b>				
# of national and international workshops conducted by the NTP trainers with support of the project	Project Report	Annually	2	3
# of existing IC policies and guidelines adapted	Technical Report	Annually	1	1
<b>2.3. Ensure an appropriate national TB policy and program response in the evolving Georgian health system reform</b>				
# of consultative meetings on legal and policy issues organized by the project that will be attended by the CCM members and other stakeholders	Project Report	Annually	2	2



Technical assistance provided to ensure that regulatory tools are put in place to support national decision makers in health to ensure future availability of case detection and DOT services in private health care settings	Project Report	Annually	TBD	3
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**2.4. Support to local NGOs with known success in assisting patients to adhere and complete MDR/XDR treatment**

# of NGO representative trained on TB related policy, proposal writing, financial management, strategic and operational planning.	Project Report	Annually	50	21
# of small grants programs implemented by NGOs	Project Report	Annually	4	6
# of social workers conducted field experience in NTP and local NGOs delivering community support services for HIV positive and TB patients	Project Report	Annually	5	20

**2.5 Assist the professional association of TB specialists**

# of grant writing workshops conducted for members of TB professional associations	Project Report	Annually	4	2
Annual award ceremony: the "Best TB specialist" and the "Best PHC Site" conducted	Project Report	Annually	1	1
# of "journal club" meetings for members of the National Association of TB Specialists	Project Report	Quarterly	1	1
# of association members attending regional conferences	Project Report	Annually	4	1
# of small grants programs implemented by various professional associations in carrying out TB education programs for its members	Project Report	Annually	2	2

**Outcome/Impact Indicator**

Treatment success rate for new smear positive TB cases: number and percentage of new smear-positive TB cases successfully treated (cured + treatment completed) to the total number of new smear-positive TB cases treated in a given year, in %	TB surveillance database (2009 baseline 75%)	Annually	83%	74.4%
Treatment success rate of MDR-TB patients: number of patients who were cured or completed Category IV treatment (% of the total number of patients in the same registration cohort)	TB surveillance database (2008 baseline 54.5%)	Annually	65%	50%
Interim treatment success rate of MDR-TB patients: number of patients who are smear and culture negative at 6 months after start of treatment (% of the total number of patients in the same registration cohort)	TB surveillance database (2008 baseline 55%)	Annually	70%	66% (2012 cohort)

Objective 3: Assistance to recently established private treatment sites nationwide in updating physical infrastructure to meet TB best practice standards, and to improve infection control

**Output Indicator**

Recommendations elaborated for adjusting physical infrastructure of health facilities	Facility assessment report	Annually		
Infectious control standards for different types of facilities elaborated	Project reports	Annually		
# of health facilities updated and equipped	Project reports	Annually	20	-
# of staff trained on effective IC measures	Project reports	Annually	200	165

**Impact Indicator**

Average number of TB patients accessing key services in each clinic- screening, diagnosis, treatment	Project reports	Annually	TBD	
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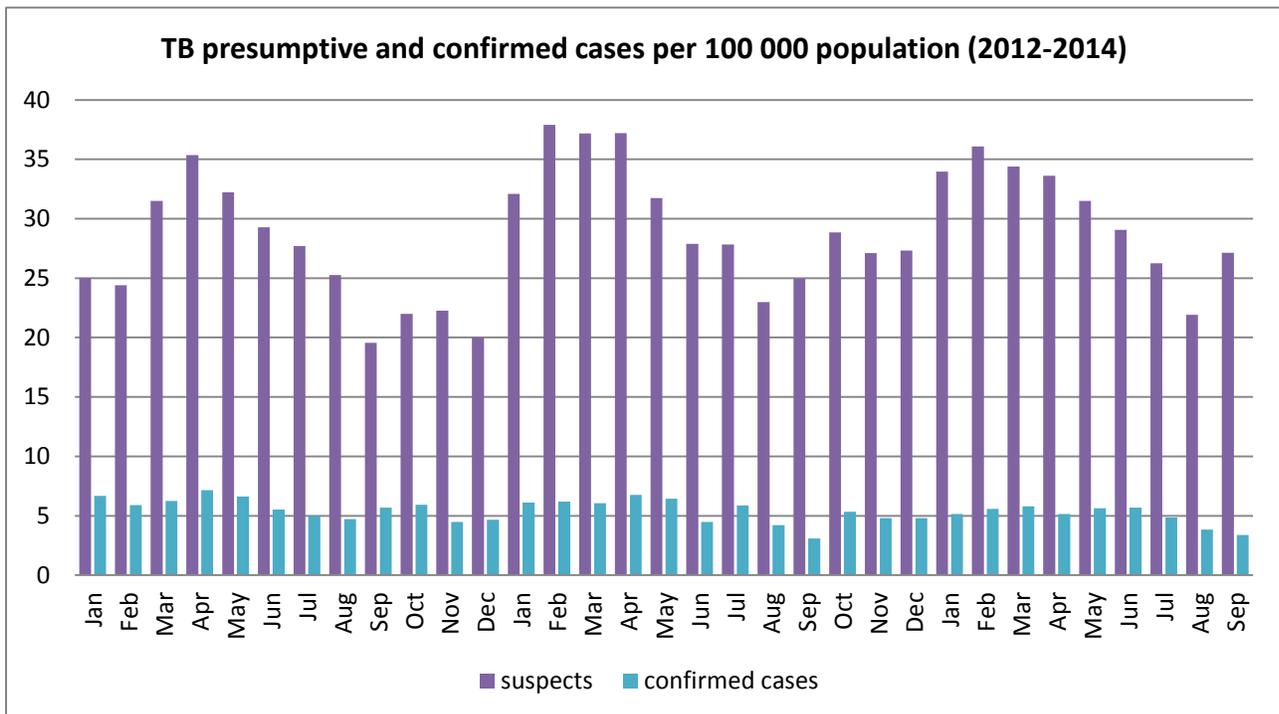


Screening			20% increase at baseline	Average 5.6 contacts screened per month per clinic (baseline 6,7)
Diagnosis			20% increase at baseline	Average 19.5 patients per month per clinic (baseline 19,5)
Treatment				Average 37.9 patients per month per clinic (baseline 39.4)

**A. Facility level data analysis**

TPP team collected facility level data at all 70 outpatient TB sites in Georgia to monitor general trends and changes in practices that may be attributable to the project interventions. Overall, both incidence and prevalence of TB has been declining. This decline should not be related to the missing patients as the investigation of patients with presumptive TB did not decrease. The number of TB presumptive cases per 100000 population has demonstrated seasonal variation but the average number relatively remained stable for the last three years, while number of confirmed cases per 100000 decreased (see figure 1).

*Figure 1: TB presumptive and confirmed cases per 100 000 population (2012-2014)*

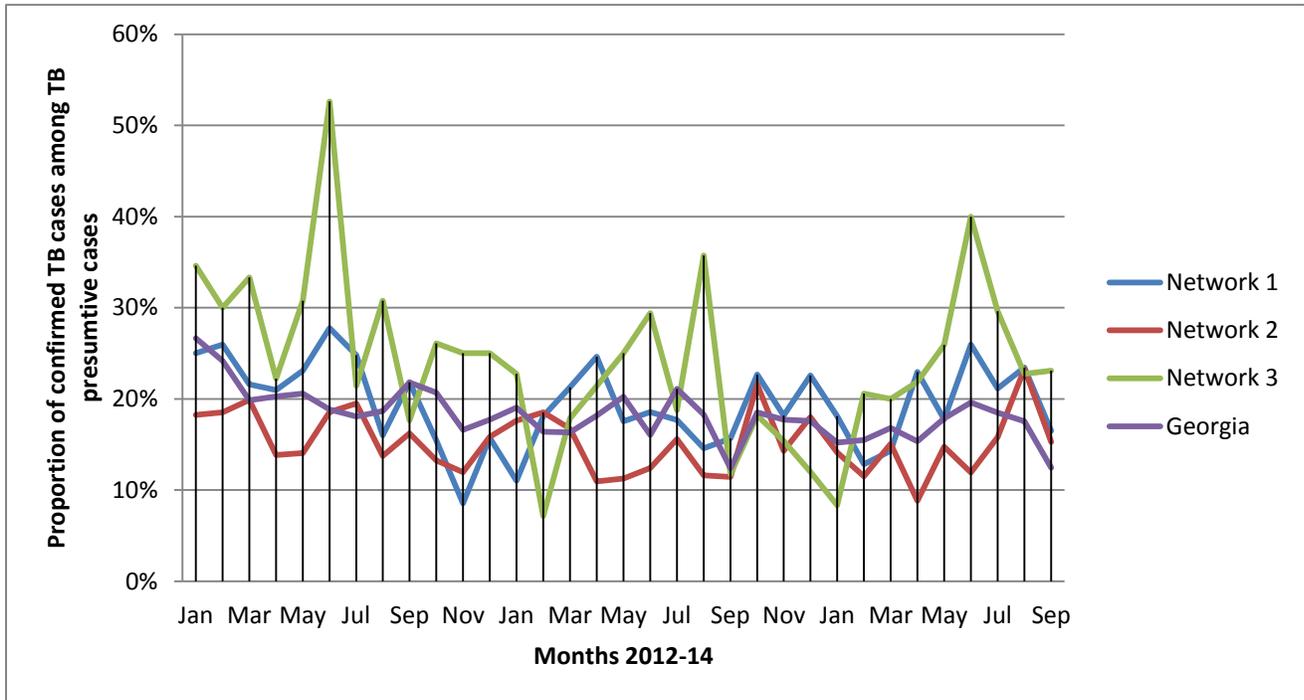


Overall the proportion of confirmed TB cases among presumptive TB cases decreased from 27% to 18% but is characterized by fluctuations. The decrease in the share of confirmed cases is supportive of the idea that some presumptive TB cases are sent to TB specialists at an earlier



stage, however the fluctuation indicates an inconsistency of practices and is most marked in the network less covered by training activities (see Figure 2).

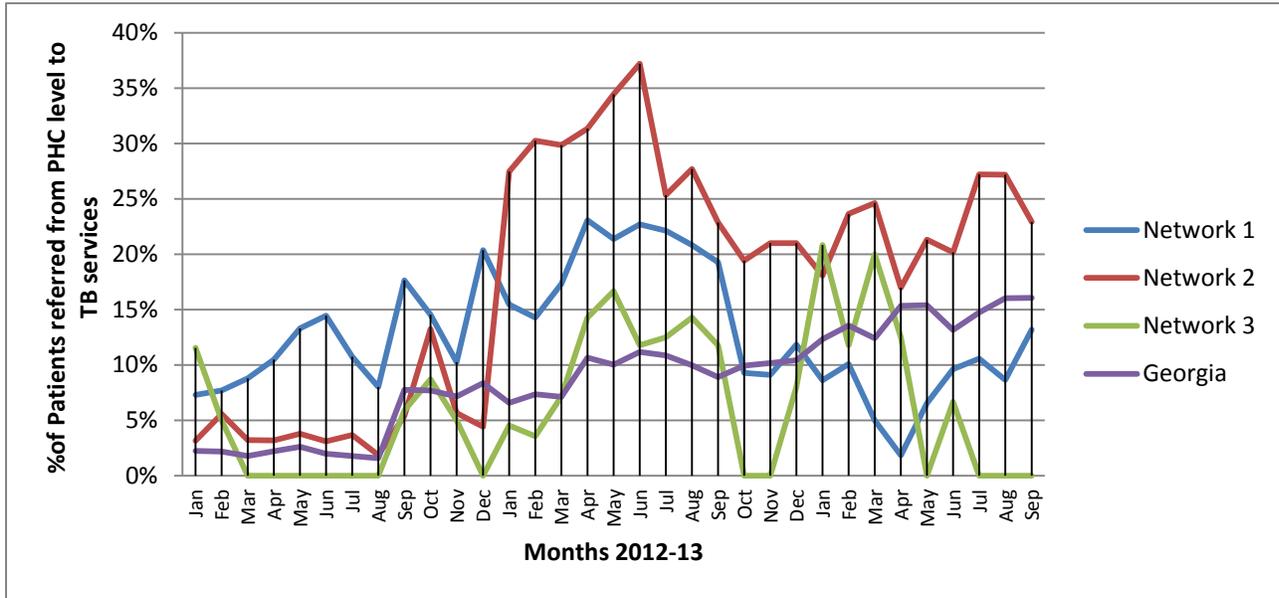
*Figure 2. Proportion of confirmed TB cases among presumptive cases in different provider networks*



The primary care referral rate of presumptive TB patients represents a focus area for the project. The data showed that during the three years of the project implementation, nationwide the share of patients referred to TB specialists from PHC services increased from 2% to 16%. This trend characterized all networks, but to a different degree (see Figure 3). TPP promoted TB related education through various activities countrywide, but training and performance appraisal have proved to be the most effective as the referral growth rate was especially significant in regions where PHC providers were trained in early TB detection and the training was followed by the performance appraisal further promoting knowledge and skills of PHC providers. The proportion of presumptive TB cases referred from PHCs in the regions covered with the training and performance appraisal programs has increased from an average 8% in 2012 to 18% in 2014 and in Adjara; from 0 in 2012 to an average 4% in 2014 in Guria, from average 1% in 2012 to 3% in 2014 in Samegrelo, from an average 9% in 2012 to 12% in 2014 in Imereti, and from average 8% in 2012 to 10% in 2014 in Kakheti.

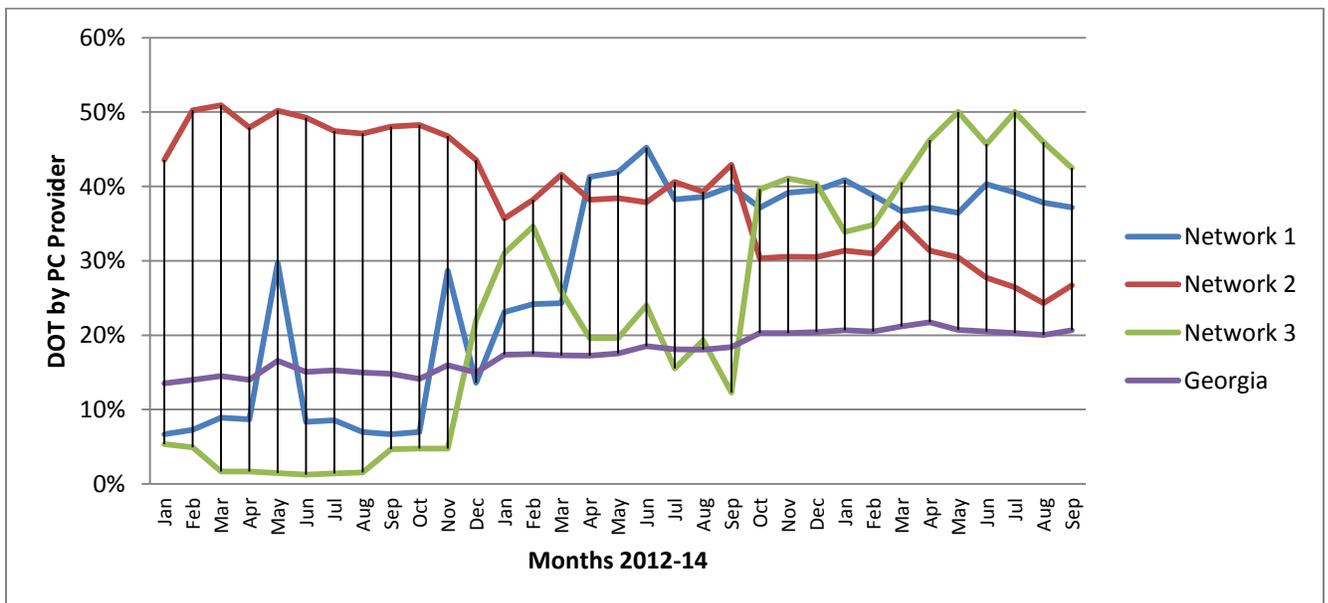


Figure 3: Proportion of presumptive TB patients referred from PHC level to TB services



PHC involvement in TB care also increased at a treatment stage. The overall share of TB patients who receive DOT at PHC level have been steadily increasing from 13% in 2012 to 21% in 2014. The proportion of community level DOT is especially marked in rural areas. Outside Tbilisi the share of these patients amounts to 31%, as in Tbilisi DOT is provided by the specialized TB network only. PHC involvement in treatment is more significant among patients treated at TB facilities that belong to networks and less significant in regions where access to PHC services in general is limited (see Figure 4).

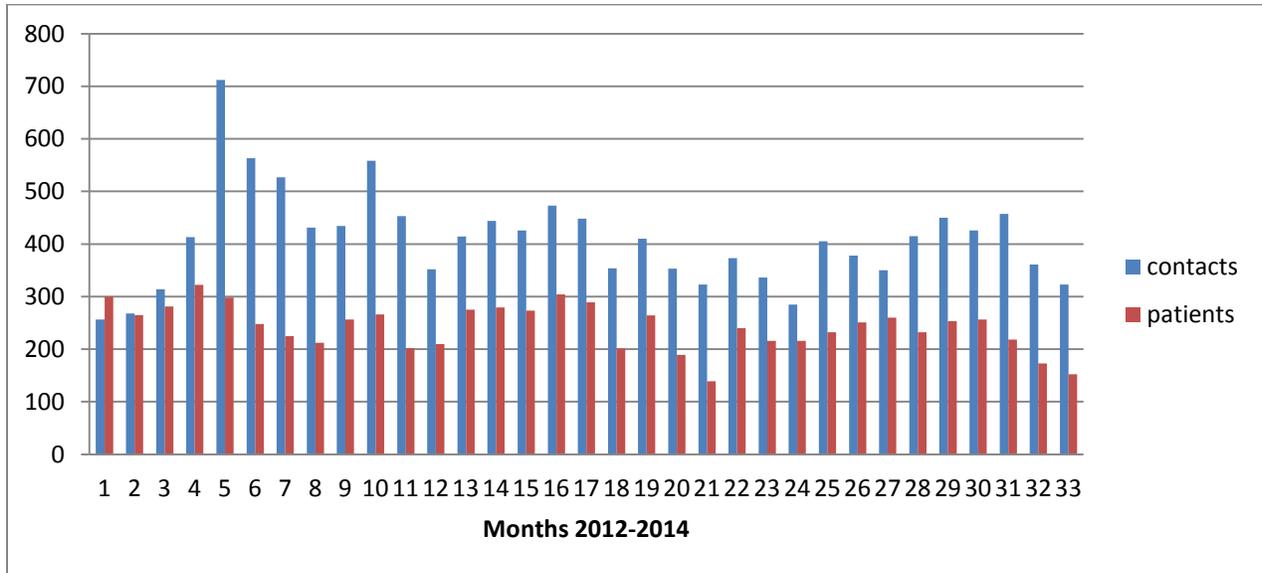
Figure 4: Proportion of patients who receive DOT at PHC level





Contact tracing remained one of the challenging areas for the national TB response. TPP has been implementing a variety of activities to strengthen the capacity of epidemiologists and support them with innovative tools. At the beginning of the project the number of contacts investigated per patient with confirmed TB diagnosis was less than one and in 2014 exceeded 2. Despite the marked growth, the ratio falls behind WHO recommendation and requires further efforts (see Figure 5).

*Figure 5: Number of patients with confirmed TB diagnosis and number of contacts investigated*



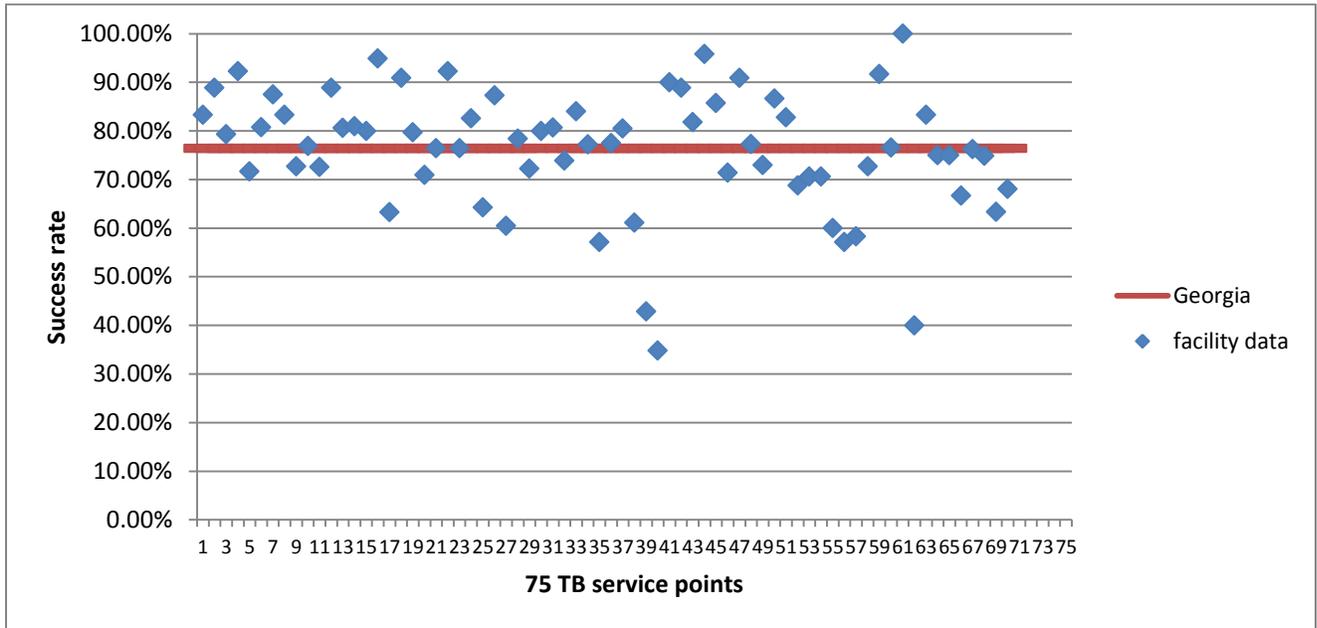
## B. Outcome indicators

TPP continued the collection of baseline outcome indicators at the facility level. The latest available cohort of patients enrolled in treatment in 2012 was selected to sensitive cases and a cohort enrolled in 2011 for MDR TB patients. Outcome definitions correspond to the WHO classification for sensitive patients: cured, completed, failure, defaulted, transferred out, died, moved to IV category and for MDR TB patients: cured, completed, failure, defaulted, transferred out, died.

Based on currently available data on treatment outcomes for DS TB patients, the success rate (cured + completed) in different facilities is mostly close to the national average of 76.4%. And although the overall success rate did not change as compared to 2011 cohort, the difference between facilities decreased. If in 2011 cohort the lowest rate was 22%, in 2012 it is 35% and more facilities achieved a success rate exceeding 90% (See Figure 6).

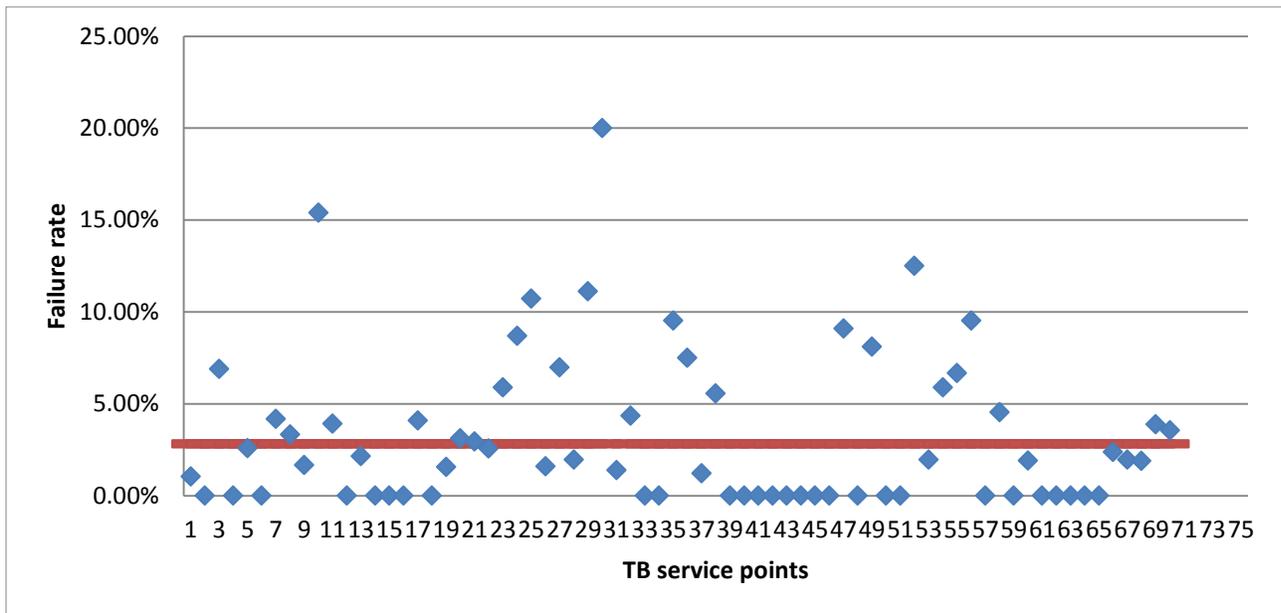


Figure 6: Treatment success rate in 2012 drug sensitive cohort



The treatment failure rate slightly increased throughout the country but is still relatively low at 2.8%. There is a significant number of facilities with 0 treatment failure. But the number of facilities with abnormally high failure rates such as 10% increased as compared to 2011 cohort (see Figure 7).

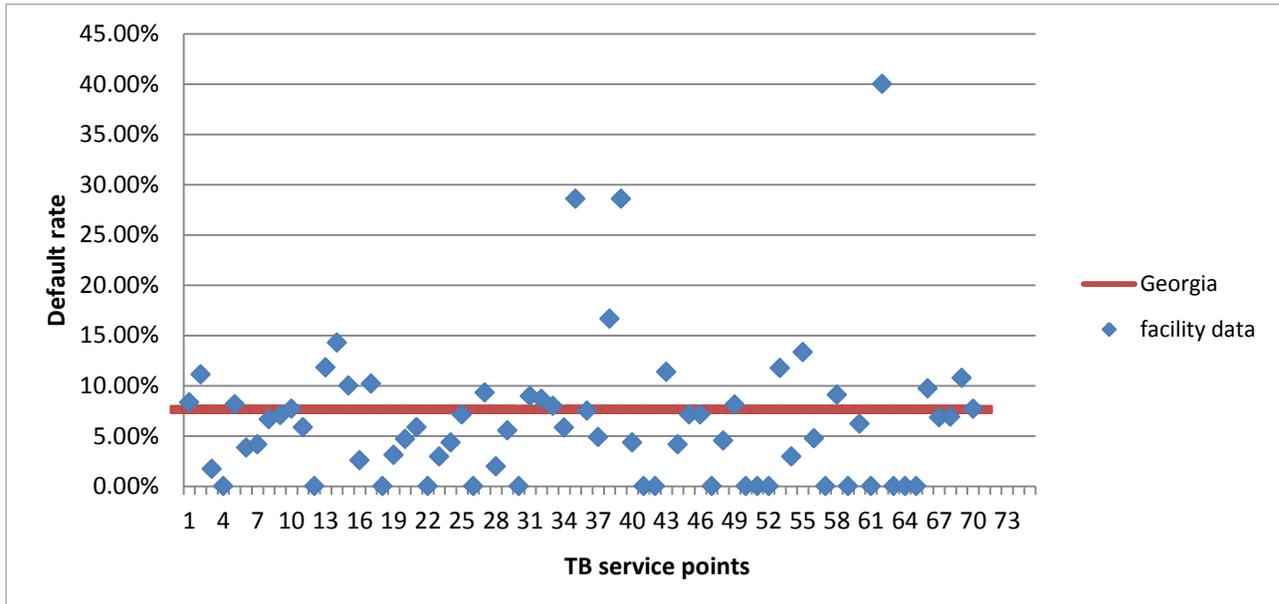
Figure 7: Treatment failure rate in 2012 drug sensitive cohort





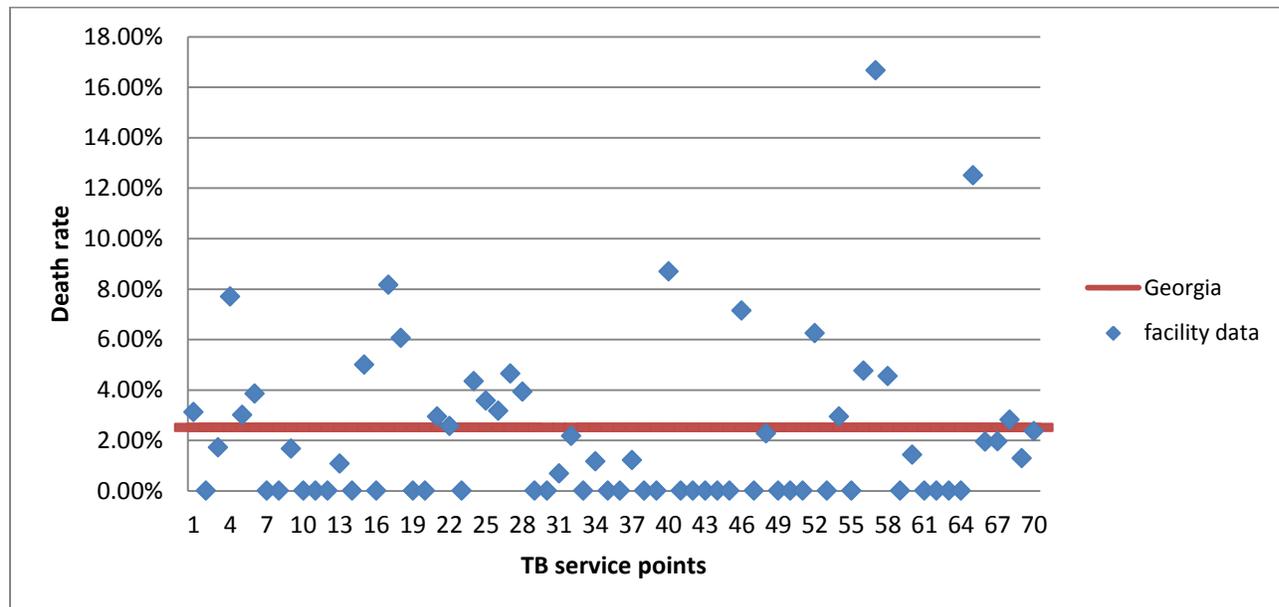
Rates of patients lost to follow up improved insignificantly from 7.8% to 7.6%. About one third of facilities have no defaulters or lose less than 2% of patient population. The exceptional case with 40% default rate is associated with the very small number of patients - in total 4 (see Figure 8).

*Figure 8: Lost to follow up in 2012 drug sensitive cohort*



The death rate in the country remained almost the same at 2.6% for 2011 cohort and 2.5% for 2012 cohort of sensitive patients. Overall pattern of facility data was also similar to the previous year, however the number of facilities with 0 deaths increased to reach about 50% (see Figure 9).

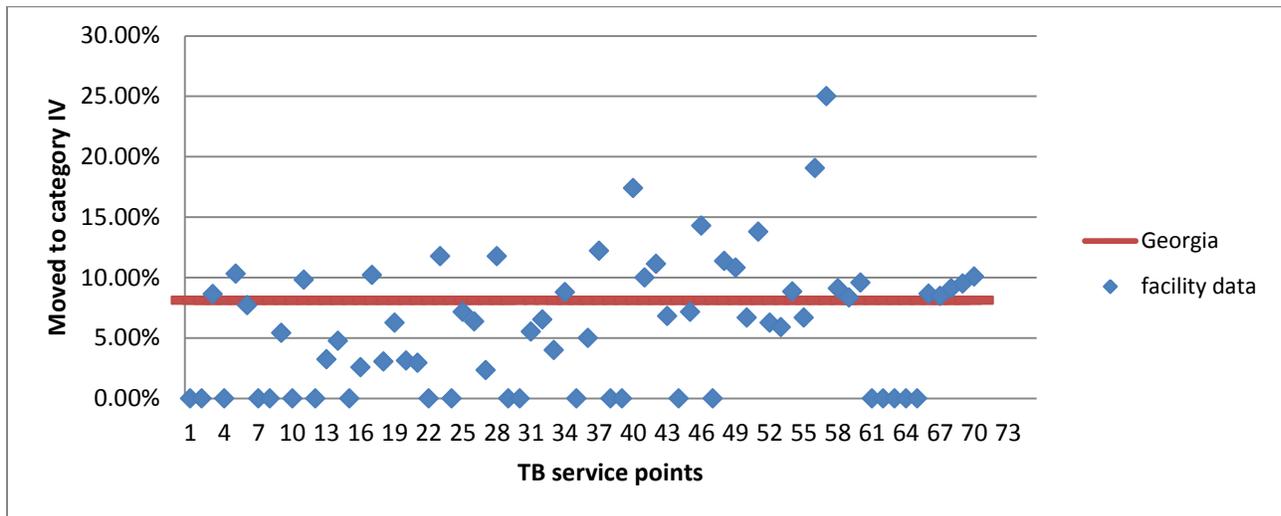
*Figure 9: Death rate in 2012 drug sensitive cohort*





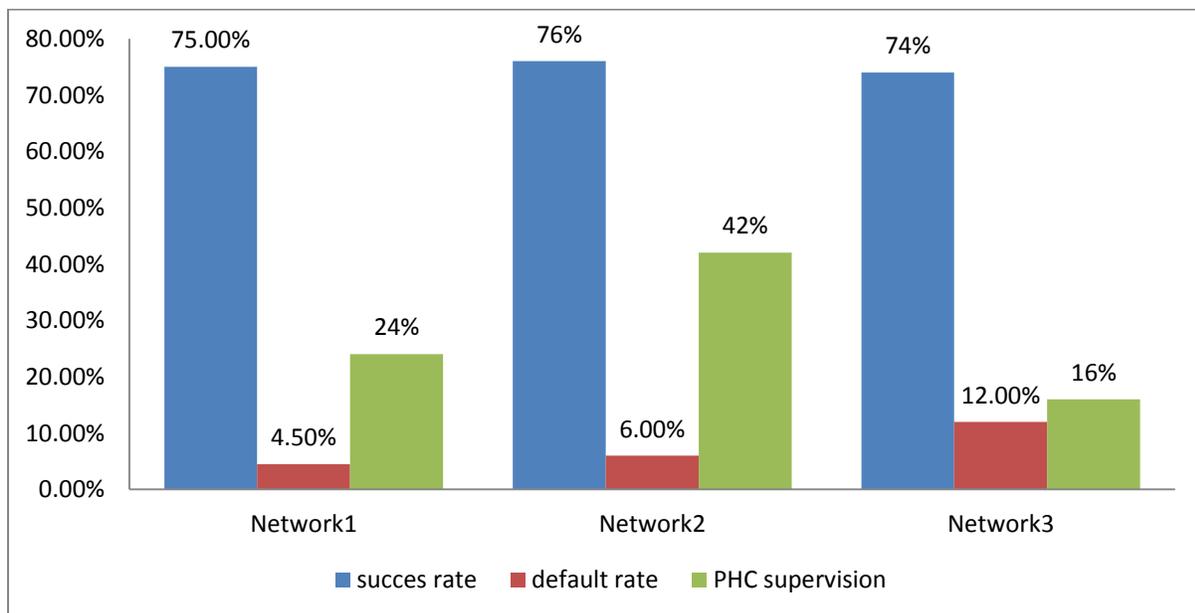
The percentage of patients who developed drug resistance is mostly around the national average of 8.1%, although in certain TB sites this rate is twice and even three times higher. This is a slight improvement compared to 2011 cohort data (9.1%) and the number of facilities with 0 patients who developed resistance during treatment doubled (see Figure 10). TPP will target the mentioned sites specifically to identify challenges and provide additional support.

*Figure 10: Percentage of 2012 drug sensitive patients, who moved to category IV*



Overall the treatment outcomes such as success rate or treatment failure for patients with sensitive TB are similar in different health service provider networks, however there are substantial differences in the rates of patients lost to follow up (see Figure 11).

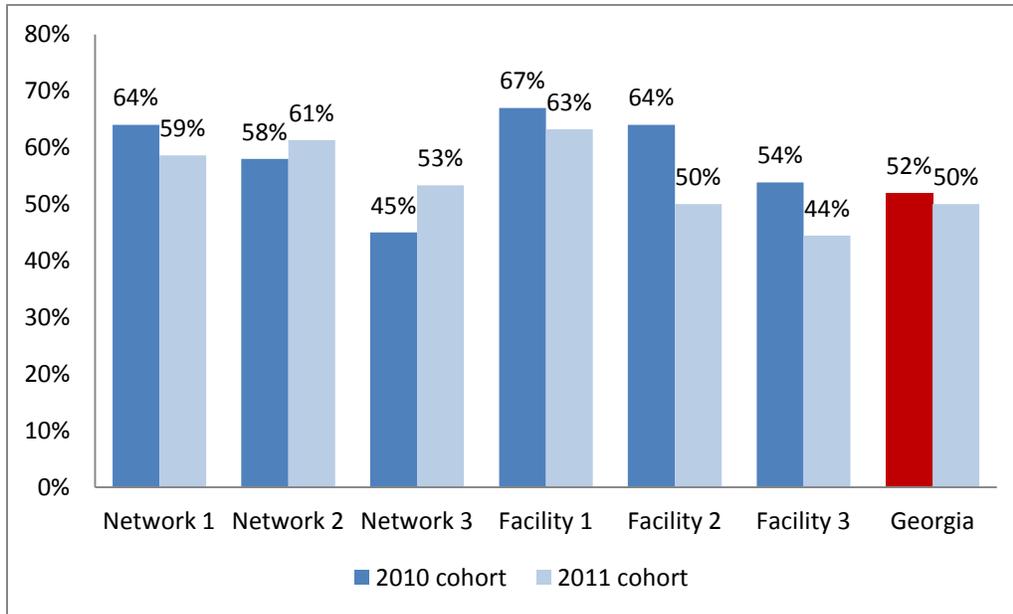
*Figure 11. Treatment success and default rates by provider networks*





The limited number of patients with MDR TB in the majority of facilities (less than 5) do not allow for outcome data analysis at the facility level. Therefore, the outcome data were grouped by the provider networks and compared with three relatively large facilities. The success rate fluctuates around the national average of 50% from 44% to 63% (see Figure 12). This is slight decrease compared to 2010 cohort success rate of 52%. It is noteworthy that treatment success rates reduced more in large urban clinics and improved in some district facilities.

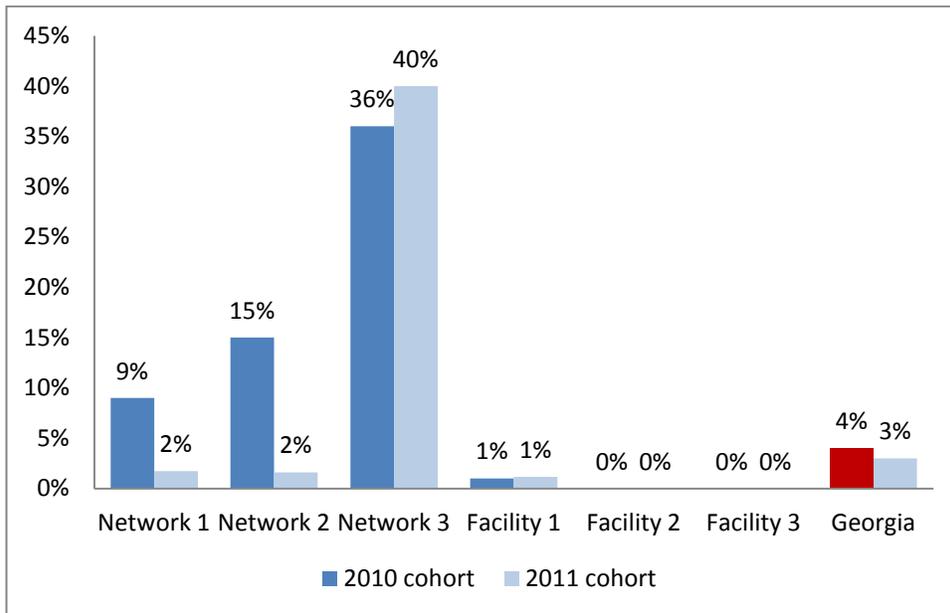
*Figure 12: Treatment success rate in 2010-2011 MDR cohorts*



Similar to sensitive patients, treatment failure and default rate demonstrate significant variability among networks and facilities. Treatment failure is zero or 1% in urban clinics and varies from 2% to 40% in district facility networks (see Figure 13).

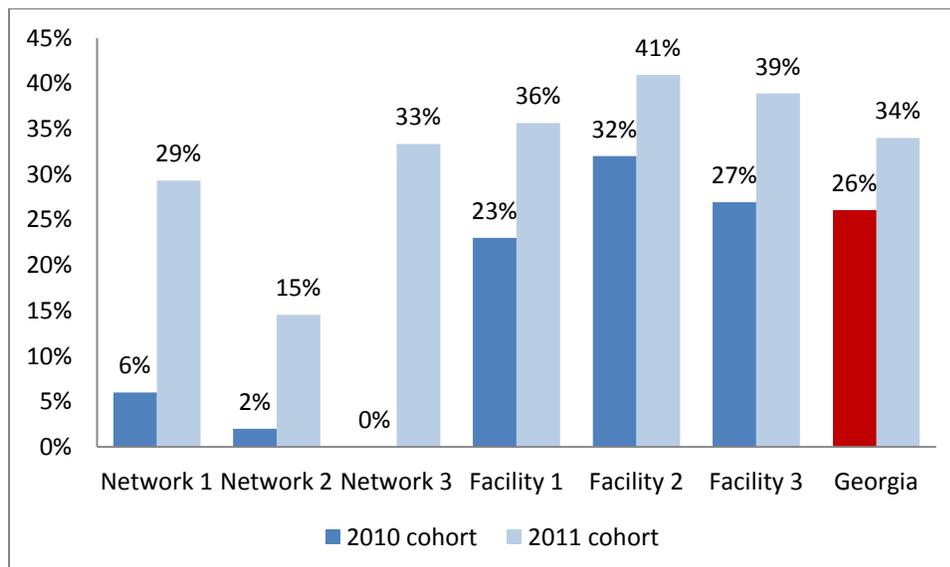


Figure 13: Treatment failure rate in 2010-2011 MDR cohorts



Lost to follow up rate ranges from 15 to 41%, with a national average of 34%. The indicator has increased dramatically in all networks and central facilities as well as overall in the country (see Figure 14).

Figure 14: Loss to follow up in 2010-2011 MDR cohorts



The lower success rate and higher rates of lost to follow up in central referral facilities may be related to the treatment of the most severe cases requiring longer duration and a more aggressive regimen.



Comparison of facility level or network level outcome data disaggregated by gender did not reveal any trends specifically related to gender, although as in the previous year better treatment outcomes are observed among females. This trend is consistent across facilities for sensitive patients and inconsistent for MDR TB patients. See data in tables below.

*Table 3: Outcomes of patients with sensitive TB enrolled in treatment in 2012 by gender*

Outcomes	Network1		Network 2		Network 3	
Successful	352	77,19%	438	77,52%	95	74,22%
F	106	84,13%	123	82,00%	28	80,00%
M	246	74,55%	315	75,90%	67	72,04%
Cured	147	32,24%	198	35,04%	41	32,03%
F	36	28,57%	43	28,67%	12	34,29%
M	111	33,64%	155	37,35%	29	31,18%
Completed	205	44,96%	240	42,48%	54	42,19%
F	70	55,56%	80	53,33%	16	45,71%
M	135	40,91%	160	38,55%	38	40,86%
Failure	15	3,29%	19	3,36%	5	3,91%
F	1	0,79%	1	0,67%	1	2,86%
M	14	4,24%	18	4,34%	4	4,30%
Default	21	4,61%	37	6,55%	16	12,50%
F	3	2,38%	8	5,33%	4	11,43%
M	18	5,45%	29	6,99%	12	12,90%
Transferred	22	4,82%	30	5,31%	6	4,69%
F	7	5,56%	11	7,33%	0	0,00%
M	15	4,55%	19	4,58%	6	6,45%
Died	11	2,41%	9	1,59%	1	0,78%
F	3	2,38%	0	0,00%	0	0,00%
M	8	2,42%	9	2,17%	1	1,08%
Moved to cat IV	35	7,68%	32	5,66%	5	3,91%
F	6	4,76%	7	4,67%	2	5,71%
M	29	8,79%	25	6,02%	3	3,23%
<b>Total with outcome</b>	456	100,00%	565	100,00%	128	100,00%
F	126	100,00%	150	100,00%	35	100,00%
M	330	100,00%	415	100,00%	93	100,00%
<b>Total inrolled</b>	456		565		128	
F	126		150		35	
M	330		415		93	



*Table 4: Outcomes of MDR TB patients enrolled in treatment in 2011 by gender*

Outcomes	Network 1		Network 2		Network 3		Facility 1		Facility 2		Facility 3	
Successful	34	59%	38	61%	8	53%	55	63%	11	50%	8	44%
F	14	63,64%	10	42,86%	3	100%	26	83,87%	3	60%	1	33%
M	20	55,56%	32	66,67%	5	41,67%	29	51,79%	8	47%	7	47%
Cured	21	36%	19	31%	2	13%	19	22%	3	14%	4	22%
F	9	41%	6	43%	2	67%	11	35%	1	20%	1	33%
M	12	33%	13	27%	0	0%	8	14%	2	12%	3	20%
Completed	13	22%	23	37%	6	40%	36	41%	8	36%	4	22%
F	5	23%	4	29%	1	33%	15	48%	2	40%	0	0%
M	8	22%	19	40%	5	42%	21	38%	6	35%	4	27%
Failure	1	2%	1	2%	0	0%	1	1%	0	0%	0	0%
F	0	0%	1	7%	0	0%	0	0%	0	0%	0	0%
M	1	3%	0	0%	0	0%	1	2%	0	0%	0	0%
Default	17	29,31%	9	15%	5	33%	31	36%	9	41%	7	38,9%
F	5	22,73%	1	7%	0	0%	5	16%	1	20%	2	67%
M	12	33,33%	8	17%	5	42%	26	46%	8	47%	5	33%
Transferred	4	7%	7	11%	1	7%	0	0%	2	9%	3	17%
F	2	9%	2	14%	0	0%	0	0%	1	20%	0	0%
M	2	6%	5	10%	1	8%	0	0%	1	6%	3	20%
Died	2	3%	3	5%	1	7%	0	0%	0	0%	0	0%
F	1	5%	0	0%	0	0%	0	0%	0	0%	0	0%
M	1	3%	3	6%	1	8%	0	0%	0	0%	0	0%
<b>Total with outcome</b>	58	100%	62	100%	15	100%	87	100%	22	100%	18	100%
F	22	100%	14	100%	3	100%	31	100%	5	100%	3	100%
M	36	100%	48	100%	12	100%	56	100%	17	100%	15	100%
<b>Total inrolled</b>	58		62		15		87		22		18	
F	22		14		3		31		5		3	
M	36		48		12		56		17		15	

The TPP team will continue collecting and analyzing facility level data in FY 2015 to measure progress against quality indicators and learn the extent to which the ongoing activities influence treatment outcomes.

## **VII. Project Administration**

The project administration was provided in accordance with established operational manual for administrative and financial management procedures in close collaboration with the administrative team within URC headquarters in Bethesda, Maryland.



## VIII. Budget and Expenditures

LINE ITEM	Approved Budget	Total Spent to date	Balance	Actual Expenditures to Date		
				FY12	FY13	FY14
Salaries and Wages	\$ 1,176,969	\$ 740,886.28	\$ 436,082.22	\$ 158,884.15	\$ 282,534.77	\$ 299,467.36
Consultants	\$ 296,271	\$ 252,157.76	\$ 44,113.11	\$ 18,095.81	\$ 128,462.09	\$ 105,599.86
Fringe Benefits	\$ 53,987	\$ 37,994.97	\$ 15,991.77	\$ 6,217.29	\$ 17,036.52	\$ 14,741.15
Travel and Per Diem	\$ 258,665	\$ 224,569.40	\$ 34,095.94	\$ 40,195.53	\$ 101,829.14	\$ 82,544.73
Equipment	\$ 96,783	\$ 85,649.67	\$ 11,132.94	\$ 49,982.92	\$ -	\$ 35,666.75
Training	\$ 527,571	\$ 97,894.86	\$ 429,676.00	\$ 28,825.96	\$ 36,875.14	\$ 32,193.76
Other Direct Costs	\$ 390,227	\$ 296,901.44	\$ 93,325.82	\$ 56,968.26	\$ 95,430.08	\$ 144,503.10
Subcontracts/agreements	\$ 1,061,415	\$ 782,997.42	\$ 278,417.58	\$ 69,602.91	\$ 440,961.80	\$ 272,432.71
<b>Sub-total</b>	<b>\$ 3,861,887</b>	<b>\$ 2,519,051.79</b>	<b>\$ 1,342,835.38</b>	<b>\$ 428,772.83</b>	<b>\$ 1,103,129.54</b>	<b>\$ 987,149.43</b>
Indirect Costs	\$ 798,333	\$ 505,009.93	\$ 293,322.62	\$ 100,641.52	\$ 200,890.68	\$ 203,477.73
<b>Total Estimated Cost</b>	<b>\$ 4,660,220</b>	<b>\$ 3,024,061.73</b>	<b>\$ 1,636,158.00</b>	<b>\$ 529,414.35</b>	<b>\$ 1,304,020.22</b>	<b>\$1,190,627.16</b>
Cost Share @ 5%	\$ 220,061.00	\$ 140,055.54	\$ 80,005.46	\$ 605.00	\$ 79,856.24	\$ 59,594.31

## IX. Key Activities for FY2015

In Quarter 1 of FY2015 the TPP team will continue the following activities started in Year 3:

- Training of an additional 225 FPs and 225 Nurses in Kvemo Kartli, Shira Kartli and Samtskhe-Javakheti regions
- Training in pediatric TB management
- Revision of TB management guideline
- Promoting implementation of HMIS module
- Conducting performance appraisals in Kakheti, Imereti, Kvemo Kartli, Shida Kartli and Samtskhe-Javakheti regions
- Organizing quality improvement collaborative meetings
- Continuing the implementation of four small grant programs and identify new sub-grantees for other initiatives
- Implementing ACSM campaigns



## **X. Appendices**

### **X.I. List of deliverables produced in Year 2**

#### **1. List of survey and assessment reports produced**

- TB laboratory network assessment report, 2014

#### **2. List of ACSM materials produced**

- 3000 leaflets with the information about WTBD/TB for General Public
- 650 T-shirts
- 75 scarves
- 200 posters
- 1 banner
- 300 pins
- 1800 flyers on treatment adherence for regular TB patients
- 2400 flyers on treatment adherence for MDR TB patients
- 1000 pediatric TB guidelines
- 2500 pediatric TB protocols
- 2000 brochures for parents
- 200 leaflets "Creating Innovative Strategies for Early TB Case Detection and Quality Improvement of Care"
- 200 leaflets "URC supports development of pediatric TB guidelines in Georgia"
- 200 Technical Briefs: Georgia TB Project
- 20000 information flyers for youth regarding TB issues
- 1000 table calendars
- 1 animated clip on childhood TB
- 1 android based application
- 12 talk-shows
- 1 newspaper article

#### **3. List of training courses conducted and materials produced**

- Revised training modules in early detection and management of TB in general practice for family physicians and nurses
- PowerPoint presentations of early detection and management of TB in general practice for family physicians and nurses
- Training course in Xpert MTB/RIF test for rapid detection of TB and Rifampicin resistance in Pulmonary, Extrapulmonary and Pediatric TB cases for lab technicians
- PowerPoint presentations on Xpert MTB/RIF test for rapid detection of TB and Rifampicin resistance in Pulmonary, Extrapulmonary and Pediatric TB cases for lab technicians
- Training course in Bacterioscopy Diagnosis of Tuberculosis for lab technicians
- PowerPoint presentations on Bacterioscopy Diagnosis of Tuberculosis for lab technicians
- Training course for epidemiologists in mhealth application for contact tracing and patient education
- PowerPoint presentations on mHealth application for contact tracing and patient education
- Training course in early detection and management of TB for frontline professionals
- PowerPoint presentations on early detection and management of TB for frontline professionals
- Curriculum for TB-IC training



- Patient detection and referral pathways adoptable to local circumstances
- Manual on TB infection control
- TB control manual for public health specialists
- 300 job aids on identification and management of TB
- 30 Childhood TB presumptive case protocols
- 1000 TB case brochures
- 1000 Pediatric TB Management Guidelines
- 500 Protocols on pediatric TB management
- 250 CDs with TB Management guidelines and educational materials



**X. II. Focus areas and achievements within completed or ongoing small grants programs**

Activities	Tanadgoma <sup>2</sup>	HRU <sup>1</sup>	HRU <sup>2</sup>	GHPEF <sup>2</sup>	GPPA <sup>2</sup>	CBSC <sup>2</sup>	Total
<b>Training</b>							
Non-TB Specialists		165			142		307
Journalists				32			32
School teachers				129			129
Peer educators						17	17
<b>Awareness raising</b>							
Scholl teachers and kids				40 schools		2 theological schools (60 participants)	42
Church community/parish						15 meetings	15
Socially vulnerable groups						2 meetings	2
Family members of former prisoners	6 meetings (72 participants)						6
NGO representatives				11 meetings (201 participants)			11
Students				11 meetings (750 students)		2 meetings (120 students)	13
Events				11 street actions (300 participants)			11
<b>Printed Information materials</b>							
Info leaflets for general public				20000			20000
Table calendar				1000			1000
Guideline for teachers				150			150
Newspaper article				1			1
T shirts				500			500
Talk shows				8		4	12
<b>TB quality improvement tools</b>							
Job aids					4		4
Childhood TB presumptive case protocol					1		1
Manual on TB infection control		1					1
TB control manual for public health specialists			1				1
Manual for counseling former prisoners	1						1

1-Completed; 2-Ongoing



### X.III Pictures of Events