



Technical Brief | Georgia TB Project

December 2013

University Research Co. LLC (URC) is a global company working to improve quality of health services, social services, and health education. URC provides technical assistance geared towards strengthening health systems and improving service quality, particularly in maternal and child health (MCH), family planning, HIV/AIDS, tuberculosis (TB), and malaria. Headquartered in Bethesda, Maryland, USA, URC, along with their nonprofit affiliate the Center for Human Service (CHS), manages projects in over 30 countries including the United States.

URC's work is guided by several principles:

- *Focus on the client:* All our work focuses on providing the client with the results they are seeking. We clarify the goals and needs of our partner organizations and implement a strategy customized to add value to their work.
- *Measurable results:* We provide measurable results thanks to a rigorous monitoring and evaluation framework and continuous tracking of key indicators.
- *Strengthened processes:* We develop sustainable processes that ensure ongoing improvement in producing results.

In 2011, URC was awarded a four-year cooperative agreement by the United States Agency for International Development (USAID) entitled the Tuberculosis Prevention Project. This project seeks to support Georgia in its efforts to reduce the overall number of TB cases and, specifically, the burden of multi-drug resistant TB (MDR TB), thereby helping the country to achieve its Millennium Development Goals.

The TB Prevention Project (TPP) works with the Ministry of Labor, Health and Social Affairs (MoLHSA) to improve clinical services and strengthen the country's capacity to address some of the current critical challenges in the treatment of all forms of TB, including: MDR-TB; infection control; reducing the number of patients who fail to complete treatment and be cured; serving hard-to-reach populations; and ensuring an appropriate national TB policy and program response in the evolving Georgian health care system. Focus is placed on:

- Improving early detection of suspected tuberculosis cases;
- Strengthening the quality of full implementation of DOTS and DOTS plus;
- Providing limited assistance to recently established private treatment sites nationwide in updating physical infrastructure to meet TB standards and to improve infection control.

Background on TB in Georgia

Until the 1990s, the Republic of Georgia experienced a steady decrease in morbidity, incidence, and mortality from TB. Since the break-up of the Soviet Union in 1991, however, TB has become an increasingly dire public health concern. In 1995, Georgia adopted the World Health Organization's Directly Observed Therapy, Short Course (DOTS) strategy for combating TB, and in the early 2000s the National Centre for Tuberculosis and Lung Diseases (NCTBLD) also adopted measures for improved surveillance of both TB and MDR TB. The WHO has identified Georgia as one of a handful of high MDR TB burden countries with appropriate surveillance systems in place to adequately monitor drug resistance.

Improved surveillance and reporting systems have made it easier to monitor MDR TB in Georgia, but stopping the spread of the disease requires more than just surveillance. Eleven percent of new TB cases and 32% of patients seeking re-treatment in 2011 were diagnosed as MDR TB cases. This high rate of MDR TB is significant enough to place Georgia on the WHO list of 27 countries with the highest MDR TB burdens in the world.

It is within this context that URC and its local partners are implementing the multi-faceted Georgia Tuberculosis Prevention Project (TPP). In the first year of implementation, TPP focused on the six regions in Georgia with the highest TB burdens, and has since expanded to national coverage. The TPP team has been working with a wide range of partners throughout the life of the project, including: the Country Coordinating Mechanism for HIV, TB, and Malaria; the Parliamentary Committee for Health and Social Issues; MoLHSA; the Ministry of Corrections and Legal Advice (MCLA); relevant professional associations and academic institutions, non-governmental organizations, TB specialized clinics, and primary care facilities countrywide.



Improving Early Detection of Suspected TB

National TB and Pediatric TB Strategies

Fundamental reforms to the national health care system have drastically transformed the landscape for TB diagnosis, treatment, and surveillance in Georgia. An emphasis on privatization of both hospitals and primary health care centers combined with a vertical system and limited utilization of TB services means that it is critical to have a cohesive national strategy in place to ensure active identification and referral of all potential TB patients in all health care settings. A national strategy becomes even more crucial as most donor funding is scheduled to end in 2015, meaning there is a limited timeline to complete training and awareness campaigns.

To address this policy gap, TPP led a task force of national and international stakeholders to develop the National TB Strategy and Action Plan 2013-2015, which was reviewed and officially endorsed by the Country Coordination Mechanism (CCM) for TB, HIV/AIDS and Malaria – the high level body that oversees implementation of the country’s TB control program – in March 2013. The document will guide the complex transition from a vertical towards an integrated TB service delivery model, and the new involvement of multiple parties responsible for various components of the National TB response. This strategy will serve as a road map for national and international stakeholders in planning and implementing specific activities aimed at reducing the TB burden in the context of Georgia’s health reform.

Family Physician and Nurse Training with Georgia Family Medicine Association

Family physicians, as frontline providers, have a crucial role to play in identifying and accurately referring potential TB patients, as well as managing and supporting long-term



The TPP Chief of Party leads a training session for family physicians in Zugdidi in 2012

care. However, as the previous health care delivery system in Georgia minimized the role of family doctors in favor of TB specialists, the potential for FPs to contribute to TB control has long been overlooked.

Within the context of a focus on strengthening primary care and family medicine, TPP has assisted in helping FPs get more involved in identifying and managing TB patients. To strengthen the capacity of primary care providers in early detection and management of potential TB cases, URC works with the Georgia Family Medicine Association (GFMA) to provide training to family physicians and general practice nurses. The project also collaborates closely with the Georgian TB Physicians and Pulmonologists Association (GPPA) to strengthen linkages between FPs and TB specialists.

TPP's support has allowed GFMA to develop tailored trainings for family physicians and nurses, teaching them how to best identify potential TB patients, refer them for diagnosis, and manage treatment via directly observed therapy (DOT) within their family medicine practice. With project assistance, training materials have been designed, trainings have rolled out throughout the country, and a system for routine performance appraisals has been developed. Based on the success of this work, the trainings are being adapted and further rolled out to family physicians and nurses practicing in primary care facilities in prisons, in collaboration with the Ministry of Correction and Legal Advice.

Five hundred and nine family physicians and 519 general practice nurses employed in the Adjara, Samegrelo-Zemo Svaneti, Imereti and Mtskheta-Mtianeti regions were trained in TB prevention, early detection, referral, and long-term support. The training program will expand to other regions in Georgia with high TB prevalence rates in the final two years of the project.

Three I's Training

TPP aims to improve the knowledge of both civil sector and penitentiary system TB and HIV physicians on detection, prevention, and management of TB/HIV co-infection. To achieve this goal, TPP prepared a training program titled, "Collaborative TB/HIV Activities–Countrywide Implementation of "3Is" Strategy" to target HIV and TB physicians in these sectors. The "3Is" stand for: intensified TB case finding (ICF), followed by a high-quality anti-tuberculosis treatment, isoniazid preventive therapy (IPT), and lastly infection control (IC) for TB. A total of 100 physicians from Tbilisi, Kutaisi, Zugdidi, and Batumi were trained in the 3Is strategy in 2013, which emphasized the most updated approaches and recommendations from WHO. Post-training assessments showed significant improvements in trainee's knowledge in all regions. TPP will monitor the implementation of "3I" strategy and provide adequate response if gaps are identified.

Advocacy, Communication, and Social Mobilization

KAP Survey

In 2012, TPP with assistance from the Health Research Union (formerly Georgian Maternal and Child Care Union) (MCCU), conducted a Knowledge, Attitudes, and Practice (KAP) survey to gain information about how health providers, high risk groups, and the general public view TB and TB risk in Georgia.

A total of 1,599 individuals were surveyed, including people recently released from prison, drug and alcohol users, post TB patients (both cured and default), contacts of active TB cases, TB patients currently on treatment, patients with



A street walk conducted by students in honor of World TB Day 2013 to bring awareness to the public about the importance of TB screening and treatment.

HIV/AIDS, patients with diabetes mellitus, patients on dialysis (as an immune-compromised group), health care providers and the general public.

The findings showed significant gaps among both high and low-risk groups regarding the spread and treatment of TB, as well as the availability of free diagnosis and treatment and where to go to receive such services. Many health care workers were also unclear on which populations to consider at-risk for TB contact, meaning many people who should have been counseled and tested were not receiving these services.

The major recommendations from the KAP survey highlighted the need to target all groups with informational campaigns to raise awareness that diagnosis and treatment are free services in Georgia. Additionally, the survey illustrated a need to increase training for health care workers on counseling patients both to receive diagnosis and to understand the treatment, as adequate diagnosis and treatment adherence are essential for stopping the spread of MDR TB.

Work with Journalists

The TPP subgrantee the Georgia Health Promotion and Education Foundation (GHPEF) designed the training course for journalists to improve communication of TB messages and reduce TB related stigma. Training sessions were conducted in all regions of Georgia and covered 30 journalists from local media sources. The workshops for media representatives will continue to highlight achievements of the National TB Program and spread messages and updated information on availability of TB treatment and prevention services to the general public.

World TB Day

In 2012 and 2013, the TPP, in coordination with MoLHSA, hosted several activities to mark World TB Day with messages geared toward all stakeholders, including high level policy makers, health care workers, patients, and society at large. These stakeholders discussed future goals and initiatives to raise awareness about TB. The participants agreed that collaborative effort is the critical success factor in the fight against TB. The high level meeting was complemented by street walks organized by students, pictured at right, from the Tbilisi State Medical University and by community volunteers in various regions of Georgia. MCLA joined the World TB Day celebration in 2013 by organizing a photo exhibition at Ksani Koloni, displaying photos of famous actors and sportsmen holding TB related messages. The event was held to help decrease the stigma of TB and to encourage people to seek early detection for TB symptoms. Overall, the Georgia TPP collaboration and coordination with various stakeholders generated popular and positive reactions amongst the public to stop TB in our lifetime, culminating in a successful World TB Day.

PSAs

As part of the ACSM strategy, TPP invited local organizations to submit proposals to produce several public service announcements (PSAs) aimed at reducing TB related stigma in Georgia. The main objective was to increase awareness and improve people's perceptions of TB, resulting in a greater demand for TB services by promoting: knowledge of key TB symptoms, the importance of early detection, and access to free TB diagnosis and treatment. To date, there are five PSAs that address these areas and encourage improving interpersonal communication and counseling between people with TB and their families.

Strengthening the Quality of DOTS Implementation

Development of guidelines

A close partner to the NCDC and NCTBLD, the TPP has worked to address critical gaps in TB clinical and programmatic policies and to update and revise existing diagnosis and treatment guidelines. The TB management guideline and nine protocols were elaborated with TPP support and endorsed by the MoLHSA in June 2013.

Pediatric Guidelines

Despite previous misperceptions that childhood TB was not a priority for TB control, there is a growing consensus that TB is an important preventable cause of disease and death among children in TB endemic areas. Children living

PSAs created by TPP

1. Georgian Celebrities Against TB: <https://www.youtube.com/watch?v=i2S4PoJw6M&feature=c4-overview&playnext=1&list=TLRRvmqDETFME>
2. TB Awareness: <https://www.youtube.com/watch?v=Yo7zD8SRLaE>
3. College TB: http://tpp.ge/Stop_TB/v23#.UIZuTBNfrwo
4. Anti-Stigma PSA 1: http://tpp.ge/Stop_TB/v20#.UfJEv6xcOzo
5. Anti-Stigma PSA 2: <http://tpp.ge//v22#.UfJEi6xcOzo>



A screen shot of the TPP-created TB Awareness PSA, aired in 2013

amongst people with infectious TB are entirely susceptible to the disease. TB illness in children can be difficult to diagnose and is often missed because the symptoms may not be specific to TB. Unfortunately, infants and young children are at a greater risk of severe disseminated disease, such as TB meningitis or miliary TB, which are often fatal.

In Georgia in 2011, 206 children under the age of 15 were reported to have TB, which comprised 4% of the country's total TB cases. The TB case notification rate for this age group has fallen markedly from 88.8 per 100,000 in 1998 to 27.1 per 100,000 in 2011 (NCTBLD). Similarly the number of cases of TB meningitis has fallen from 28 in year 2003, to 2 to 3 per year from 2009-2011. This form of TB is particularly devastating as it has a high risk of death or chronic neurologic disability. No national policies and guidelines existed in the country. To address this need, TPP, in collaboration with GPPA, developed an integrated

pediatric TB guideline, based on the best available international evidence.

GNA Developing Nursing TB Care Protocols and Defining Competencies of DOT Nurses

In order to improve standardized systems of care for nurse-provided TB services, since 2012, TPP has worked with the Georgian Nurses Association (GNA) to review and revise the responsibilities, required qualifications, and training requirements for nurses providing TB services. Based on assessments, the project team and the GNA developed revised training plans to close critical gaps in knowledge and necessary skills to allow nurses to successfully perform the functions of TB service nurse. The project team also completed elaboration of 10 protocols for nurses in TB care, covering management of TB and TB/HIV co-infection, individual and environmental infection control, care and treatment for TB patients, and medical records and reporting.

Work with Prison Services

Because of the significant number of prisoners who have been diagnosed with TB and the challenges associated with controlling the spread of TB in a prison setting, the USAID mission established a one-year Memorandum of Understanding between the MCLA of Georgia in February 2013. This MOU allows TPP to work on behalf of USAID directly with MCLA to limit the spread of TB and reduce the number of cases both within the prison system and in the general population.

TPP is supporting MCLA to improve TB management in detention facilities, build linkages between civilian and penitentiary sector TB specialists through conferences and journal club meetings, and develop training modules and guidelines for improving the quality of TB care, as well as job aids and other informational materials to control the spread of TB both within the prisons and as prisoners are released from detention.

Quality Improvement Collaboratives

Improving quality of TB services has been a top priority for the TPP team since the project inception. A quality improvement collaborative approach has been used to build up quality improvement systems in general health facilities providing TB care. In a quality improvement collaborative, a large number of health facilities are brought together at least quarterly at the regional/local level to solve TB problems, review progress, and identify other strategies to improve case detection and cure rates. The package of interventions – covering providers, patients, and the delivery system – are implemented for a period of time. A snow-ball effect is created as a result of knowledge-sharing

among these facilities, which allows for the expansion of improvements to other clinical and support areas, or other districts requesting to participate in the program.

The TPP team provides external support to guide health facilities to adopt models for improvement, based on a clear vision for ideal TB care and specific changes to improve TB management. The model for improvement incorporates several key elements: specific and measurable aims; measures of improvement that are tracked over time; key changes that will result in the desired improvement; and series of parallel testing plan-do-study-act (PDSA) cycles.

Capacity Building of Local Partners

Although direct technical assistance to the MOLHSA and NCDC are essential to the success of the project, it is equally important to build the capacity of local partners to maintain and extend the gains the project makes over the life of the program. To achieve this sustainability, TPP has developed a small grants program in Georgia that aims to build both technical and management capacities of local organizations.

In the first two years of the project, TPP awarded grants to six Georgian organizations whose objective is to reduce the prevalence of MDR-TB in Georgia. These organizations include: the Georgian Nurses Association, the Partnership for Social Initiatives, the Welfare Foundation, the Center for Bioethical Studies and Culture, the Georgian Health Promotion and Education Foundation, and GPPA.

TPP works with these partners to implement ACSM activities; conduct training for health care workers, peer educators, public school teachers, and journalists; develop quality improvement tools; and conduct operational research for determining barriers and facilitators to TB integration into general health services. Additionally, the TPP team conducts quarterly financial and administrative reviews of each organization to ensure that objectives are being met efficiently and effectively, and that all Georgian and US government regulations are being complied with. With this support, these organizations will be better positioned in the future to implement larger programs and work with a variety of other donors to continue addressing MDR-TB in Georgia.

Operational Research

The TPP team has been assisting the MOLHSA/NTP to implement the operational research (OR) plan integrated into the TB Strategic Plan for 2013-2015. In 2012 and 2013, the TPP team, in collaboration with local entities, conducted an operational assessment of barriers and facilitators to integration of TB services into general health facilities and organized a survey to identify risks

associated with the high default rate among M/XDR TB patients. The key areas for future OR include: analyzing the cost of expanding patient support for ambulatory treatment and the potential benefits (which may include less loss to follow up if patients are treated closer to home and less nosocomial transmission), and an in-depth market and pharmaceutical sector assessment to inform the TB procurement and supply chain management strategy after 2015 when Global Fund (GF) support ends. Other areas to be covered may include an assessment of the availability of public and private capacity and options for supplying quality-assured TB medicines with government funding or funding other than GF and the legal and regulatory bases, medicine registration, selection, and procurement regulations and practices that would apply.

Improve Infection Control

Ventilation

As part of TPP's objective to improve infection control in private health care facilities to help limit the spread of TB, the project partnered with two local entities, Imercomfort LLC and Klimatsheni LTD, to install exhaust equipment in 30 facilities throughout Georgia. A preliminary environmental review was conducted by a qualified engineer for each facility, which determined the work to be done in each clinic. Work to update the facilities began in March 2013 and was completed by July. The TPP team will continue ongoing supervision and training of facility staff to ensure that they are able to provide adequate operational support and maintenance of installed equipment.

Training on IC, Integration of TB Services within PHC Sites

As a part of the TB guideline development process, the recommendations on IC measures were elaborated and integrated into the new National TB management guideline. The TPP will support implementation of recommended measures and will assist health service delivery networks to elaborate local IC protocols and detailed plans for supervision and support of IC activities in different types of facilities.

TPP regional coordinators will continue ongoing on-site mentoring for TB and primary care clinic management and medical staff on simple but effective IC measures such as cough hygiene education, prioritization of coughing patients, segregation of coughing patients in the waiting area, and open windows policy. TPP regional coordinators will provide monitoring on personal protective measures, such as proper wearing of respirators among HCWs involved in TB care, including nurses.

Next Steps

In the final two years of the project, TPP will continue providing training for TB and non-TB specialists, as well as laboratory training in GeneXpert implementation to improve diagnosis, care, and treatment for TB and MDR-TB patients. Additionally, NCDC epidemiologists will be trained on contact tracing to help limit the spread of TB in Georgia. Trainings will continue to evolve based on lessons learned from prior training sessions. Additionally, TPP will support implementation of the TB electronic Health Management Information System by providing training and equipment for providers. Infection control will be addressed through workshops and information materials to be developed in the coming months. TPP will also continue its ACSM efforts to educate providers and the public on testing and treatment for TB to improve health-seeking behaviors among Georgians.

Key Achievements

- 1032 practitioners in four regions and the penitentiary system were trained in “Early Detection and Management of TB at PHC level”
- 100 TB and HIV physicians trained in detection, prevention, and management of TB/HIV co-infection.
- 100 TB physicians trained in usage of new algorithms for rapid diagnosis of TB by Xpert MTB/RIF System.
- 153 epidemiologists of NCDC trained in tracing of TB contacts, ex-prisoners and patients lost to follow up
- Computer-based training module on TB management was developed, posted on web-site, and recorded on 2000 CDs.
- 20 adult and 5 pediatric clinical case studies were developed, posted on the website, printed and distributed to TB specialists and PHC providers
- Performance appraisals of 325 family medicine teams in TB service delivery was conducted.
- National TB Strategy and action plan for 2013-2015 was elaborated and endorsed by CCM
- TB Management Guideline and protocols were developed and endorsed by MoLHSA
- Childhood TB guideline developed
- Ventilation equipment installed at 30 general hospitals.

Project Materials

TPP has developed the following materials which are available electronically on the project website at www.tpp.ge

- National TB Strategy and Action Plan for 2013-2015 (Endorsed by the Country Coordinating Mechanism for HIV, TB and Malaria in March 2013)
- TB KAP survey report, Health Research Union, 2013
- Survey of risk factors associated with default from treatment and long term outcomes of defaults in patients with multidrug-resistant tuberculosis, Survey Report, Institute for Social Studies and Analysis, 2013
- National TB Management Guideline and 9 Protocols (Endorsed by MoLHSA in June 2013)
- Pediatric TB Management Guideline
- TB Care Protocols for Nurses
- TB clinical case discussions (quarterly publication for primary care physicians and TB specialists)
- Online TB course available at http://tpp.ge/Online_learning/m6#.UIZ37kQcDH8
- Training modules and materials for (http://tpp.ge/Training_materials/m49#.UIZ4FUQcDH8)
 - Family Physicians and Nurses
 - Journalists
 - TB Patients
 - Social Workers within Georgia Harm Reduction Network
 - NCDC Epidemiologists
 - TB specialists on Implementation of Gene-Xpert diagnostics
 - TB specialists on 3”I” strategy
- ACSM materials: More than 20000 copies of informational materials, including job-aids, brochures for PHC providers, brochures for patients, postcards, leaflets, calendars on pediatric TB and TB in prisons, posters, stickers printed and distributed



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