

Project Title: Improve Tuberculosis-related Infection Control Practices at Hospital Settings

Contract Number: FY2014-G05-7003

Subcontractor: Health Research Union

Submission date: 10/10/2014

Report Submitted by: George Kamkamidze (Project Manager)

1) Introduction and Background

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

Objectives of the project are the following:

- Strengthen capacity of hospital managers and epidemiologists in general aspects of hospital infection control and TB related infection control requirements;
- Build up technical expertise within healthcare facilities to:
 - Implement managerial, administrative and environmental control mechanisms;
 - Identify TB suspects and ensure appropriate diagnostics and referrals;
- Introduce Practical Approach to Lung Health (PAL) model and its implementation strategies;
- Develop facility level action plans, IC committee ToRs and budget appropriate activities;
- Use collaborative approach to IC, enhance providers' capabilities for risk assessment and modification of interventions to ensure continuous improvement;
- Address stigma and other key barriers for seeking care
- Enhance monitoring and evaluation systems for TB IC activities and outcomes.

2) Summary of its Activity Objective Achievements

The activities carried out within the frames of this project improved the awareness and technical skills of hospital managers and epidemiologists (or other personnel responsible for IC control) in appropriate TB-IC planning, implementation and monitoring at healthcare settings. In total 165 individuals were trained on TB-IC from the selected healthcare facilities from different regions of Georgia, including hospital managers and persons responsible for IC in a facility (epidemiologists, nurses etc.) Evidence based guiding materials and tools for TB-IC at healthcare facilities including manual on TB infection control, model terms of reference for hospital infection control committees, sample of facility action plan for TB infection control and TB patient detection and

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

Summary of its Activity Implementation process

Specific activities accomplished under the project in the period of April 1 – September 30, 2014 include:

Preliminary start-up activities

At the beginning project detailed work plan was developed, preliminary negotiations were conducted with some of the key beneficiaries and complete list of training and implementation sites were identified. Facilities were selected based on their exposure to TB patients (or potential TB patients), as well as the existence of medium to high-risk service infrastructure. The priority was given to general hospitals with TB services, although tertiary-level facilities that administer complex medical treatment to TB patients were also involved in the project. Preliminary literature search was undertaken and key resources/guidelines/articles were identified, reviewed and used for the elaboration of training materials. Project was staffed fully to achieve anticipated results and implement activities.

Development of TB infection control training and information materials

The following training and information materials were developed, submitted and approved by USAID/GTPP:

- Curriculum for TB-IC training
- Model terms of reference for hospital Infection Control Committees
- Adopted sample of Facility Action Plan for TB infection control
- Patient detection and referral pathways adoptable to local circumstances
- Manual on TB infection control

Training and information materials were printed and disseminated among training participants.

Development of Facility-level TB-IC costing tool

TB-IC costing tool was developed based on the desk review and local data collection.

Desk review of available costing tools was conducted and a draft costing tool was developed. Costing tool is based upon the TB-IC action plan for facilities, developed as part of the project.

Initially, activities in the Action Plan that can/will evoke costs to the implementing party were identified and secondly, relevant cost categories were defined.

The tool takes a perspective of a payer, in this case a facility manager/owner. This well fits the objectives of the projects. Furthermore, National TB control costing was already conducted to inform national authorities, while societal perspective could not be employed due to lack of cost data.

Facility level data collection will take place jointly with the training sessions, while external data is being collected to be incorporated with the costing tool.

Upon completion of draft cost categories, facility level data was collected to identify most relevant cost items and also define their relevance to local setting. The most challenging cost component remains to be infrastructure, as standardization of baseline (e.g. existing capital assets); as well standardization of cost occurring in future had been a significant challenge. Further, prices for relevant supplies and services were the most disbursed.

Process-related costs had been identified as the most reflecting local circumstances.

Cost data was collected from external sources and compared with local prices of selected facilities. As no large discrepancies were observed, average cost date for supplies could be used.

As during the development state, it was understood that facility mangers have significant time constraint to identify local information about prices of supplies and others, the tool provides them with information about suggested prices for most of the supplies. Though, facility manager can also use their local data.

Calculation of human resources costs requires local data input and no suggested amounts are provided, as the large discrepancies in remuneration practices had been observed.

Following to the finalization of cost categories for the tool, actual design and instruction package was piloted by the selected facilities and redesigned to make it easy to use and instruction – simple to understand. Upon this redesign, the tool is considered to be complete and was disseminated to all training participant for local implementation.

Training in TB-IC of hospital managers and epidemiologists

Overall, seven 8-hour training sessions on TB-IC were conducted. Totally 165 hospital managers and epidemiologists (or other personnel responsible for infection control) from the selected healthcare facilities were trained. Detailed information about the trainings dates, location, number of attendees, and names of participant healthcare facilities are provided in the table below.

The trainings on TB-IC covered the following topics:

- a. *Administrative controls and managerial activities* such as enforcing cough etiquette; moving coughing patients to the front of the queue for rapid assessment; ensuring proper

cleaning and sterilization or disinfection of potentially contaminated equipment (e.g., bronchoscopes, endoscopes) and others.

- b. *Primary and secondary environmental control mechanisms* to prevent the spread and reduce the concentration of infectious droplet nuclei in ambient air:
 - Primary environmental controls targeting the source of infection using local exhaust ventilation, such as hoods, tents, and booths; diluting and removing contaminated air by using general ventilation.
 - Secondary environmental controls targeting the airflow to prevent contamination of air in areas adjacent to the source (Policies and practices for Airborne Infectious Isolation (All) Rooms in healthcare settings); Cleaning the air by using high efficiency particulate air (HEPA) filtration, or ultraviolet germicidal irradiation.
- c. *Utilization of personal protective equipment - respiratory protection controls* using air purifying respirators (e.g. N95, N99 etc.) including disposables.

d. *Address key barriers of TB treatment and stigma.*

Training participants were provided with specially designed evidence-based guiding materials and tools for appropriate TB-IC planning, implementation and monitoring.

Support to establish and strengthen TB-IC measures at facilities

Sample facility-level action plan was provided to all participants and further assistance was given to develop local TB-IC action plan adapted to local circumstances at their facilities. Participants were provided with terms of reference to support establishment of IC committees at hospitals, received guidance on PAL implementation at healthcare facility and were provided with specially developed TB patient detection and referral pathways in order to ensure early detection and referral of TB patients and TB suspects for appropriate treatment or ensuring segregation to protect other patients, visitors and healthcare workers from TB exposition.

Training Date and Place	Training Location	Number of Participants	Name of the Facility
9 July, 2014 Tbilisi	– Health Research Union	<i>11 persons</i>	<ul style="list-style-type: none"> - Gudushauri National Medical Center - N.Kipshidze Central University Clinic - M.Iashvili Childrens Central Hospital - New Hospital - Medalfa - MedicalPark Georgia - Aversi Clinic
16 July, 2014 Tbilisi	– Hotel “Batesta”	<i>21 persons</i>	<ul style="list-style-type: none"> - Geohospitals (Dusheti, Tianeti, Mtskheta, Gardabani, Marneuli) - Akhagori District Health Center - LTD “Gormedi” - Medalfa (Kaspi) - Medical Park Georgia (Bolnisi, Dmanisi, khashuri) - Regional Healthcare Center (Qareli)
18 -19 July 2014 Kutaisi	– EVEX Training Center	<i>42 persons</i>	– EVEX (Imereti, Samegrelo-Zemo Svaneti, Adjara Regions)
22 July, 2014	– NDCD in Kutaisi	<i>30 persons</i>	<ul style="list-style-type: none"> - Naneishvili Metal Health Center - Western Center of Infectious Diseases – Medical City - Sachkhere Regional Hospital (Multiprofile) - Geohospitals (Chiatura, Bagdadi, Zestafoni) - Regional Healthcare Center (Vani ,Kharagauli, Lentekhi) - Medical Park Georgia (Mestia,Tsageri, Oni, Ambrolauri) - Archimedes Clinic (Senaki Hospital)
25 July ,2014 Telavi	– Hotel “Old Telavi”	<i>26 persons</i>	<ul style="list-style-type: none"> - Geohospitals (Sagaredjo) - NGO KakhetiIoni - Regional Healthcare Center (Dedoflists-karo) - Archmedes Clinic (Signagi, Tsnori, Dedoplists-karo, Lagodekhi) - EVEX (Kvareli, Akhmeta, Telavi)
7 August, Batumi	– Adjara Division of NCDC&PH, Regional Department	<i>16 persons</i>	<ul style="list-style-type: none"> - Batumi Infectious Disease, HIV/AIDS and TB Regional Center - Khelvachauri Medical Center - Regional Healthcare Center (Lanchkhuti) - Medalfa (Lanchkhuti, Ozurgeti)
22 August, 2014 Samtshkhe-Javakheti	– Hotel “Gino Wellness”	<i>19 persons</i>	<ul style="list-style-type: none"> - Geohospitals (Tsalka, Borjomi) - Regional Healthcare Center (Aspinda) - EVEX (Akhalsikhe, Ninotsminda, Adigeni, Akhalkalaki)
Total Number of Participants			<i>165 persons</i>

Project Progress Against Planned Activities:

Fill out the table below

Table 1: Achievement of performance indicators as reflected in the organizations business/schematic plan

Activity	C	P	N/I	Achievements	Challenges	Supporting data/source documents
	C = Completed; P = In Progress; NI = Not Implemented					
1) Review international evidence on TB-IC activities and relevant guidelines	y			Reviewed and used for the development of training and information materials on TB-IC procedures and tools for facilities to implement TB-IC activities	N/A	1. Evidence-based information materials on TB-IC. 2. Tools for facilities to implement TB-IC activities
2) Review Georgian regulations, guidelines and strategic directions for TB-IC	y			Reviewed and used for the development of training and information materials on TB-IC procedures and tools for facilities to implement TB-IC activities	N/A	1. Evidence-based information materials on TB-IC. 2. Tools for facilities to implement TB-IC activities
3) Development of training curriculum	y			Developed, submitted to URC and approved	N/A	Training curriculum
4) Development of TOR for hospital IC committees	y			Developed, submitted to URC and approved	N/A	TOR for hospital IC committees
5) Development of adopted sample of	y			Developed,	N/A	Sample of facility action

facility action plan for TB-IC				submitted to URC and approved		plan for TB-IC
6) Development of TB patient detection and referral pathways adoptable to local circumstances	y			Developed, submitted to URC and approved	N/A	TB patient detection and referral pathways
7) Development of TB infection control manual	y			Developed, submitted to URC and approved	N/A	Manual on TB infection control
8) Printing training and information materials	y			Printed	N/A	Printed training and information materials on TB-IC
9) Training of at least 100 hospital managers and epidemiologists in TB-IC	y			Hospital managers and epidemiologists (165 in total) were trained in TB-IC	N/A	List of participants/signed registration forms
10) Provide support to participating facilities in TB-IC	y			Hospitals received specially developed sample of Facility Action Plan, model ToR for hospital IC committees, and TB patient detection and referral pathways. Hospital managers and epidemiologists of participating facilities were provided with special instructions to develop facility TB-IC action plan.	N/A	First draft of TB-IC facility action plans adapted to local circumstances were developed by participating facilities; Model ToR for hospital IC committees, and TB patient detection and referral pathways are available at participating facilities.
11) Development of facility-level costing tool	Y			Developed, submitted to URC and approved	N/A	Excel-base Costing Tool

3) Monitoring and Evaluation

Fill out table below

Table 2: Status of Performance Indicators

Indicators	Final Target	Actual
1. Evidence-based information on TB-IC procedures available	Development of training curriculum	Training curriculum developed
2. Tools for implementing TB-IC activities available	Development of TOR for hospital IV committees	TOR for hospital IV committees developed
3. Tools for implementing TB-IC activities available	Development of adopted sample of facility action plan for TB-IC	Sample of facility action plan for TB-IC developed
4. Tools for implementing TB-IC activities available	Development of TB patient detection and referral pathways adoptable to local circumstances	TB patient detection and referral pathways adoptable to local circumstances developed
5. Evidence-based information on TB-IC procedures available	Development of TB-IC manual for facilities	TB-IC manual for facilities developed
6. Facility managers and epidemiologists understand managerial, administrative and environmental control mechanisms of TB-IC	At least 100 individuals (hospital managers, epidemiologists or other personnel responsible for TB-IC at facility) participate and at least 80% of them successfully complete the training on TB-IC	Totally 165 individuals (hospital managers, epidemiologists or other personnel responsible for TB-IC at facility) participated and all of them successfully completed the training on TB-IC
7. Facilities have TB-IC action plans	At least 80% of participating facilities complete first draft of TB-	More than 80% of participating facilities completed their first

	IC action plan.	draft of TB-IC action plan.
8. High participation rates in trainings	At least 90% of identified healthcare facilities with integrated TB care participate in the training	More than 90% of identified healthcare facilities with integrated TB care participated in the training
9. Facility managers demonstrate sensitivity to common TB treatment barriers, including stigma	At least 90% of training participants demonstrate sensitivity to TB stigma aspects	More than 90% of training participants demonstrated sensitivity to TB stigma aspects
10. Facility managers understand budgetary implications for TB-IC	At least 80% of facilities have completed costing exercise for TB-IC	Information about cost-data had been incorporated in the tool for all facilities; although, implementation of the costing tool is beyond the time frame of the project and should be further monitored.

*** Please report on each indicator as per approved and M&E plan***

4) Financial Management

Provide overall expenditures incurred per activity/budget line item

Table 3:

Budget Line Item	Budget	Expenditure	Variance
Personnel			
Project manager/Trainer	10,240.00	10,240.00	00.00
Health Economist and Legal Issues Adviser	8,820.00	8,820.00	00.00
Trainer/PH expert	8,240.00	8,240.00	00.00
Trainer/PH expert	8,240.00	8,240.00	00.00
Trainer/PH/Biosafety expert	1,560.00	1,560.00	00.00
M&E officer	2,500.00	2,500.00	00.00
Project assistant	2,000.00	2,000.00	00.00
<i>Subtotal for personnel</i>	41,600.00	41,600.00	00.00
Travel, accommodation, per-diem			
Trainers	4,200.00	3,465.00	735.00
Training participants	3,240.00	3,780.00	-540.00
<i>Subtotal for travel, accommodation, per-diem</i>	7,440.00	7,245.00	195.00
Contractual			
Driver	1,000.00	1,000.00	00.00
Accountant	1,250.00	1,250.00	00.00
<i>Subtotal for contractual</i>	2,250.00	2,250.00	00.00
Other direct costs			
Gasoline	1,077.00	900.00	177.00
Stationery and training materials	500.00	1342.88	-842.88
Lunch for trainings	2,160.00	2482.91	-322.91
Communication	1,000.00	601.38	398.62
Bank charges	50.00	7.24	42.76
<i>Subtotal for other direct costs</i>	4,787.00	5,334.41	-547.41
Indirect costs	5,608.00	4,944.90	663.10
TOTAL	61,685.00	61,374.31	310.69

5) Challenges

There were no major challenges during the implementation of project activities. The activities were implemented according to the schedule.

Success stories

If you there are particular success stories, please describe those. If there are no success stories, leave out this section.

These stories focus directly on the people that your project is helping. The story can be written in a narrative style, describing the problem or issue and your organization's solution or response. Include direct quotes from the individuals whose story you are documenting, as well as the name(s) and locations of the person(s) who are the central subject to the story. Please provide photos (electronic version), if available.

6) Lessons Learned and Recommendations

Implementation of TB-IC procedures at facility level depends not only on the willingness and adequate technical knowledge of hospital managers but also on the available funds to plan and implement appropriate TB-IC procedures. Activities conducted within the frames of this project targeted the enhancement of skills and awareness in TB infection control among hospital managers and other personnel responsible for IC at facilities. In addition, the project assisted facilities in identifying accurate costs for TB-IC interventions in order to be included into budgetary planning of the facility by managers. However, the lack of sufficient funds still serves as a barrier for facilities to implement a number of high-cost interventions.

7) Final Grant Funds Reconciliation

N/A

8) Commodity Inventory

N/A