



TUBERCULOSIS PREVENTION PROJECT

FY 2015: Annual Report

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Submitted to:

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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 within the Year 4 of the USAID Tuberculosis Prevention Project (TPP) implementation from October 1st 2014 to September 30th 2015. During Year 4 the project made significant steps forward and reached tangible results described below. The most important achievements of the year were: implementation of TB HMIS module and Mobile Health application, assistance to the MoLHSA and NCDCPH in developing the National TB Strategy for 2015-2020 and submitting the country concept note to the Global Fund within the new funding mechanism.

Key milestones under each objectives of this period include:

- **Objective 1: Improve early detection of presumptive tuberculosis (TB) cases**
 - 253 family physicians and 277 general practice nurses employed in Kvemo Kartli, Shida Kartli and Samtskhe-Javakheti regions were trained in TB prevention, early detection, referral and long-term support.
 - Performance appraisal of 241 family physicians and 238 nurses was conducted in Imereti, Guria and Kvemo Kartli regions.
 - 196 Pediatricians from Tbilisi, Kvemo Kartli, Samegrelo and Adjara regions were trained in timely detection and management of pediatric TB cases
 - 13 adult and 4 pediatric clinical case studies were developed, printed and posted on the website.
 - World TB day campaign conducted
- **Objective 2: Strengthen the quality of full implementation of DOTS and DOTS plus**
 - 226 TB Physicians from all the country were trained in understanding of the new TB Definitions and using of updated TB Recording-Reporting System.
 - 126 TB physicians and 53 Nurses from Tbilisi, Kakheti, Imereti, Samegrelo and Adjara regions were trained in detection and management of mental disorders among TB patients.
 - 63 TB Physicians were trained in treatment of MDR-TB patients with new and repurposed TB drugs.
 - 10 TB Physicians from the National Center for TB and Lung Diseases were trained in monitoring and management of Adverse Events during the MDR-TB treatment.
 - 9 Xpert MTB/RIF Systems were installed and 16 Laboratory technicians were trained in rapid diagnosis of TB by using of the new, molecular Xpert MTB/RIF test.
 - TB management guideline and 8 protocols were updated and approved by the State Guideline Accreditation Board at the Ministry of Labour, Health and Social Affairs.
 - 142 front-line professionals were trained in early detection and management of TB and diabetes
 - Representatives of seven local NGOs, 20 journalists, 1864 schoolchildren and 550 students were trained on TB policies and stigma reduction strategies.
 - 5 TV talk-shows and 6 information lectures were aired.
 - More than 30000 copies of informational materials: job-aids, brochures for PHC providers, brochures for patients, postcards, leaflets, calendars, posters, stickers.
 - TB HMIS module developed, TB specialists of 66 facilities trained to support the national roll out



- TB mHealth system developed and 96 epidemiologists trained in use of mobile application for TB patients' counseling
- 5 small grants have been implemented by 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***
 - 2 Xpert MTB/RIF systems were procured, installed in multi-profile hospitals and 4 lab technicians trained.
 - 75 physicians were trained in FAST strategy and GeneXpert system use.
 - 18 hospital managers and epidemiologists were trained in TB infection control.
 - 149 community based epidemiologists trained in IC at a community level.



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. Besides, as part of the National TB Strategy effort, the TPP team works with MOLHSA/NTP, the NCDCPH, 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 has been working with the MOLHSA/NTP to roll out a comprehensive package of TB interventions across all regions of the country. TPP has been strengthening the full implementation of DOTS and DOTS plus nationwide to ensure that providers routinely adhere to effective, standardized treatment guidelines, as a means to improve treatment outcomes and reduce drug resistance. The project used training, technical assistance and continuous performance feedback to enhance the capacity of health care workers, and also develop health workers' capacity to support patients through treatment completion. In addition to provider capacity, the project addressed health sector issues related to supporting quality DOTS, including support to strengthen policy environment and program management, engage all providers in providing quality DOTS, and expand partnerships with communities and non-government organizations (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 has been working with MoLHSA and private facilities on developing effective strategies for infrastructure improvement including air flow control.



B. Overview of Activities/ Results

In Year four, the project team worked closely with MoLHSA, NCDCPH, NCTBLD, 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 4, 530 family physicians and nurses attended the course. This initiative is intended to support both capacity building of local providers as well as strengthening professional bodies.

TPP employed adequate tools for continuous performance evaluation and professional feedback to trained professionals to ensure sustainability of these efforts. Similar to previous years the performance appraisal of 263 family physicians and 265 nurses in FY2015 proved the effectiveness of the training program in terms of improving knowledge and skills to make timely recognition of presumptive TB and refer them to TB specialists. The primary care professionals received a compilation of new clinical case studies to serve as a knowledge refresher and support decision making in every day practice.

In Year 4 the TPP has initiated various activities aimed at achieving sustainable positive changes in the quality of TB services:

- (i) Strengthening identification and management of pediatric TB cases has been among TPP implementation priorities since FY2014. In 2015 196 pediatricians were trained on the basis of newly adopted clinical practice guideline and protocols.
- (ii) TPP team has been providing support to the MoLHSA/NTP to improve quality of DOTS and DOTS plus nationwide. In FY2015 TPP supporting update of TB management guideline, conducted ToT to facilitate introduction of new treatment schemes and trained 126 TB physicians and 53 nurses in management of DR treatment side effects.
- (iii) TPP in collaboration with USAID/HSSP continued work on electronic TB Health Information System module to support adequate programmatic data collection and analyses to inform the national program planning and policymaking. TPP also trained epidemiologists in the use of tablet based application which includes a patient education module.
- (iv) TPP in close collaboration to the USAID Senior TB technical advisor and the National Working Group provided support to the Country Coordinating Mechanism, MoLHSA and NCDCPH in development of the National Strategic Plan 2016-2020 and Concept Note for submission to GF. Both documents have received high evaluation from WHO and GF experts.
- (v) TPP supported the Parliamentary Committee for Health and Social Issues in elaborating a package of legislative changes to strengthen TB control in the country.

The URC team has been providing technical assistance to local NGOs to strengthen their capacity in designing and implementing TB prevention and control programs. In addition, it also provided



small grants to local institutions to implement community-level initiatives to improve TB awareness and fight stigma against TB.

Key results achieved in FY2015 are outlined in Table 1.

Table 1. Key results of USAID Georgia TB Prevention Project in FY2015

| Objectives | Results |
|--|--|
| <p>Objective 1: Improve early detection of suspected tuberculosis (TB) Cases</p> | <ul style="list-style-type: none"> • 530 practitioners (137 FPs and 147 nurses in Kvemo Kartli, 95 FPs and 111 nurses in Shida Kartli, 21 FPs and 19 nurses in Samtskhe-Javakheti) were trained in “Early Detection and Management of TB at PHC level” • 196 Pediatricians from Tbilisi, Kvemo Kartli, Samegrelo and Adjara regions were trained in timely detection and management of pediatric TB cases • 100 job aids on TB detection were printed in Russian language and disseminated to frontline professionals in selected regions. • 13 adult and 4 pediatric clinical case studies were developed, posted on the website, printed and distributed to health professionals • Performance appraisals of 241 family physicians and 238 nurses in TB service delivery was conducted. The number of teams appraised reached 261 in October 2015. • Three communication campaigns implemented <ul style="list-style-type: none"> ○ World TB day campaign on March 23rd ○ Youth Awareness Raising regarding TB ○ Georgian Orthodox Church for TB Prevention |
| <p>Objective 2: Strengthen the quality of full implementation of DOTS and DOTS plus</p> | <ul style="list-style-type: none"> • Draft TB Control law elaborated and registered for Parliamentary hearings by the Health and Social Affairs Committee, Parliament of Georgia • 10 lab technicians trained in Xpert MTB/RIF test for rapid detection of TB and Rifampicin resistance • 126 TB physicians and 53 Nurses from Tbilisi, Kakheti, Imereti, Samegrelo and Adjara regions were trained in detection and management of mental disorders among TB patients. • 63 TB Physicians were trained in treatment of MDR-TB patients with new and repurposed TB drugs • 10 TB Physicians from the National Center for TB and Lung Diseases were trained in monitoring and management of Adverse Events during the MDR-TB treatment. • 9 Xpert MTB/RIF Systems were installed and 16 Laboratory technicians were trained in rapid diagnosis of TB by using of the new, molecular Xpert MTB/RIF test. • Updated TB management guideline and related protocols were approved by the Ministry of Labour, Health and Social Affairs. • Representative of seven NGOs, 20 journalists, 1864 schoolchildren and 550 students trained on TB policies and stigma reduction strategies • 5 TV talk-shows and 6 information lectures aired • More than 30000 copies of informational materials: job-aids, brochures for PHC providers, brochures for patients, postcards, leaflets, calendars, posters, stickers. • 142 front-line professionals trained in early detection and |



| | |
|--|---|
| <p>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</p> | <p>management of TB and diabetes</p> <ul style="list-style-type: none"> • TB HMIS module developed, TB specialists of 66 facilities trained and the module has been piloted countrywide • TB mHealth system developed and 96 epidemiologists trained • 5 small grants implemented by NGOs and professional associations <ul style="list-style-type: none"> • 2 Xpert MTB/RIF systems procured, installed in multi-profile hospitals and 4 lab technicians trained • 75 physicians trained in FAST strategy and GeneXpert system use. • 18 hospital managers and epidemiologists trained in TB infection control. • 149 community based epidemiologists were trained in IC at a community level. |
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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**

WHO considers TB control and Primary Health Care as interdependent domains. Rapid progress in controlling TB will not occur in countries where TB is widespread unless TB control is integrated into the PHC system. Similarly, a PHC program cannot be considered adequate unless it includes participation in TB control. In order to build competencies of FPs and nurses in presumptive TB case management and community-based DOT to enable such integration, the TPP in collaboration with the Georgia Family Medicine Association (GFMA) and TB specialists continued training of primary care practitioners. 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 GFMA trained a pool of TB and Family Medicine (FM) trainers and thus created capacity for a national rollout of the training program in the coming years. The total number of physicians and nurses trained in the target regions (Adjara and Samegrelo) in year 1 was 420. In year 2 the project trained 301 FPs and 307 GPNs in Imereti and Mtskheta-Mtianeti Regions. Among those there were 28 FPs and 42 nurses from the penitentiary health facilities. In year three, the training covered 515 primary care doctors and 502 nurses in Imereti, Tbilisi, Kakheti and Guria. In year 3 the project trained 1017 providers [515 family Physicians and 502 Nurses] from Tbilisi, Mtskheta-Mtianeti, Kekheti, Imereti and Guria regions.

In the year four the training activities were focused on Shida-Kartli, Kvemo-Kartli and Samtskhe-Javakheti regions. Thirty two-day training sessions were conducted for 253 family physicians and 577 general practice nurses.

In total, the project trained 2575 PCPs and nurses meaning 54% of all PHC providers countrywide and 90% coverage in rural areas. Like the previous years the course was highly in demand and very positively evaluated by the participants.



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, motivation and commitment of trainers to deliver high quality sessions. The trainees' feedback indicated they were supportive of the training and appreciative of both the information provided and the way in which it was delivered. Overwhelming majority of participants scored the training as top possible "5".

2. Strengthening of Pediatric TB Diagnosis and Treatment

While efforts by TB programs contribute to combating the childhood TB epidemic, the root of this problem can only be addressed with the engagement and accountability at all levels of the health care system and community. Children with TB present to health services in the same context as children with common childhood illnesses, which is generally at primary and secondary care settings. Therefore, the Childhood TB Roadmap recommends developing training and reference materials on childhood TB for health care workers and fostering local expertise and leadership among child health workers at all levels of the health care system.

To support childhood TB diagnosis and treatment TPP developed a training module and built capacity of pediatric care providers in general health care settings. 154 pediatricians were trained in Tbilisi, Zugdidi and Batumi in January-March 2015. In total 196 participants attended the 8-hour modular course on pediatric TB diagnosis and management. Pre- and post-tests with Multiple Choice Questions were used to gauge the knowledge of participants on the topic before they get training and after the training in order to know the extent to which the participants increase knowledge during the training; Results of pre- and post-tests was evaluated; The knowledge progress was significant – in the majority of cases from very bad and bad to good. Based on these results it is anticipated that the training will increase the confidence and competence of health workers to recognize the clinical presentation of TB in children, and to prevent, diagnose and treat TB in children or to refer them to a higher level of care when appropriate.

3. 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. A compilation of 17 new examples of TB cases (4 childhood and 13 adult) were developed. The cases are diverse in content; each is presented in a consistent manner, incorporating relevant data about the patient and the approach to patient care. These case discussions generate an in-depth, multi-faceted understanding of a complex issue in its real-life context, help to understand existing gaps in service delivery or why one intervention may be chosen over the other and promote clinical problem solving. The case studies are available electronically at www.tpp.ge and www.gfma.ge. 1000 booklets with the case studies were printed and distributed to family physicians, pediatricians, general practice nurses as well as other boarder-line professionals.



4. Performance appraisal and continuous professional feedback to FM practitioners in TB service delivery

Performance appraisal in TB management through supportive supervision visits is an innovative approach for Georgia. It 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 is very resource intensive process and requires commitment and substantial efforts from both sides. Appraisers and appraisees should be well prepared for the supervision visits to accomplish all objectives.

In close collaboration with experts in FM and TB, TPP team developed and piloted the performance evaluation tools and initiated performance reviews of primary care physicians and nurses while providing on-the-spot professional feedback to improve priority clinical outcomes. In FY2013 TPP conducted performance appraisal of 324 primary care teams in Adjara and Samegrelo regions. Based on the implementation experience and lessons learned the TPP team has revised the module to make it more focused and TB care needs oriented. In FY2014 TPP extended the appraisal exercise to additional regions e.g. Imereti, Kakheti, Mtskheta-Mtianeti and Tbilisi. In June-August 2014, the TPP appraisers conducted site visits to 257 physicians and 261 nurses trained in TB detection and care in 2013. The appraisal visits continued in FY 2015 for primary care physicians and nurses trained late 2014 or early 2015 in Imereti, Guria and Kvemo Kartli regions. The TPP appraisers evaluated performance of 241 family physicians and 238 nurses. Site visits to 12 additional teams will be conducted in October 2015.

A team composed of a family medicine, a nurse and a TB specialist made site visits to observe the practice and provide professional feedback according to the predefined criteria. The key competencies to be explored during the appraisal visits include:

- Recognizing signs and symptoms related to TB;
- The process and procedure for making patient referrals to TB services;
- Basic clinical monitoring of patients on TB therapy, including adverse effects and “red flags” indicating a need for immediate clinical intervention

The performance appraisal covered both evaluating the process of care through observations and reviewing medical records as well as outcomes. In addition, the reviewers provided on the spot feedback and mentoring for primary care staff.

The results of 11 appraisee satisfaction survey shows that they’ve appreciated this opportunity and are willing to have it again. Nevertheless, appraisers reported some difficulties that prevented them from conducting a comprehensive review and providing feedback. These include a lack of medical documentation and poorly organized appointment system that does not allow for direct observation on TB patients visits. Moreover, a lack of adequate physical infrastructure did not always allow ensuring privacy and individual assessment during appraisal visits.

The findings of FY 2015 appraisal are very similar of assessments conducted in FY2013 and 2014. This indicates that systemic issues related to overall performance of primary care services heavily influence TB care practice. Individual, personnel related factors such as TB care competencies



certainly determine the quality of care. But lack of adequate working environment and low financial motivation prevent providers from making their practice evidence-based and thus achieve best possible outcomes. Inadequate information flow from FPs to TB specialists and vice versa leads to fragmentation in TB care delivery that often impairs clinical outcomes.

It is worth to note that improved knowledge is not necessarily applied by all providers as they do not face TB in their daily practice. Those not currently involved in DOT do not show much interest for building their competencies in this area. TB related counseling is a major area in which most of FPs and GPNs need further training. Adequate TB drugs side effect management is another challenge faced by primary care providers and should be addressed in future educational interventions.

In summary, the performance appraisal experience revealed the following:

- The training program has had a positive impact in terms of developing adequate competencies to make timely recognition of patients with presumptive TB and refer them to TB specialists; Knowledge on follow-up care has been applied when possible; Emphasis on counseling and 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
 - 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;
- Along with greater involvement in DOT monitoring FPs and GPNs should improve their knowledge on TB drug side effects and be able to effectively manage those

Training developed good understanding of teamwork in TB care and stimulated building professional linkages between primary care and TB specialized service teams.

5. 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), Georgian Phthisiologists and Pulmonologists Association and the National Center for Tuberculosis and Lung Diseases (NCTBLD) hosted several activities to mark World TB Day 2015 with the theme “Reach the 3 Million”. The main sub-theme and message for this year was “Reach, Treat, Cure Everyone”.

On March 23, 2015 TPP supported Georgia Phthisiologists and Pulmonologists Association to organize a 1-day scientific conference for TB specialists. The aim of the conference was to present TB epidemiology in Georgia, TB National Program outcomes, current aspects in diagnosis, treatment and management of pulmonary and extra pulmonary TB, problems concerning differential diagnosis, study reports and preliminary findings of ongoing studies at National Center for Tuberculosis and Lung Diseases. The conference was broadcasted by TV channel – “Pulsi”.



On March 24, 2015, TPP hosted a high level meeting attended by the USAID/Caucasus Mission Director, Stephen Haykin, the Deputy Minister of Labour, Health and Social Affairs of Georgia – Dr. Zaza Sopromadze, and other distinguished guests to commemorate World TB Day. The event aimed at raising awareness about the global epidemics of tuberculosis, its magnitude in Georgia and the efforts made to eliminate this preventable disease.

With participation of students, TPP team, NCTBLD, NCDCPH and other stakeholders Information materials (leaflets, posters, etc.) were distributed in different public places. Special event was organized at the NCTBLD where stakeholders planted trees. The participants were in WTBD T-shirts and scarves.

TPP PSAs on TB were submitted to TV channel – “Pulsi” for broad public coverage and was aired during March, 2015.

On March 26, 2015 TPP regional coordinator Khatuna Chanturia in collaboration with Association Atinati made a presentation for youth in Zugdidi and distributed promotional and information materials. Promotional and informational materials were also distributed at the secondary schools in Batumi.

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

1. Provide technical support to the MOLHSA/NCDC/NTP to mobilize/leverage additional resources

TPP has been cooperating with the MOLHSA/NCDC/NTP staff on a daily basis since the beginning of the project. The daily cooperation created a very favorable environment for sharing technical experience and skills and had been mutually beneficial. The TPP provided TA to the TB stakeholder working group established under the auspices of CCM and facilitated the country dialogue for revising the TB National Strategy and elaborating the concept note in close collaboration with the USAID long term technical advisor based at NCDCPH. WHO experts gave high evaluation to the new strategy and Technical Review Panel (TRP) found the submitted concept note to be technically sound and strategically focused. The Global Fund Grant Approvals Committee (GAC) has endorsed the recommendations of the TRP to proceed to grant-making.

2. Advocate TB as an important public health priority during the policy process

Tuberculosis Prevention Project joined the initiative of the Global TB Caucasus and implemented a dynamic advocacy campaign in order to encourage the members of Parliament (MPs) of Georgia to sign the Barcelona Declaration to build stronger political commitment and civil society support to end TB. For this purpose the GTPP team worked with Georgian MPs as well as with the representatives of civil society organizations.

As a part of this Campaign, TPP team worked closely with the Healthcare and Social Issues Committee of Parliament of Georgia. TPP team developed the brochure about the Barcelona declaration for the distribution among the Georgian MPs. The brochure includes the information



about the Barcelona Declaration, the Declaration itself and the link, where the parliamentarians can sign the Declaration (the document – Barcelona declaration brochure – can be accessed at: http://tpp.ge/uploads/wtbd2015/tb_leaflet_for_print_final.pdf).

A member of the Committee, Dr. Giorgi Khechinashvili, gave a brief speech on the challenges of combating TB during the plenary session of the Parliament of Georgia and presented the brochure to the Georgian MPs (the speech can be found at <https://www.youtube.com/watch?v=81liWVvBseA&feature=share>).

In addition, work has moved forward with civil society organizations to encourage their engagement. The TPP team along with civil society organizations were involved in an online campaign launched by TB Europe Coalition (TBEC). With this online campaign our team is raising awareness of TB and assisting representatives of the civil society organizations to reach out to decision makers and encouraging Georgian MPs to sign the Barcelona Declaration in order to join a global movements of parliamentarians working on TB. Representatives of the civil society organizations had opportunity to go to the link: <http://www.fighttb2015.eu/georgia-language/> and contact the Georgian MPs by sending them the Barcelona Declaration by mail and asking them to sign the Declaration.

3. Promoting Quality Improvement Collaboratives

Quality improvement collaborative (QIC) approach adapted to the realities of resource-constrained settings has demonstrated its power to achieve rapid results and enable the large-scale spread of models of evidence-based care. The method emphasizes peer-to-peer learning and local adaptation of interventions, therefore as a next step of work on quality improvement collaborative TPP developed a framework to assist individual TB care providers in conducting situation analysis, identifying possible causes of existing problems, selecting priorities for action and developing action plan at facility level. With support of TPP regional coordinators this framework has been used at TB sites that were involved in TB quality improvement collaboratives established in the previous years to introduce clinical audit methodology and tools and facilitate development of the internal quality assurance system.

4. Strengthening multidrug-resistant (MDR) TB case management

a) Updating MDR TB Management Guideline

In FY 2015, the TPP team continued support to adopt evidence-based interventions to improve the prevention and control of TB. A cardinal feature of evidence-based guidelines is that they are subject to timely review in order that new research evidence and technological advances can be incorporated. Periodically updating the evidence base and guideline recommendations is essential in order to maintain their validity and authority. With TPP assistance, the National TB Management Guideline was updated in line with the latest WHO recommendations including guidance on the use of new drugs for MDR TB. The guideline with corresponding protocols was approved by the State Guideline Accreditation Board at the Ministry of Labour, Health and Social Affairs.

b) Improve identification and management of mental disorders among MDR TB patients

Low MDR-TB treatment success rates and a high level of loss to follow-up indicate the need for strengthening MDR-TB case management practice in Georgia. The survey of multidrug-resistant/



extensively drug resistant (MDR/XDR) TB patients in 2008-2013 cohorts revealed that the most powerful risk factors for treatment loss to follow up are side effects of the TB drugs, depression, and financial constraints. The extent to which TB specialists are prepared to identify and manage depression is unknown. There is no evidence available in Georgia on diagnosing and managing depression among TB patients. Neither there is any referral mechanism established between TB and mental health services to improve timely detection and effective management of mental illnesses among those on TB treatment.

In order to minimize an adverse impact from mental health issues on TB treatment adherence and completion, it is critical to build TB physicians ability to recognize common mental health disorders and learn how best to assess and respond to patients' mental health needs. TPP selected a local NGO "Global Initiative on Psychiatry – Tbilisi" (GIP-T) to develop evidence-based tools for identification and management of mental disorders among TB patients and train TB specialist and nurses. GIP-T experts' team developed the curriculum and training materials for the 16-hour training course on the early detection and management of mental disorders among MDR TB patients and conducted two day training course for 10 groups of specialists in March–May 2015. In total 179 specialists were trained (instead of 150 planned), including 71 TB physicians 53 nurses from Tbilisi, 21 physicians from Batumi, 17 – from Zugdidi and 17 – from Kutaisi.

c) Support introduction of the new treatment schemes

In 2011, with support of MSF, Georgia started compassionate use of Bedaquiline - first medication for pulmonary MDR-TB with a novel mechanism of action in over 40 years. The country planned to introduce the program wide use of Bedaquiline in 2015 as part of a combination therapy in adults with pulmonary MDR TB when an effective treatment regimen cannot otherwise be provided in line with the WHO interim policy guidance.

In order to support the National TB Program in introducing new MDR TB treatment schemes, USAID Georgia Tuberculosis Prevention Project arranged the training for TB specialists to ensure adherence to best practices in treatment delivery, to enable optimal drug effectiveness and safety.

In March 10-18, 2015 63 TB specialists from all regions of the country, including prison sector, were trained by the international consultant Dr. Jennifer Furin in collaboration with the leading local specialists Dr. Lamara Vashakidze, head of the TB department of Tbilisi State Medical University and Dr. Nana Kiria, clinical director of the National Center for TB and Lung Disease. The training included the following:

- Introduction of New Drugs for DR-TB under Program Conditions: The WHO Approach;
- Bedaquiline, Delamanid and Linezolid for the Treatment of DR-TB: Drug Information and Evidence for Use;
- Clinical Considerations in New Drug Introduction;
- Clinical case discussions;
- Ethical Considerations and Informed Consent;
- Active Pharmacovigilance in the Field;
- Generating Evidence for Scale-Up.



The above described training and preparatory efforts aimed to support introduction of BDQ in Georgia was featured by the Stop TB Partnership newsletter in March (available at http://www.stoptb.org/news/frompartners/2015/fp15_037.asp).

d) ToT in Management of Adverse Events in Patients with Drug-Resistant TB

In collaboration with USAID Systems for Improved Access to Pharmaceuticals and Services (SIAPS) TPP supported training of a core group of TB specialists in “Optimal Monitoring and Management of Adverse Events in Patients with Drug-Resistant TB” conducted on August 13-14, 2015. The training was led by international expert Dr. Jennifer Furin and attended by 10 TB specialists who will further serve as trainers. This training is an important step for introduction of active pharmacovigilance system to monitor and adequately manage MDR TB treatment side effects.

5. Strengthening and updating systems for data management and use

In 2013, WHO revised standard case definitions for TB and drug-resistant TB, the categories used to assign outcomes and the standard reporting framework for TB. Implementation of new case definitions is an important precondition for standardization and valid assessment of the National TB Program performance in areas of TB detection, treatment coverage and clinical outcomes for specific patients’ groups. In order to support NTP to comply with the new requirements TPP in close collaboration with the Global Fund TB Project team, NCDCPH and NCTBLD developed a manual on new case definitions with related reporting and recording forms and trained all TB Physicians and Data Managers countrywide.

In February – March 2015 two days training course, with total duration of 16 hours (8 hours each day), was delivered in 18 groups for approximately 15 trainees in each group in Tbilisi, Kutaisi, Batumi and Zugdidi. In total 226 TB specialists were trained. All trainees were provided with the training materials, stationary, and other necessary training aids. Improvement of the trainees’ knowledge was evaluated by using of the pre- and post-tests. Analysis of the pre- and post-tests results showed that trainees have improved their results since pre-testing.

6. TPP’s Small Grants Program

During the Year 4 six small grant projects initiated during the previous year were completed, namely:

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

The project aimed to: increase a knowledge and understanding of public health aspects of Tuberculosis among the personnel of district public health centers; strengthen capacity of public health centers’ personnel in contact tracing and screening of high risk patients; strengthen capacity of public health centers in supervision of TB interventions at the community level; strengthen capacity of public health centers’ personnel in counseling and community education on TB issues;



strengthen capacity of public health center's personnel in monitoring and evaluation of TB interventions at the district/community level.

The activities carried out within the frames of this project improved the understanding and confidence of PHC personnel in public health aspects of TB. In total 182 individuals representing all 63 public health centers (and departments) throughout Georgia were trained on TB control at a community level. Evidence-based guiding materials including TB control manual for PHCs were developed on the basis of evidence-based data, WHO and US/CDC recommendations and guidelines were printed and distributed among training participants. TB control manual will serve as a reference book for the district PH centers and will be a useful tool for PH system players to effectively implement and monitor TB control activities. As a result of project implementation overall knowledge on public health aspects of TB was increased by 30% on average among PHC personnel participating in the trainings.

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

The purpose of the project was to improve early detection of presumptive pulmonary, extra-pulmonary and childhood TB cases in multi-profile medical facilities. This was 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.

The project working group developed and printed:

- Childhood TB presumptive case protocol for bordering professionals that is in-line with the recently developed National Childhood TB Guideline endorsed by Ministry of Health;
- 2 Job-aids, one for obstetricians and gynecologists and one for neonatologists that will cover major aspects of perinatal, intranatal and postnatal management of TB;
- Presentation on Childhood TB presumptive case management;
- Patient Referral Flyer;
- TB and Pregnancy management protocol.

Six 2-days trainings were conducted (12 training session days). Overall 150 professionals were trained in Tbilisi and Kutaisi, out of which 135 attended both training session days, while 150 attended at least one session day. The trainings consisted of general introductory section and specific section relevant for the participants' field. At the end of each training session specific case simulation scenarios were exercised as a role play.

In order to provide flexible basis for establishing strong linkages between the TB program and the public-private sector and make further communications and referral of patients more effective GPPA elaborated a special patient referral flyer. On February 27, 2015, a closing conference was conducted to present the project achievements. Overall, the project implementation resulted in



31% increase in referral of TB presumptive cases from targeted public-private sector to TB services.

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

The Overall Goal of the project was to raise awareness of youth in all regions of Georgia that was achieved through a multifaceted information campaign. Namely, focus group discussions have been arranged and information and communication materials developed including

- information flyer for youth about TB,
- table calendar,
- T-shirts with slogans,
- PPT presentations for teachers training,
- PPT presentation for information seminar with pupils,
- Methodological guide for teachers,
- CD with necessary materials for teachers.

GHPEF conducted seminars for 14-17 years old pupils in more than 120 public schools in Tbilisi and 10 regions of Georgia and facilitated organization of more than 80 school based activities (school conferences, peer-education events, parent awareness raising seminars, drawing of pictures, street actions, flash-mob performances, sport events, etc.). Totally, more than 4000 pupils have participated in information meetings.

In close cooperation with the Ministry of Education and respective resource-centers, and with active involvement of Teachers Professional Development Center (TPDC), GHPEF covered 129 teachers through 4 sessions in Tbilisi and Kutaisi.

Totally, with the teachers training, information seminars in schools and school based activities (peer-education events, parent information seminars, street actions, sport tournaments, etc.) the project managed to deliver information about TB issues to more than 22.000 pupils and 10.000 adults. In addition, 5 talk-shows in internet TV/Radio "Obieqtivi" reached about 500,000 population.

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

The overall goal of this grant was to reduce community transmission of TB and thus contribute to decreasing incidence and prevalence of TB in Georgia. This was achieved through:

- Increased awareness among different target groups, such as the clergy (bishops, priests) and parish, including general population and socially vulnerable populations through anti-stigma information campaign.
- Support in early TB detection among hard-to-reach populations living in nunneries and monasteries by providing supporting information and active case findings among nuns and monks.



- Use of peer educators system for identifying treatment non adherence at the early stages and treatment defaulters in their respective regions and support them to complete treatment as prescribed.

In particular, the 21 eparchies were visited throughout the country and 42 priests and bishops selected and trained as peer educators. Afterwards the peer educators provided counseling to all the non-adherent patients at the NCTBLD who agreed to attend the session. In total 11 sessions were conducted.

Five meetings were held at theological boarding schools. These meetings were attended by both children and teachers and were devoted to delivering information about TB and spread of the disease. Six lectures were arranged at St. Tamar University. During the meetings information leaflets and booklets were disseminated and participants were able to ask questions. Informational lectures were elaborated and broadcasted by Ertsulovneba channel 10 times.

The project team has visited four housing entities for socially vulnerable and delivered information to about 200 inhabitants.

During the visits to monasteries and nunneries, in addition to training, medical examinations were conducted and 19 people with presumptive TB were identified and referred to specialized TB services.

The project implementation and achievements have been highlighted by the Stop TB Newsletter. The article can be accessed at http://www.stoptb.org/news/frompartners/2015/fp15_007.asp

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

The project covered four geographical areas of Georgia: Tbilisi (Kartli region), Batumi (Adjara region), Kutaisi (Imereti region) and Zugdidi (Samegrelo region) and was targeted at prisoners, former prisoners and their families. The main objectives were to support treatment adherence among prisoners and former prisoners TB patients who are under treatment at the moment of release from prison and raise awareness of high risk groups for developing TB. To achieve these objectives Tanadgoma elaborated a pre-release package including guide for TB counseling in prison, TB client map and counseling consent form and trained 43 social workers, and 60 medical personnel (103 participants in total) working in the TB hospital in Ksani and in other prisons. The training included two-day presentations and interactive sessions with the focus on TB treatment adherence issues and specifics of work with prisoners. As a result of training the participant knowledge improved by 26%.

Informational booklet “Tuberculosis and treatment adherence” was elaborated, printed in 2000 copies and distributed to prisoners and their families. Booklets were also handed over to the Medical Department of the Ministry of Corrections for distribution among prisoners on TB treatment. 23 educational meetings were conducted with family members of the former prisoners, who are under TB treatment or defaulted from treatment, reaching 276 family members and individual meetings were held with former prisoners, reaching 311 former prisoners. At the end of



the project a roundtable was carried out to present project achievements and analysis of data collected during the project implementation.

The Fourth wave (2015) small grants program

Five new grants were awarded and implemented in the same year, namely:

a. 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 project objective was to improve early detection of presumptive TB cases including pulmonary, extra-pulmonary and childhood TB in multi-profile and specialized medical facilities. GPPA team GPPA team prepared a lecture presentation on TB and Diabetes, developed and printed TB and Diabetes Screening Protocol for Endocrinologists and general internists (35 copies), TB and Diabetes Job-aid for Endocrinologists and general internists (100 copies) and conducted training sessions in 4 target groups. All of the training participants received the printed materials (relevant job aids and protocols) and the training certificates.

The trainings were conducted at following sites: Evex Kutaisi Training Center were 22 internists and endocrinologists were trained, Evex Zugdidi Referral Hospital, where 41 participants from the field of internal medicine and endocrinology were trained; Ghudushauri National Medical Center in Tbilisi, with 23 participants from the relevant specialties and Aversi Clinic in Tbilisi, with 30 training participants from Internal medicine and endocrinology. In total 116 frontline professionals were trained within the frames of this small grant project. One hundred percent of the participants provided positive feedback, both verbally and by documenting in the Training Evaluation Questionnaires. The project implementation led to 31% increase in referral of presumptive TB patients from multi-profile health facilities. The project results were presented at the close-out conference conducted on September 18, 2015.

b. The Center of Bioethics Studies and Culture (CBSC): “Georgian Orthodox Church Against Tuberculosis”

The project aimed to reduce community transmission of TB and thus contribute to decreasing incidence and prevalence of TB in Georgia. The project team visited Chkondidi, Akhaltsikhe, Bodbe, Manglisi, Mtskheta and Lazeti eparchies to arrange meetings with church representatives and parish and also meet hard-to-reach populations (monks, nuns) in the monasteries of respective regions. The information leaflets and booklets were disseminated. Attendees were able to ask questions. They agreed to spread appropriate information regarding TB and thus support in implementation of project targets. The project technical experts conducted health checks. In total 131 persons were examined and four presumptive TB patients identified and advised to take further medical examination in the specialized medical facility.

Two Informational meetings/ lectures were conducted at St. Tamar’s University and one in the theological boarding school in Mtskheta. The meetings were attended by the head of schools,



teachers and students – 84 (Tbilisi) and 47 (Mtskheta) persons respectively. Six informational meetings/ lectures at the theological boarding schools in Tbilisi, Martvili, Saphara, Ninotsminda, Batumi and Khulo and attended by 660 persons.

Information lectures regarding TB transmission and its associated stigma were broadcasted on TV channel “Ertsulovneba” once per month (April 22, May 20, June 17, July 22, August 26, September 25 <https://www.dropbox.com/s/b31pod7yfwrtqk/CBSC%2025Sep2015.mp4?dl=0>

https://www.dropbox.com/s/5b0ckojhs4v6gg3/CBSC_2015.mp4?oref=e&n=114584110)

Five meetings between peer educators and TB patients were conducted in the out-patient department in Tbilisi. In total 140 individuals attended the sessions.

c. Georgian Health Promotion and Education Foundation: “Community Level Information Campaign and Youth Awareness Raising regarding TB in Georgia”

The Overall Goal of the project was to raise awareness of the general public in all regions of Georgia. To achieve this objective the project team organized information sessions/meetings in 52 public schools throughout Georgia. These meetings were attended by more than 1864 13-17 years old pupils. Information seminars were also organized in 11 high schools and universities for 550 non-medical students.

Schools and universities have actively engaged in organizing follow up events/activities and as of June 30, 40 different activities were organized by the schools and 12 activities by the universities. These activities included peer education seminars, information meetings for parents, flash-mob actions, wall painting, street actions and distribution of information fliers, tree planting activities, intellectual games, sport tournaments, school conferences, etc. The project team participated in many activities. The total number of participating pupils exceeded 950 and total number of students participating in university actions was to 268.

The project activities were covered by media, namely:

1. Obieqtivi TV; 2.05.2015
<http://obieqtivi.net/tv1.php?id=21492>
2. Obieqtivi TV; 20.06.2015
<http://obieqtivi.net/tv1.php?id=22164>
3. TV Rioni, Kutaisi. 28.05.2015
4. MEGA TV, Kutaisi. 28.05.15
<http://megatv.ge/?p=10017>

Training of journalists was arranged in Tbilisi on July 10, 2015 and in Batumi on July 11, 2015. In total 20 (13 in Tbilisi and 7 in Batumi) journalists from TVs, radios, news agencies and newspapers attended the training. The trainers have delivered modern information about tuberculosis to the participants, explained different aspects of TB control in Georgia and internationally. Special attention was given to the modern developments in TB control, new medicines and approaches.



Journalists were engaged in practical exercises in order to improve their skills regarding publicizing different aspects of TB and in order to overcome the stigma existing in society.

Information about the trainings was delivered by TV Adjara and TV-25 news programs:

http://www.tv25.ge/?page=news&news_id=17202#.Vajyevmqgko
<https://www.youtube.com/watch?v=y1rFBOxQpw>

After the trainings the journalists were given the task to prepare TV/radio programs and/or newspaper articles regarding tuberculosis. The winners were awarded special diplomas and prizes during the closing conference that took place on September 23, 2015. In addition to award ceremony the conference was devoted to presentation of outcomes of information campaign, including the follow up activities initiated by the teachers and schoolchildren.

d. Health Research Union: “Knowledge, attitude and practice survey about TB among high risk groups and general population of Georgia (a follow-up survey)”

The goal of the follow-up TB KAP survey was to determine the current level of knowledge, attitudes and practices about TB in different target groups, compare it with the baseline survey findings and identify the trends between the two survey results.

As a preparatory phase 17 social workers from Georgian Harm Reduction Network and epidemiologists from Health Research Union, National TB Center and Local Public Health Centers were contracted to conduct interviews for the survey. All interviewers were divided into 2 groups and received 1-day trainings on May 13 and May 19, 2015. The trainings consisted of classroom instruction, practice and pre-testing of all survey procedures, including recruitment, obtaining informed consent and interviewing. During the training interviewers had the opportunity to revise and discuss each question from the structured questionnaires specially designed for different target groups and the informed consent form in order to ensure clarity and cultural appropriateness. Besides, during the training interviewers participated in role-playing interviews.

The survey was conducted in Tbilisi and different regions of Georgia: Adjara, Samegrelo, Imereti, Kvemo-Kartli and Kakheti. Totally 1620 respondents were interviewed. Data were collected from the following target groups: individuals recently released from prison, drug users, alcohol users, post TB patients (both cured and default), contacts of active TB cases, TB patients currently on treatment, immune-compromised patients (patients with HIV/AIDS, patients with diabetes mellitus, patients on dialysis), health care providers and university students and teachers (as representatives of general public).

Data were collected through face-to-face individual interviews by specially designed questionnaires. Four different questionnaires were used for different target groups. Key elements of the questionnaires included: socio-demographic characteristics, TB awareness, TB perception, TB symptoms, TB transmission, TB diagnosis and treatment, TB treatment by DOTS method, TB prevention, TB risk factors, attitude towards TB patients, attitude toward TB related health problems (symptoms), attitude toward disease (TB), attitude toward medical treatment of TB, attitude and experience of stigma and discrimination related to TB, sources of information on TB,



media preferences etc. Collected data were entered in statistical package SPSS v.22.0. The survey report will be finalized in October, 2015.

e. Health Research Union: “Implementation Support of Tuberculosis-related Infection Control Practices at Hospital Settings”

The purpose of the project was to prevent healthcare associated transmission of TB, reduce TB incidence among high-risk patients, Health Care Workers and community through improved infection control and prevention practices at district hospitals.

The HRU team conducted a baseline assessment about current TB IC status, policies and procedures at the selected healthcare facilities using specific tool developed within the frames of this project. At this stage the team has assessed TB administrative control at health care facilities by evaluating basic documents and existence/structure of infection control committee, distribution of responsibilities and competencies, reporting system and regulations of committee and infection control officers.

Based on the baseline assessment of current IC status, policies and procedures HRU team supported hospital managers in development of comprehensive TB-IC action plan. These action plans were presented to hospital administration and approved by an internal order. HRU team also assisted hospitals in the implementation of IC action plan activities, namely,

- Personnel of participating hospitals was trained to ensure understanding of basic issues related to TB and infection control principles. In total 18 people directly involved in implementing and/or supervising TB IC interventions at the selected hospitals attended a two-day training.
- Internal procedures and protocols were developed to specifically describe pathways of a patient with cough or other symptoms suspicious for TB that are based on FAST strategies.
- Educational and communication materials were developed targeted both for hospital personnel as well as patients. Internal protocols and guidelines were printed and placed so that hospital personnel have easy and regular access to these materials.
- IC monitoring and evaluation plan was developed including managerial, administrative, environmental control and personal protection equipment evaluation indicators.

The lessons learned were presented at the final conference on September 24, 2015. The HRU team emphasized the clear need for integrating TB related IC into the overall hospital IC policies and procedures at all facilities regardless of their current status of TB service delivery. It was also stressed that IC practice needs improvement in all three directions including environmental, administrative and personal protection.

f. Center for Information and Counseling on Reproductive Health: “Supporting collaborative TB/HIV activities in Georgia”

The project aimed to raise awareness of high risk groups such as People who Used Drugs (PUDs), Men who have Sex with Men (MSM), and Sex Workers (SW) on information regarding TB



symptoms and services in 3 cities of Georgia (Tbilisi, Batumi, Kutaisi); and strengthen linkages between health care facilities providing TB care and communities through identifying a contact person and enhancing referral to TB care facilities.

The project team developed brochure “Tuberculosis” for project beneficiaries (MSM, SW, PUD). Besides, stories of TB patients were collected, recorded and corrected for the booklet “Patients’ stories”. Both brochures were printed in 1000 copies and distributed among beneficiaries.

634 counseling sessions were conducted with project beneficiaries at the three sites of project implementation, out of these 177 were SWs, 195 –MSM and 262 Drug Users. The meetings led to identification of 59 presumptive TB cases that were recommended to visit TB care services. The Tanadgoma team also arranged 60 counseling sessions to reach out 351 injection drug users. Twelve presumptive TB cases had been identified among them and advised to address health services. The implementers conducted 18 training sessions for peer educators at the three sites in Tbilisi, Batumi and Kutaisi. Six trainings were conducted in each target group. In total 180 beneficiaries participated in this training.

In September three working group meetings were conducted to develop the referral tool. The draft version was presented on a round-table meeting on September 25, 2015 and finalized with stakeholder input.

To evaluate the project outcomes Tanadgoma conducted the survey at the beginning and at the end of the project implementation to measure progress. Ninety respondents from target groups (MSM, SWs, PUDs) participated in the survey. In total 180 questionnaires were filled out. The survey demonstrated significant progress in the respondents’ knowledge and change in attitude.

7. Strengthening tools for managing TB patients

The GoG has prioritized the use of information technologies to streamline data systems, including those for TB. The USAID Georgia Tuberculosis Prevention Project (TPP) has assisted the National TB program in introducing innovative m/eHealth tools using mobile phones, tablets, and web-based learning systems to enable optimization of communication, sharing, and the exchange of information, images, and data among healthcare professionals and with patients. FY2015 TPP in collaboration with USAID/HSSP supported work to fine-tune various system components such as laboratory, statistics, drug accounting, pharmacovigilance, etc., trained TB care providers at penitentiary facilities and provided on-site mentoring and assistance in data entry to facilitate development of necessary skills as well as identify operational weaknesses and technical errors that might emerge during the work and report to the HMIS technical team to ensure timely response.

All indicators and data collection tools are aligned to the latest WHO standards. The TB HMIS module works by allowing providers to upload data to the national system quickly for each patient with TB and presumptive TB. The Ministry of Labour, Health and Social Affairs uses the module for generating case-based financial reports and simplifying billing and financial transactions through electronic reporting within the State TB Program. Beside the main eTB database, the mhealth



component is functional that facilitates patient counseling using a tablet based patient education module (which time- and geo-tags sessions) and also (b) allows electronic recording of patient attendance to directly observed therapy sessions (DOT) via SMS. After a successful pilot, a Government Decree has mandated electronic recording and reporting of TB related data from May 1st, 2015 onward. Within the first quarter of the implementation more than 80% of TB providers countrywide started using the eTB module on a daily basis. There were 2947 TB cases currently on treatment registered and daily DOT attendance reported for 92% of cases. Although this practice is rather recent, it has already proved to be well accepted by the beneficiaries.

8. Strengthening regulatory framework for TB Control in Georgia

Considering the severity of an epidemic and potential impact of ongoing transitions on TB National Response, the Government of Georgia identified legal preparedness as a critical component in TB control. The Parliamentary Committee for Health and Social Issues made decision to introduce effective policies and strengthen legislative framework for adequate TB control. The new legislation once introduced will greatly contribute towards strengthening quality of DOT and DOT plus services nationwide. USAID Tuberculosis Prevention Project has provided technical assistance to the working group and facilitated the process to ensure that legal and policy development procedures are transparent and participatory.

The legal expert, hired by TPP to ensure that proposed regulations protect public health as well safeguard the legal rights of individuals in line with the current best practice, in close consultations with the Parliamentary Committee for Health and Social Issues prepared the full package of legislative amendments and explanatory notes necessary for initiating the hearings. On May 22, 2015 the draft documents have been presented and discussed at the workshop arranged in Batumi. The workshop was attended by a broad group of stakeholders, including the Chairperson of the Health and Social Affairs Committee, Parliament of Georgia, Deputy Ministers of Labour, Health and Social Affairs, Members of the Parliament, representatives of NCDCPH, NCTBLD, local authorities, TB specialists and NGOs. In order to clarify the issues raised at the broad stakeholder meeting in May, 2015 and ensure consistency of legislative, executive and judicial rules and regulations, as well as compliance with ethical requirements, the working group met with the Minister of Justice T. Tsulukiani and Minister of Labour, Health and Social Affairs D. Sergeenko. The political and legal decisions were reflected in the draft law, which will be introduced for parliamentary hearings in October 2015.

9. Building human resource capacity for TB laboratories

a) Countrywide roll-out of Xpert MTB/RIF system

WHO recommended use of the Xpert MTB/RIF – an automated nucleic amplification assay for the simultaneous detection of TB and rifampicin resistance directly from sputum in under two hours in December 2010 and is monitoring the global roll-out of the technology to promote coordination. In line with these recommendations Georgia piloted use of the technology in Tbilisi and initiated its roll-out countrywide. The initiative has been jointly supported by the Global Fund TB project and USAID TPP. The Global Fund TB project has purchased additional nine GeneXpert machines and



TPP supported installation of Xpert MTB/RIF Systems and Training of laboratory technicians in using of rapid testing to improve quality of TB diagnosis and ensure timely initiation of adequate treatment for all confirmed TB cases.

From February 7, to March 11, 2015 9 Xpert MTB/RIF Systems were installed and 16 laboratory technicians were trained in 7 laboratories of NCDC (Gori, Akhaltsikhe, Telavi, Batumi, Ozurgeti, Poti, Zugdidi) and in 2 laboratories of Penitentiary system. According to the FIND GeneXpert Implementation Road Map, initial installation and training should be followed by competency assessment of laboratory staff. After 3 months of installation process USAID/TPP plans to conduct follow-up trainings for all technicians involved in TB diagnosis at laboratories of NCDC and Penitentiary System.

b) Training in TB culture and second line drug susceptibility testing

Since 2012, the National Center for Disease Control and Public Health (NCDC) has assumed many of the TB-related lab responsibilities including culture and microscopy. As this is a relatively new role, the National Center for Disease Control experiences shortage of laboratory workers skilled in TB culture, microscopy and GeneXpert technique. TPP has been supporting NCDC in addressing this issue for the last two years by supporting lab technicians from the regions to take part in training at the National Reference Laboratory in Tbilisi.

Upon request from NCDC, the TPP supported a one-month training of laboratory specialists from several laboratories to develop capacity in culture and second line drug susceptibility testing. Three laboratory technicians from NCDC laboratories of Samegrelo, Kakheti and Imereti regions were trained in the National Reference Laboratory of the National Center for Tuberculosis and Lung Diseases: Laboratory technicians from Zugdidi (Samegrelo region) and Telavi (Kakheti region) were trained from May 4-29, 2015 and a laboratory technician from Kutaisi (Imereti region) was trained from June 8 to July 3, 2015.

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

The Health Research Union implemented a small grant to prevent healthcare associated transmission of TB, and reduce TB incidence among high-risk patients, HCW and the community through improved infection control and prevention practices at district hospitals. Baseline assessment about current TB IC status, policies and procedures was conducted at the selected healthcare facilities in Tbilisi and different regions of Georgia (Kakheti, Shida-Kartli, Kvemo Kartli, Adjara, Samegrelo, Guria and Imereti regions) using specific tool developed from relevant sources identified through literature review. At this stage TB administrative control at health care facilities was assessed by evaluating basic documents and existence/structure of infection control committee, distribution of responsibilities and competencies, reporting system and regulations of committee and infection control officers. Building on the baseline assessment findings HRU team worked with hospital epidemiologists and designated IC officers to develop and finalize specific activities to complete a comprehensive TB-IC action plan. The action plan specifies administrative,



environmental and personal protective measures and policies. In order to assist in implementation of the mentioned plan educational materials, internal protocols as well as IC monitoring and evaluation plans were developed and personnel was trained. The evidence from project implementation was presented at the round-table meeting.

TPP purchased 2 GeneXpert machines to pilot the FAST (Find Actively, Separate and Treat) approach at two general hospitals and transferred that to NCDC on the bases of a memorandum to ensure sustainability of the effort. The machines were installed in “New Hospital”, Tbilisi and Central Clinic, Rustavi and laboratory technicians were trained. In collaboration with HRU FAST protocol for general healthcare settings was developed, printed and distributed at these hospitals. Three training sessions were arranged (two in Tbilisi and one in Rustavi) for 75 physicians and nurses. The trainings covered FAST principles and raised awareness of the opportunities created by the on-site availability of GeneXpert machines for rapid identification of unsuspected infectious TB cases.

IV. Best Practices/Success Stories

Support Country Preparedness for Introduction of New Drugs for the Treatment of Drug-Resistant TB in Georgia

Georgia is among the first recipient countries receiving bedaquiline through the USAID and Janssen Therapeutics’ Bedaquiline Donation Program to help treat MDR-TB. The overall purpose of the donation program is to assist the Government of Georgia in combating MDR-TB, and to ensure access to the drug for all patients in need. The TPP team in collaboration with national and international partners (USAID/MSH SIAPS, MSF France) supported the country in meeting all the prerequisites for introduction of the new drug to ensure adherence to best practices in treatment delivery, and enable optimal drug effectiveness and safety. Bedaquiline implementation plan was developed, TB treatment guidelines were updated and TB specialists were trained. Georgia is emerging as a model country for the use of new drugs and has a well-trained workforce who could be used to help provide training and share experience in other countries in the region and on an international level.

TPP support acknowledged by the WHO Review Mission

The WHO Review Mission (November, 2014) during the initial presentation of the mission findings listed activities and outcomes supported by TPP among the main achievement of the National TB Response in Georgia. Namely:

- Well-elaborated and approved National TB Strategy
- Established new coordination committee at MoLHSA
- The National TB Laboratory Strategic Plan
- Training for lab technicians
- National TB guidelines that are developed according to WHO recommendations
- Health care professional of cross-cutting specialties trained on diagnosis and differential diagnosis of pulmonary, extra-pulmonary and childhood TB



- Significant involvement of local NGOs in TB care and control and ACSM activities within the small grants program
- Coordination of local NGOs by TPP avoiding duplication
- Availability and usage of the manual for counseling former prisoners, information brochures for former prisoners. Engagement of the family members of former prisoners.
- Effective collaboration with the Georgian Orthodox Church

Support to Country Coordinating Mechanism to fight against Tuberculosis, HIV and Malaria

TPP Chief of Party in her capacity as a vice chair for the Country Coordinating Mechanism, a high-level constituency that oversees implementation of GFATM grants in the country provided support in facilitating the country dialogue aimed at preparing GFATM grants concept notes for both HIV and Tuberculosis. The TPP team provided substantial input to ensure inclusiveness and transparency of the concept note development process. The Global Fund Grant Approvals Committee (GAC) has endorsed the recommendations of the Technical Review Panel (TRP) on the Georgia HIV and TB concept notes to proceed to grant-making.

Georgia has won URC's 50th Anniversary Community Program Contest

The TPP team has been working closely with local NGOs to support their greater involvement in the National TB response. As a part of these efforts TPP has applied to URC's 50th Anniversary Community Program Contest. Non-governmental organization Georgian Patient's Union nominated by TPP for the Contest has been selected as one of three winners. This nomination is made to support "Georgian Patients' Union" (GPU established in 2014) in its intention to improve community based TB care through peer education and outreach. GPU is the first organization in Georgia involving former TB patients which are willing to act as advocates and peer-educators to newly diagnosed TB patients and aims to support TB prevention, increase community involvement in TB control and protect patient rights. With this win, the Georgian Patient's Union will receive a prize donation of \$2,000 to fund their purchase of an electronic notebook and tablets to facilitate their TB education efforts.

V. Challenges

No major challenges were identified during the reporting period. However some technical barriers are still in place that prevent from effective implementation of the project interventions. Approximately 20% of TB service delivery points lack internet access or data entry into the newly introduced TB module is complicated due to very low computer literacy. TPP team members have been working with the hospital managers to solve the problems above. As a result, at some facilities (including NCTBLD) internet connection has been restored and a support staff identified to assist TB teams in data entry.

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 1 most of the targets were achieved. However, due to political, technical and administrative barriers no or insignificant progress was observed against the following indicators:

- Regional training center is not functional and therefore no workshops could be supported.
- 241 FPs and 238 nurses were visited by the end of September 2015, the performance appraisal activity was finalized in early October and reached 261 FPs and 261 nurses exceeding the target of 250. Consequently presentation of appraisal results and the Annual award ceremony: the “Best TB specialist” and the “Best PHC Site was postponed to November 2015.
- The previous years experience demonstrated that the majority of FPs and nurses, especially in rural areas prefer the printed materials compared rather than electronic forms. Besides, e-library with all educational materials produced by TPP is being developed. Therefore in 2015 the project distributed 500 CDs with the focus on visual materials and the CDs with e-library will be produced in the next quarter.
- # and % 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. Therefore, the number of patients seeking for diagnostic services on average increased but number of patients on treatment decreased.

Table 1: 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 4 Target | Year 4 Actual |
| 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) | | | | |
| # 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 | 28 |
| # 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 | 225 | 253 |
| # of General nurses trained in identification of TB suspects in the early stage of disease | Project Report | Quarterly | 225 | 277 |
| # performance appraisal visits conducted to family physicians and general practice nurses | Project Report | Annually | 250 | 241 FP and 238 nurses |
| 1.2. Ensure use of a standard TB case detection module in all pre- and in-service training curricula for general practitioners | | | | |
| # 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 | 2 |
| # 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 | 43 |
| # of Distance-learning courses and innovative approaches to improve attendance to TB training modules and rotations are developed | Project Report | Annually | 2 | 3 |
| # of pediatricians trained in identification of TB suspects in the early stages of disease | Project Report | Annually | 150 | 196 |
| 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 | | | | |
| # 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 | 0 | 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 | 500 |
| # 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 | 2700 distribution materials (1000 clinical cases, 1000 guidelines, 500 packages with 8 protocols, 200 posters) |
| # 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 |
| 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 | | | | |
| KAP survey conducted | Survey report | Annually | | Yes |
| # 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 | 3 |



| | | | | |
|---|---|------------------|--|---|
| # of Printed materials distributed to the general public in common areas such as banks, grocery stores, bars and restaurants | Project Report | Quarterly | TBD | 5000 info booklets, 10000 leaflets, 20000 info flyer for youth, 5000 calendars |
| 1.5. Reduce the stigma of TB through PSAs and informational materials | | | | |
| # of current and former TB patients trained to deliver positive messages to the public about TB diagnosis and treatment. | Project Report | Annually | 150 | |
| # of local leaders, cured TB patients delivering TB stigma reduction massages | Project Report | | TBD | 6 |
| # of PSA and community events held to deliver stigma-reduction and awareness building communication messages | Project Report | Annually | 12 | 68 |
| # 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 | 750 T-shirts, 200 scarves, 500 pins, 500 leaflets on Barcelona declaration, 1 banner, 5 newspaper articles, 10 talk-shows on TV and radio |
| 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 | 60% increase at baseline (49 per month in 2012) | Average Georgia 238 per month -385% increase at baseline |
| % of TB+ cases in total number of suspected TB patients referred from primary care providers | Multiple Sources | Annually | 60% increase at baseline (baseline 4% in 2012) | 16% (300% increase at baseline) |
| 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 | 60% increase at baseline | 108 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 4 Target | Year 4 Actual |
| 2.1. Expand geographically to cover nationwide quality DOTS and DOTS plus services through technical assistance and training of medical personnel and supportive supervision | | | | |
| # of outpatient TB service providers evaluated through supportive supervision visits | Project Report | Annually | 100 | 140 |



| | | | | |
|--|--|-----------|-----|---------------------------------|
| 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 counseled after they leave penitentiary system | Project Report | Annually | TBD | 311 |
| # of TB specialists, nurses and laboratory staff trained in the use of WHO's TB definitions | Project Report | Annually | - | 226 |
| # of TB specialists and nurses trained in managing mental disorders among TB patients | Project Report | Annually | - | 126 TB physicians and 53 Nurses |
| 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 | | | | |
| # of national and international workshops conducted by the NTP trainers with support of the project | Project Report | Annually | 2 | 2 |
| # of existing IC policies and guidelines adapted | Technical Report | Annually | 1 | 1 |
| 2.3. Ensure an appropriate national TB policy and program response in the evolving Georgian health system reform | | | | |
| # 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 |
| 2.4. Support to local NGOs with known success in assisting patients to adhere and complete MDR/XDR treatment | | | | |
| # of NGO representatives trained on TB related policy, proposal writing, financial management, strategic and operational planning. | Project Report | Annually | 50 | 52 |
| # of small grants programs implemented by NGOs | Project Report | Annually | 4 | 5 |
| # 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 | 10 |
| 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 | - |
| # of association members attending regional conferences | Project Report | Annually | 4 | 2 |
| # 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% | 80,7% (2013 cohort) |



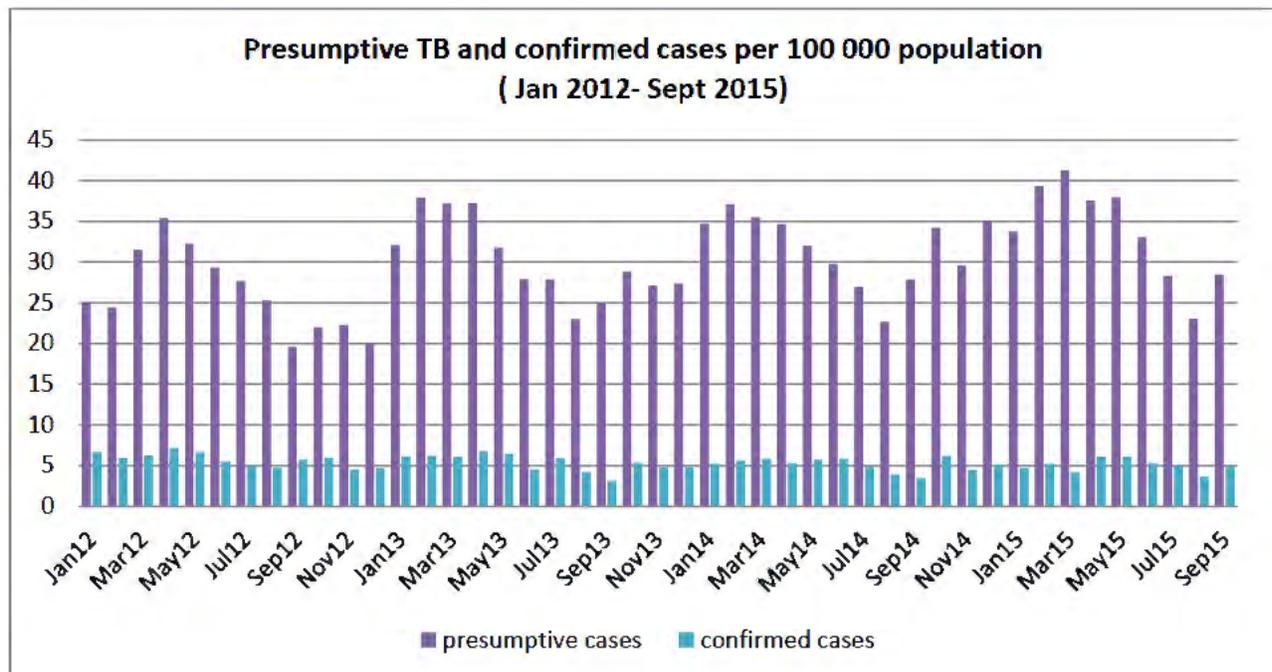
| | | | | |
|---|--|----------|--------------------------|---|
| Treatment success rate of MDR-TB patients: number of patients who were cured or completed Category IV treatment (% of the total number of patients in the same registration cohort) | TB surveillance database (2008 baseline 54.5%) | Annually | 65% | 46% (2012 cohort) |
| 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% | 46% (2014 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 | - | Yes |
| # of health facilities updated and equipped | Project reports | Annually | - | - |
| # of staff trained on effective IC measures | Project reports | Annually | 100 | 242 |
| Impact Indicator | | | | |
| # and % of TB patients accessing key services in each clinic- screening, diagnosis, treatment | Project reports | Annually | TBD | |
| Screening | | | 20% increase at baseline | Average 6,7 contacts screened per month per clinic (baseline 6,7) |
| Diagnosis | | | 20% increase at baseline | 21,6 patients per month per clinic (baseline 19,5) |
| Treatment | | | | Average 22 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 incidence and prevalence of TB has continued to decline. Total number of both sensitive and resistant cases has decreased slightly. Like the previous years this decline should not be related to the missing patients as the investigation of presumptive cases did not decrease. The number of suspects 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. Since 2012 the confirmation rate gradually lowered from average 20% to 15% getting closer to WHO recommended ratio (see figure 1).

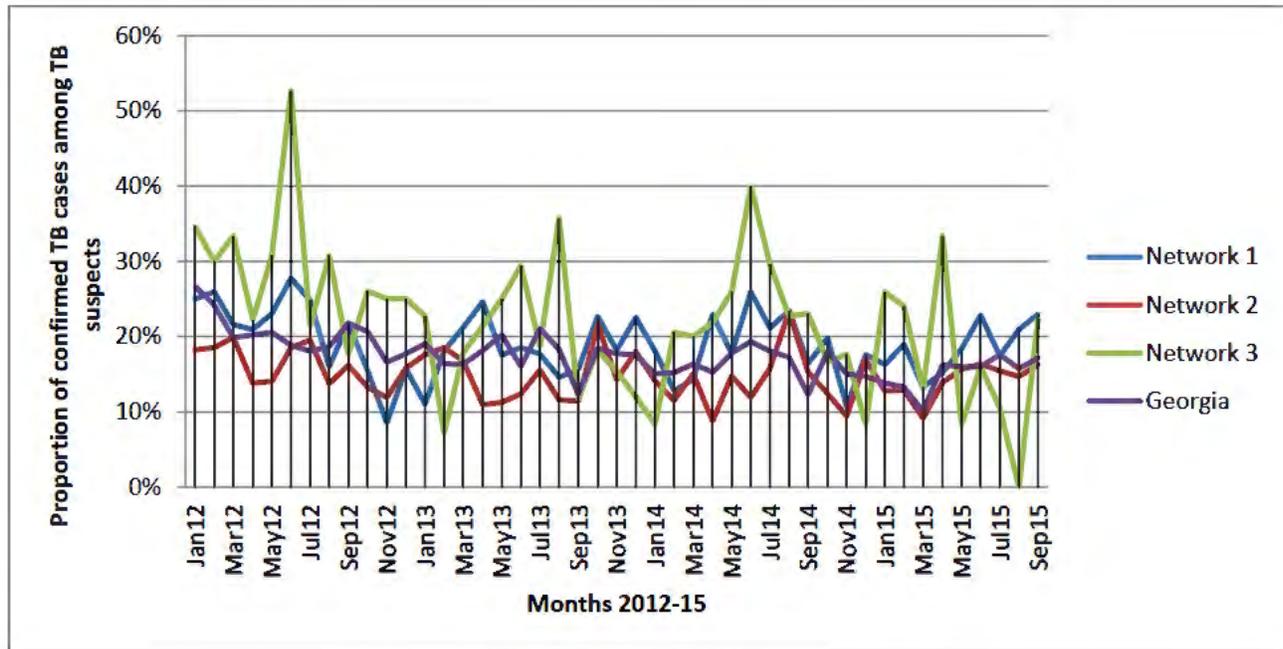
Figure 1: Presumptive and confirmed TB cases per 100 000 population (2012-2015)



The same trend is demonstrated by all three major service provider networks. There is certain fluctuation that is partly explained by the inconsistency in practice and also by the overall small number of cases in some facilities. During the project implementation the difference between the networks reduced substantially. 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. (see Figure 2).



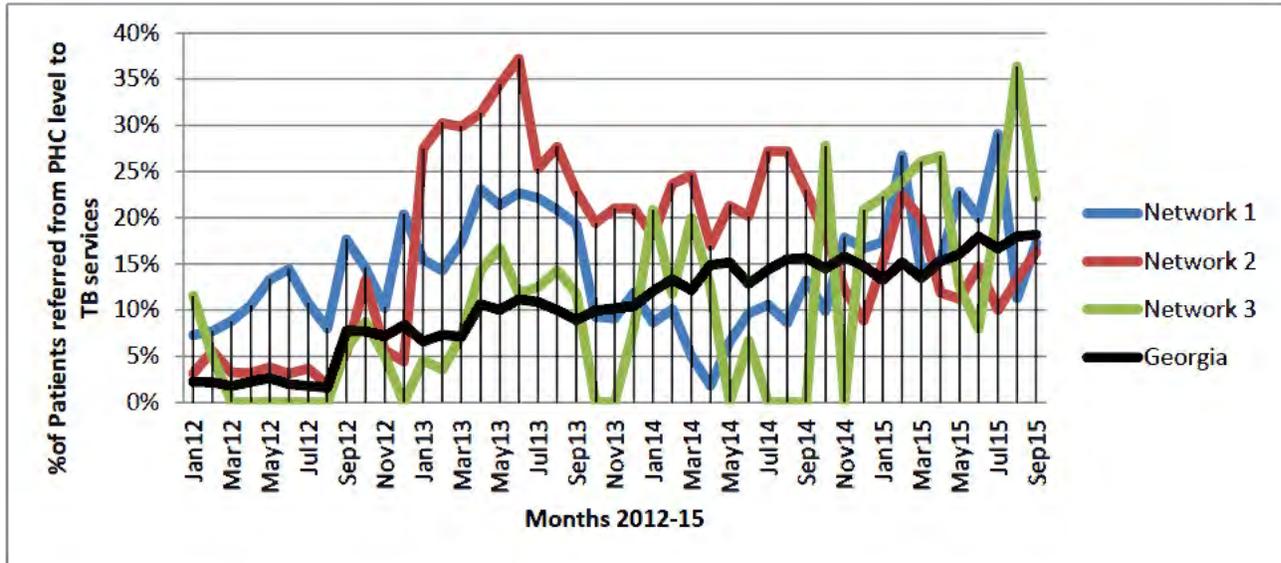
Figure 2. Proportion of confirmed TB cases among presumptive cases in different provider networks



Patient referral from PHC level has also improved in all provider networks. At the beginning of the project implementation nationwide the share of patients referred to TB specialists from PHC services did not exceed 2% per month and by the end of Year 4 reached 18% per month (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 according to the observation of regional coordinators the referral growth was especially significant from PHC facilities where providers were trained in early TB detection and the training was followed by the performance appraisal further promoting knowledge and skills of these providers.

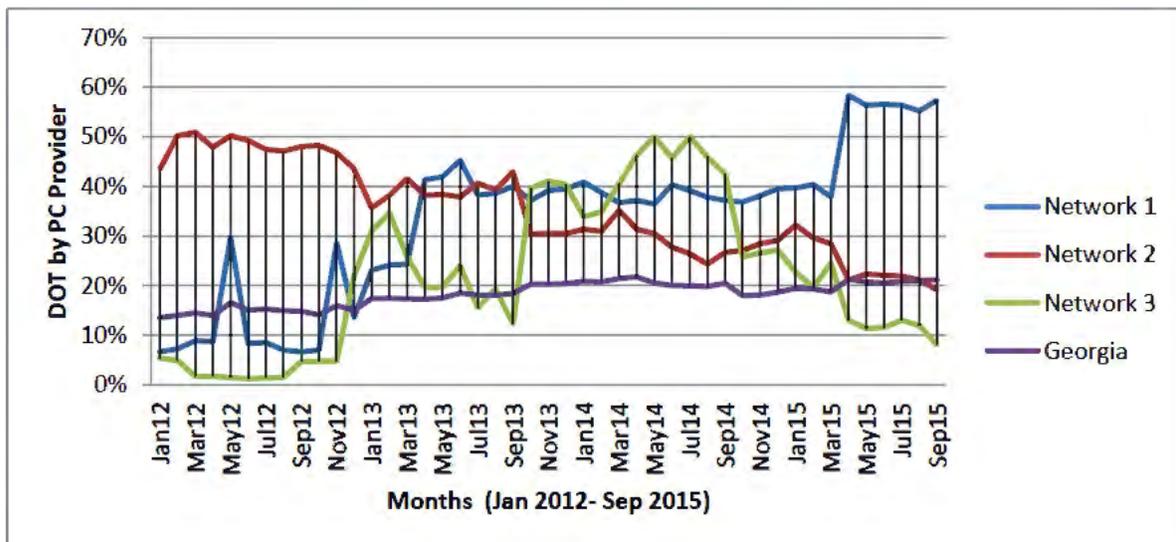


Figure 3: Proportion of presumptive TB patients referred from PHC level to TB services



PHC involvement in TB care also increased at a treatment stage. Overall share of TB patients who receive DOT at PHC level have been steadily increasing from 13% in 2012 to 20% in 2015. 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. Changes in the share of patients supervised at PHC level are partly attributed to the reconfiguration of provider networks implying changes in ownership and contractual agreements (see Figure 4).

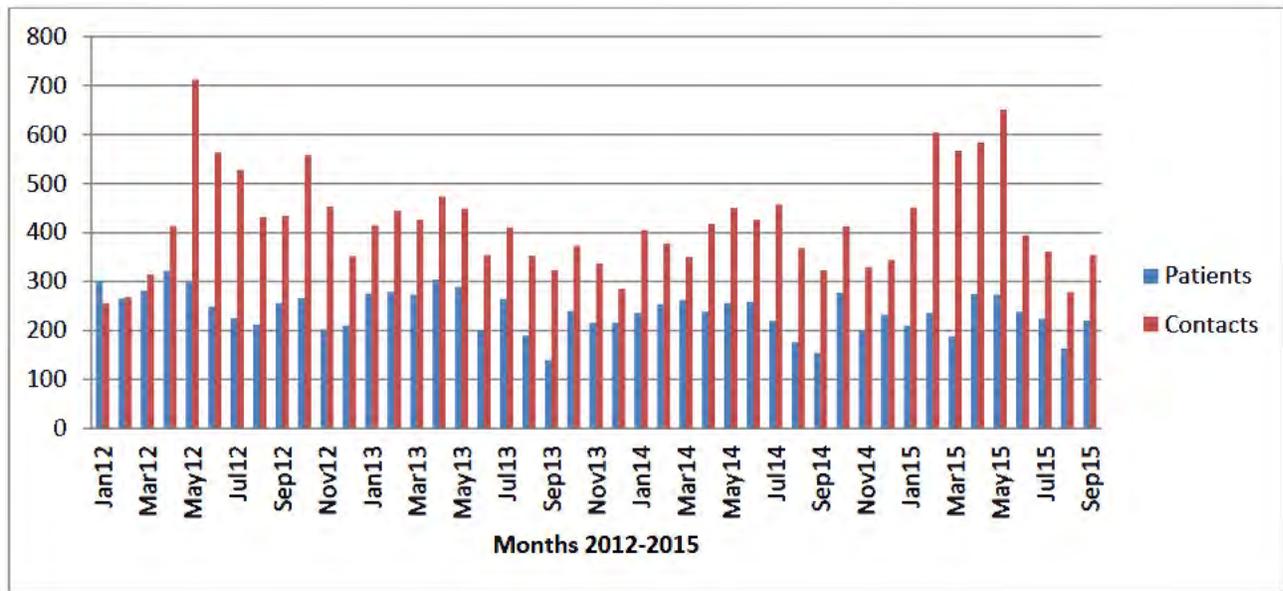
Figure 4: Proportion of patients who receive DOT at PHC level





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 and was kept at that level in 2015. Continuous effort and further refining of the regulatory framework is needed to reach WHO target (see figure 5).

Figure 5: Number of patients with confirmed TB diagnosis and their contacts



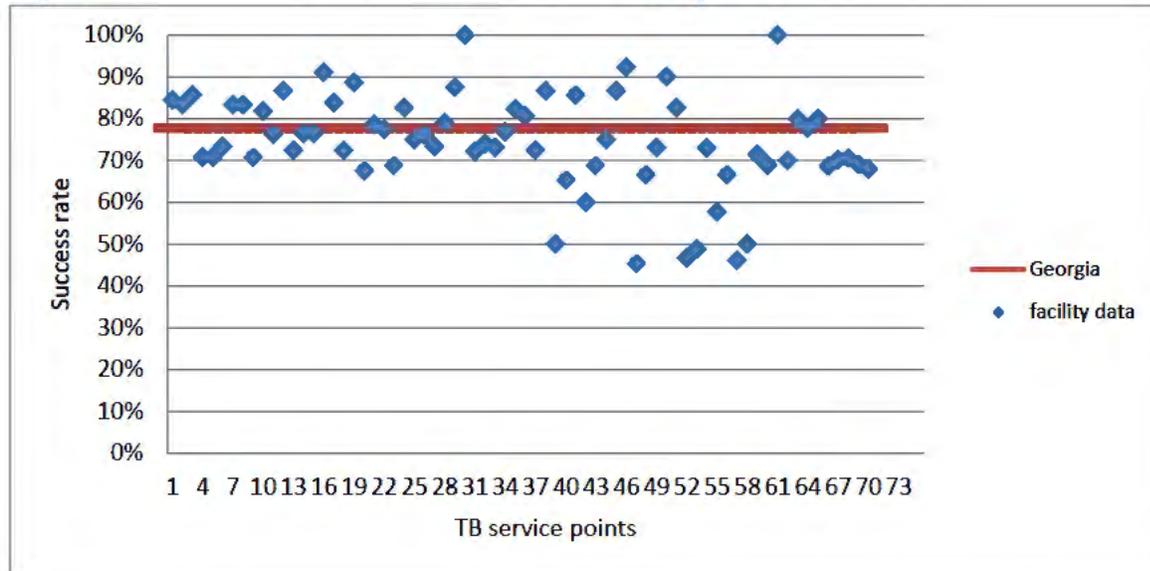
B. Outcome indicators

TPP continued the collection of baseline outcome indicators at the facility level. The latest available cohorts were selected – regular TB patients enrolled in treatment in 2013 and MDR TB patients enrolled in treatment in 2012. Outcome definitions correspond to the new WHO classification (2013 revision) for regular TB patients: cured, completed, failure, lost to follow up, died, not evaluated and for MDR patients: cured, completed, failure, lost to follow up, died, not evaluated.

Overall treatment success rate (cured + completed) in the country showed mild improvement from 76.4% to 77.7%. The success rate in different facilities is mostly close to the national average. Improvements achieved in facilities with the lowest success rate are especially important. In 2011 cohort the lowest rate was 22%, in 2012 increased to 35% and in 2013 cohort no facility has treatment success rate lower than 45% (See Figure 6).

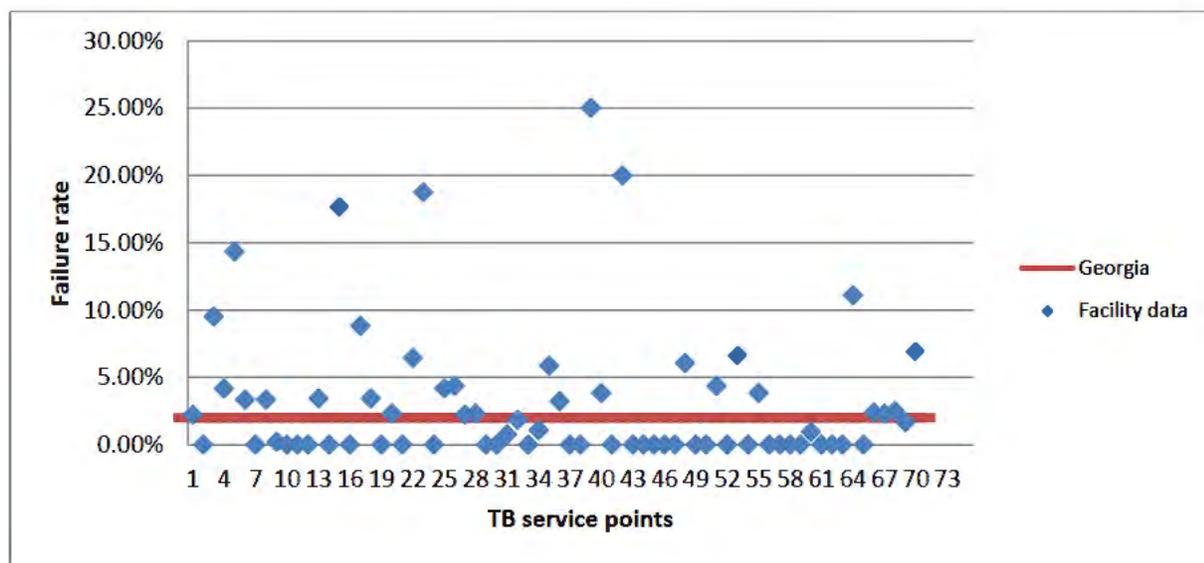


Figure 6: Treatment success rate in 2013 drug sensitive cohort



In difference with the previous year treatment failure rate improved throughout the country from 2.8% to 2%. There is significant increase in the number of facilities with zero treatment failure. In 2013 cohort no patients were registered with treatment failure in 34 facilities while in 2012 cohort the number of facilities reporting no treatment failure was 28. The exceptionally high rates as 20% and 25% are due to overall low number of patients in respective facilities - 5 and 4. Other factors (suboptimal quality of care, access barriers to DoT services etc.) could also contribute to the high treatment failure rate at these facilities. These factors should be explored further and addressed adequately by facility managers and clinical staff (see Figure 7).

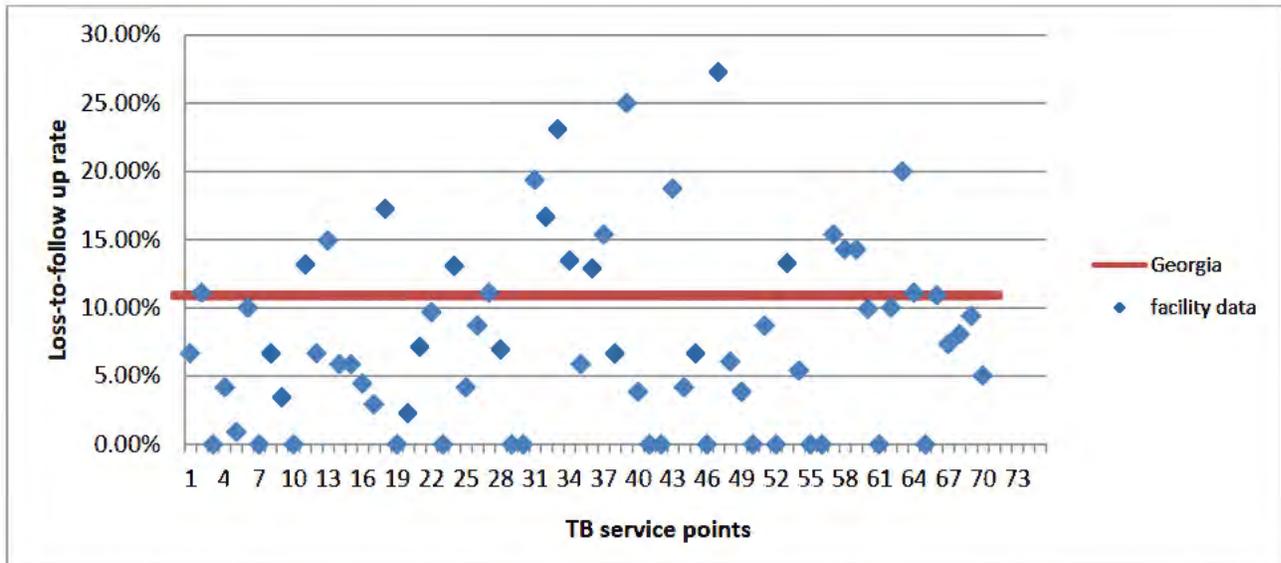
Figure 7: Treatment failure rate in 2013 drug sensitive cohort





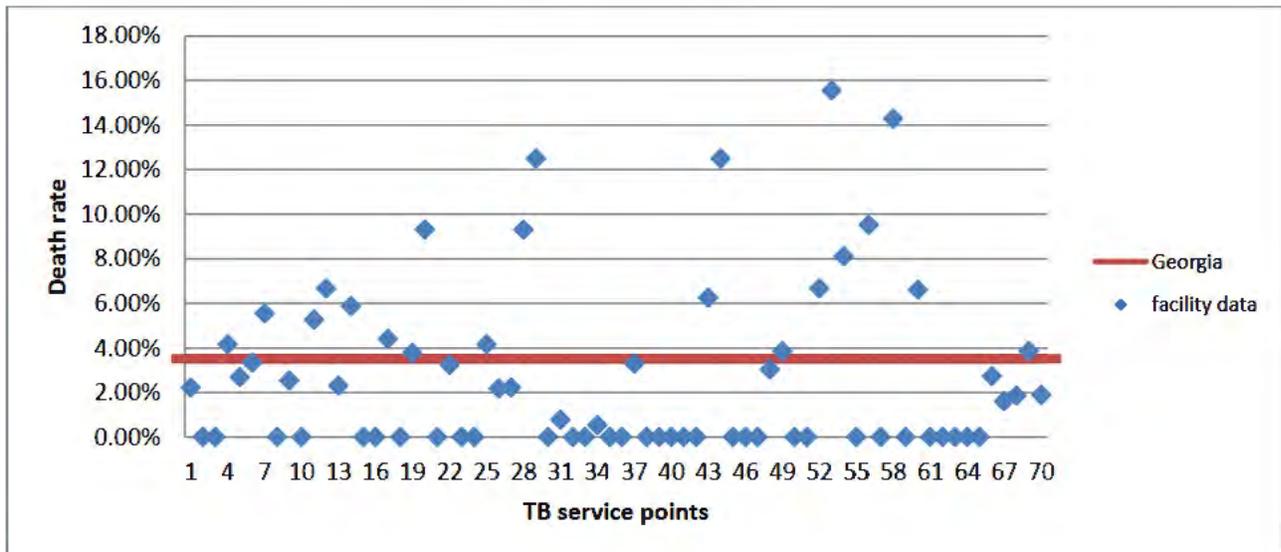
Overall rate of patients' loss to follow up in the country increased to 10.9%. This worsening is manifested in the majority of facilities, however, more than 20% of facilities still have zero loss to follow up rate and the number of facilities with especially high rate of loss to follow up decreased from 3 to 1(see Figure 8). The growth of patients lost to follow up coincides with suspension of financial incentives in late 2013 and early 2014.

Figure 8: Lost to follow up in 2013 drug sensitive cohort



The death rate in the country that was stable before worsened significantly from 2.5% in 2012 cohort to 3.5% in 2013 cohort of sensitive patients. Overall pattern of facility data was also similar to this, although almost half of the facilities have zero deaths among drug sensitive patients (see Figure 9).

Figure 9: Death rate in 2013 drug sensitive cohort





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.

In line with the overall trend in the country treatment success rate slightly decreased in many facilities. The success rate at facility and network level fluctuates around the national average of 46% from 43% to 59% (see Figure 12). The same variability is seen in loss-to-follow up rate it ranges from 14% to 37% (see Figure 13). The lower success rate and higher loss-to-follow up rate is observed in central referral facilities as compared to rural networks. This may be related to the treatment of the most severe cases requiring more aggressive regimen and also supportive environment for patients who are able to undergo lengthy out-patient treatment at local health facilities.

Figure 12: Treatment success rate in 2012 MDR cohort

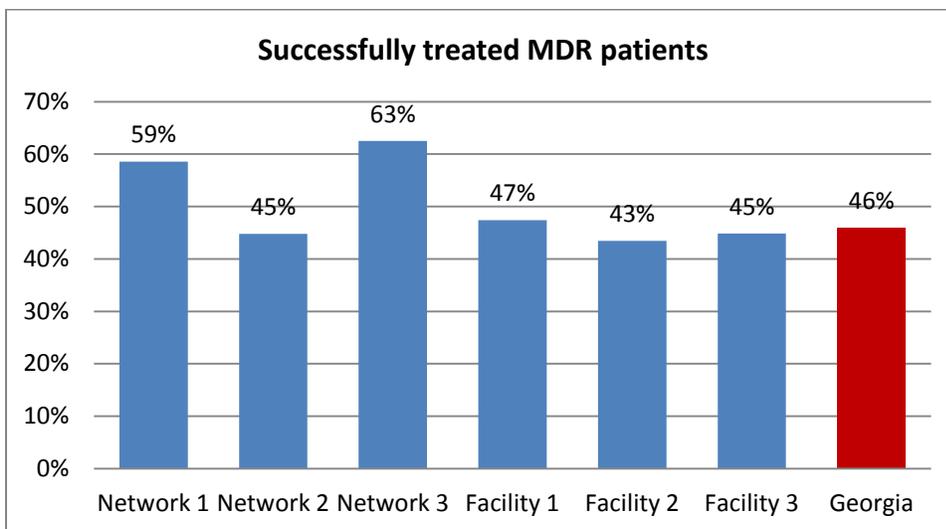
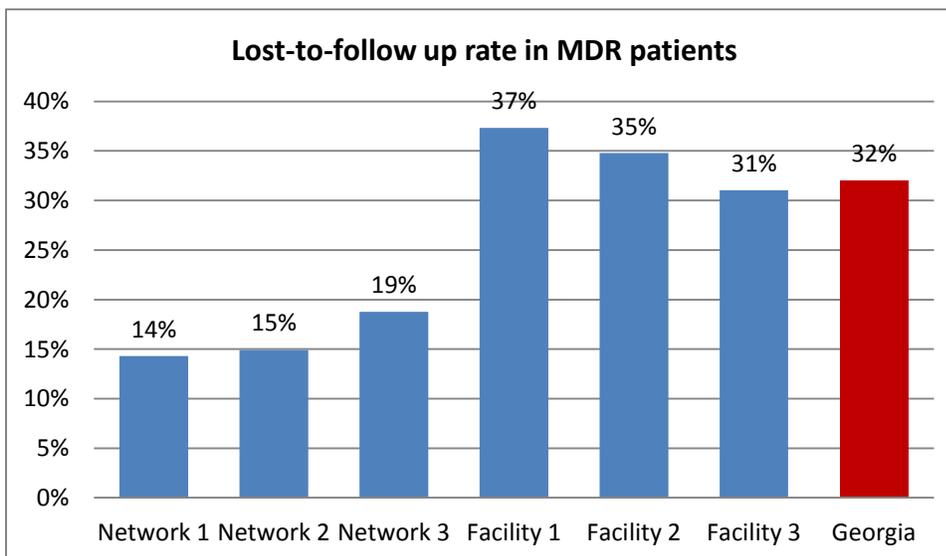


Figure 13: Loss to follow up in 2012 MDR cohort





Comparison of facility level or network level outcome data disaggregated by gender did not reveal any trends specifically related to gender. In line with the natural spread of disease number of male patients prevails in all networks, while like the previous years, in the majority of cases treatment outcomes are similar or better among females. See data in tables below.

Table 1: Outcomes of patients with drug sensitive TB enrolled in treatment in 2012 by gender

| | Network1 | | Network 2 | | Network 3 | |
|---------------------------|------------|----------------|------------|----------------|------------|----------------|
| Success | 293 | 80,49% | 374 | 78,41% | 83 | 79,05% |
| F | 95 | 79,83% | 115 | 84,56% | 24 | 82,76% |
| M | 198 | 80,82% | 259 | 75,95% | 59 | 77,63% |
| Cured | 143 | 39,29% | 168 | 35,22% | 33 | 31,43% |
| F | 48 | 40,34% | 48 | 35,29% | 8 | 27,59% |
| M | 95 | 38,78% | 120 | 35,19% | 25 | 32,89% |
| Completed | 150 | 41,21% | 206 | 43,19% | 50 | 47,62% |
| F | 47 | 39,50% | 67 | 49,26% | 16 | 55,17% |
| M | 103 | 42,04% | 139 | 40,76% | 34 | 44,74% |
| Failure | 8 | 2,20% | 17 | 3,56% | 3 | 2,86% |
| F | 3 | 2,52% | 2 | 1,47% | 0 | 0,00% |
| M | 5 | 2,04% | 15 | 4,40% | 3 | 3,95% |
| Lost to follow up | 41 | 11,26% | 38 | 7,97% | 14 | 13,33% |
| F | 16 | 13,45% | 7 | 5,15% | 4 | 13,79% |
| M | 25 | 10,20% | 31 | 9,09% | 10 | 13,16% |
| Transferred | 7 | 1,92% | 27 | 5,66% | 3 | 2,86% |
| F | 1 | 0,84% | 8 | 5,88% | 1 | 3,45% |
| M | 6 | 2,45% | 19 | 5,57% | 2 | 2,63% |
| Died | 15 | 4,12% | 21 | 4,40% | 2 | 1,90% |
| F | 4 | 3,36% | 4 | 2,94% | 0 | 0,00% |
| M | 11 | 4,49% | 17 | 4,99% | 2 | 2,63% |
| Total with outcome | 364 | 100,00% | 477 | 100,00% | 105 | 100,00% |
| F | 119 | 100,00% | 136 | 100,00% | 29 | 100,00% |
| M | 245 | 100,00% | 341 | 100,00% | 76 | 100,00% |
| Total inrolled | 364 | | 477 | | 105 | |
| F | 119 | | 136 | | 29 | |
| M | 245 | | 341 | | 76 | |



Table 2: Outcomes of MDR TB patients enrolled in treatment in 2012 by gender

| Outcomes | Network 1 | | Network 2 | | Network 3 | |
|---------------------------|-----------|---------|-----------|---------|-----------|---------|
| Successful | 41 | 59% | 30 | 45% | 10 | 63% |
| F | 11 | 64,71% | 5 | 37,50% | 1 | 50,00% |
| M | 30 | 56,60% | 27 | 45,76% | 9 | 64,29% |
| Cured | 11 | 16% | 13 | 19% | 1 | 6% |
| F | 2 | 12% | 3 | 38% | 1 | 50% |
| M | 9 | 17% | 10 | 17% | 0 | 0% |
| Completed | 30 | 43% | 19 | 28% | 9 | 56% |
| F | 9 | 53% | 2 | 25% | 0 | 0% |
| M | 21 | 40% | 17 | 29% | 9 | 64% |
| Failure | 4 | 6% | 11 | 16% | 1 | 6% |
| F | 1 | 6% | 2 | 25% | 0 | 0% |
| M | 3 | 6% | 9 | 15% | 1 | 7% |
| Loss to follow up | 10 | 14,29% | 10 | 15% | 3 | 19% |
| F | 1 | 5,88% | 0 | 0% | 0 | 0% |
| M | 9 | 16,98% | 10 | 17% | 3 | 21% |
| Transferred | 9 | 13% | 9 | 13% | 0 | 0% |
| F | 3 | 18% | 1 | 13% | 0 | 0% |
| M | 6 | 11% | 8 | 14% | 0 | 0% |
| Died | 6 | 9% | 5 | 7% | 2 | 13% |
| F | 1 | 6% | 0 | 0% | 1 | 50% |
| M | 5 | 9% | 5 | 8% | 1 | 7% |
| Total with outcome | 70 | 100,00% | 67 | 100,00% | 16 | 100,00% |
| F | 17 | 100,00% | 8 | 100,00% | 2 | 100,00% |
| M | 53 | 100,00% | 59 | 100,00% | 14 | 100,00% |
| Total enrolled | 70 | | 67 | | 16 | |
| F | 17 | | 8 | | 2 | |
| M | 53 | | 59 | | 14 | |

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 | Balance | Actual Expenditures to Date | | | |
|-----------------------------|------------------------|------------------------|----------------------|-----------------------------|------------------------|------------------------|------------------------|
| | | | | FY12 | FY13 | FY14 | FY15 |
| Salaries and Wages | \$ 1,176,968 | \$ 1,031,437.74 | \$ 145,530.48 | \$ 158,884.15 | \$ 282,534.77 | \$ 299,467.36 | \$ 290,551.46 |
| Consultants | \$ 295,798.87 | \$ 374,897.44 | \$ (79,098.57) | \$ 18,095.81 | \$ 128,462.09 | \$ 105,599.86 | \$ 122,739.68 |
| Fringe Benefits | \$ 53,986.74 | \$ 44,775.42 | \$ 9,211.32 | \$ 6,217.29 | \$ 16,712.09 | \$ 14,741.15 | \$ 7,104.89 |
| Travel and Per Diem | \$ 258,665.34 | \$ 278,681.22 | \$ (20,015.88) | \$ 40,195.53 | \$ 101,829.14 | \$ 82,544.73 | \$ 54,111.82 |
| Equipment | \$ 96,782.61 | \$ 158,043.05 | \$ (61,260.44) | \$ 49,982.92 | \$ - | \$ 35,666.75 | \$ 72,393.38 |
| Training | \$ 527,570.86 | \$ 166,992.65 | \$ 360,578.21 | \$ 28,825.96 | \$ 36,875.14 | \$ 32,193.76 | \$ 69,097.79 |
| Other Direct Costs | \$ 395,999.26 | \$ 385,130.84 | \$ 10,868.42 | \$ 56,968.26 | \$ 95,430.08 | \$ 144,503.10 | \$ 88,229.40 |
| Sub-contracts/agreements | \$ 1,055,444.00 | \$ 1,061,821.07 | \$ (6,377.07) | \$ 69,602.91 | \$ 440,961.80 | \$ 272,432.71 | \$ 278,823.65 |
| Sub-total | \$ 3,861,215.90 | \$ 3,501,779.43 | \$ 359,436.47 | \$ 428,772.83 | \$ 1,102,805.11 | \$ 987,149.43 | \$ 983,052.07 |
| Indirect Costs | \$ 799,004.10 | \$ 682,653.28 | \$ 116,350.82 | \$ 100,641.52 | \$ 199,917.96 | \$ 203,477.73 | \$ 178,616.07 |
| Total Estimated Cost | \$ 4,660,220.00 | \$ 4,184,432.71 | \$ 475,787.29 | \$ 529,414.35 | \$ 1,302,723.06 | \$ 1,190,627.16 | \$ 1,161,668.14 |
| Cost Share @ 5% | \$ 220,061.00 | \$ 207,466.78 | \$ 12,594.22 | \$ 605.00 | \$ 79,856.24 | \$ 59,594.31 | \$ 67,411.24 |



IX. Key Activities for FY2016

In Quarter 1 of FY2016 the TPP team will continue the following activities started in Year 4:

- Performance appraisal of PHC physicians and nurses finalized and dissemination conference organized
- Supporting implementation of FAST strategy in general health care settings
- A small grant program completed
- TB health information module implementation promoted
- Mechanisms and tools for active pharmacovigilance developed to support implementation of new MDR TB treatment schemes
- Draft TB Control Package registered for Parliamentary hearings



X. Appendices

X.I. List of deliverables produced in Year 4

1. List of survey and assessment reports produced

- KAP survey, 2015 (Draft)
- TB-IC assessment in selected hospitals in Georgia

2. List of ACSM materials produced

- 750 T-shirts,
- 200 scarves,
- 500 pins
- 500 leaflets on Barcelona declaration,
- 1 banner,
- 5 newspaper articles,
- 10 talk-shows and info lectures on TV and radio
- 5000 info booklets,
- 16000 leaflets for general public,
- 20000 info flyer for youth,
- 5000 calendars
- 1000 TB management guidelines,
- 500 packages with 8 protocols,
- 200 posters

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 on early detection and management of TB in general practice for family physicians and nurses
- Training modules in early detection and management of TB for pediatricians
- PowerPoint presentations on early detection and management of TB for pediatricians
- Training modules in new TB Definitions and using of updated TB Recording-Reporting System.
- PowerPoint presentations on new TB Definitions and using of updated TB Recording-Reporting System.
- Training modules in detection and management of mental disorders among TB patients
- PowerPoint presentations on detection and management of mental disorders among TB patients
- Training modules in treatment of MDR-TB patients with new and repurposed TB drugs.



- PowerPoint presentations on treatment of MDR-TB patients with new and repurposed TB drugs
- Training modules in monitoring and management of Adverse Events during the MDR-TB treatment.
- PowerPoint presentations on monitoring and management of Adverse Events during the MDR-TB treatment
- Training course in rapid diagnosis of TB by using of the new, molecular Xpert MTB/RIF test for lab technicians
- Training course in early detection and management of TB and diabetes for frontline professionals
- PowerPoint presentations on early detection and management of TB and diabetes for frontline professionals
- TB IC internal procedures and protocols
- TB-IC monitoring and evaluation plan
- FAST protocol for general medical settings
- 100 job aids on TB and Diabetes
- 35 TB and Diabetes Screening Protocol
- 1000 TB case brochures
- 1000 TB Management Guidelines
- 500 Protocols on 8 different topic in TB Management
- 500 CDs with video reel



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

| Activities | Tanadgoma ² | HRU ¹ | HRU ¹ | GHPEF ¹ | GPPA ¹ | CBSC ¹ | Total |
|--|--|------------------|------------------|--------------------|-------------------|-----------------------|--------------|
| Training | | | | | | | |
| Non-TB Specialists | | | 93 | | 142 | | 235 |
| Journalists | | | | 20 | | | 20 |
| Peer educators | | | | | | 19 | 19 |
| Public Health Staff | | 149 | | | | | 149 |
| Awareness raising | | | | | | | |
| Schoolchildren | | | | 157 schools | | 9 theological schools | 166 |
| Church community/parish | | | | | | 6 visits | 6 |
| Students | | | | 11 meetings | | 6 meetings | 13 |
| High risk groups | 600 (IDUs, SW and MSM) 126 Former prisoners 168 Family members of former prisoners | | | | | | 600 |
| Events | | | | 52 | | | 52 |
| Printed Information materials | | | | | | | |
| Info leaflets for general population | 1000 | | | 10000 | | 5000 | 16000 |
| TB and treatment adherence for prisoners | 2000 | | | | | | 2000 |
| Info flyer for youth | | | | 20000 | | | 20000 |
| Table calendar | | | | 5000 | | | 51000 |
| Media package for journalists | | | | 60 | | | 60 |
| Newspaper article | | | | 6 | | | 6 |
| T shirts | | | | 500 | | | 500 |
| Talk shows | | | | 5 | | 13 | 18 |
| brochures with patients' stories | 1000 | | | | | | 1000 |
| TB quality improvement tools | | | | | | | |



| | | | | | | | |
|-----------------------------------|--|--|---|--|---|--|---|
| Job aids | | | | | 1 | | 1 |
| TB and Diabetes protocol | | | | | 1 | | 1 |
| FAST protocol | | | 1 | | | | 1 |
| IC monitoring and evaluation plan | | | 1 | | | | 1 |

1-Completed; 2-Ongoing

X.III Pictures of Events