TUBERCULOSIS CONTROL PLAN FOR GEORGIA

2007-2011

2006

ACRONYMS AND ABBREVIATIONS

ACF	Active Case Finding
AIDS	Acquired Immune Deficiency Syndrome
AFB	Acid-fast Bacilli
BTEP	Biotechnology Exchange Program
CCM	Country Coordinating Mechanism
CRDF	U.S. Civilian Research & Development Foundation
DOT	Directly Observed Treatment
DOTS	Directly Observed Treatment, Short course
DST	Drug Susceptibility Test
EQA	External Quality Assurance
GDF	Global Drug Facility
GLC	Green Light Committee
Global Fund	Global Fund to Fight AIDS, Tuberculosis and Malaria
GOPA/KfW	GOPA Worldwide Consultants / Kreditanstalltbank für Wiederaufbau
GTZ	Gesselschaft für Technische Zusammenarbeit
HIV	Human Immunodeficiency Virus
ICRC	International Committee of the Red Cross
IDP	Internally Displaced Person
KAP	Knowledge, Attitudes and Practices
MDR-TB	Multidrug Resistant Tuberculosis
MOLHSA	Ministry of Labor, Health and Social Affairs
MSF	Médicins Sans Frontières
NCDC	National Center for Disease Control
NCTBLD	National Center for Tuberculosis and Lung Disease
NGO	Non-governmental Organization
NIH	National Institutes of Health (USA)
NRL	National Reference Laboratory
NTP	National Tuberculosis Program
PHC	Primary Health Care
SISUF	Social Insurance State United Fund
TB	Tuberculosis
UV	Ultraviolet
WHO	World Health Organization

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I. Introduction

Tuberculosis (TB) is a bacterial infectious disease that is transmitted from person to person through air. WHO estimates that annually 9 million people develop active TB and more than 2 million die from it worldwide, making TB the second leading cause of death due to an infectious disease.

TB is a greatest public health problem in the world, including Europe. In February 2005 Regional Director of WHO European Bureau recognized TB as "a regional emergency" and called on all Member States to ensure that TB is given the highest priority on the health and development agenda.

Since the beginning of 1990s, after the collapse of the Soviet Union, resulting in economic crisis, failure of health system (including TB control), increasing poverty, civil conflicts and several hundreds of thousands of internally displaced persons (IDPs), TB has become a most severe public health problem in Georgia (see annex 1).

Physicians, scientists and public health experts in Georgia as well as external partners have consolidated and called for strengthening Tuberculosis control in Georgia. The U.S. NIH-Georgia conferences on infectious diseases held in Tbilisi in 1998 and 2003 recognized TB as a serious public health problem in Georgia and concluded, that "*tuberculosis is the highest priority health threat to Georgia today and thus, should be the first priority for public health and research efforts*".

1. TB - a special public health problem

TB is the most specific disease among all other public health problems - "it is a curable disease which kills annually more than 2 million people worldwide". Its specifity is expressed by the complex of characteristics:

- it is an airborne infection;
- most of the untreated cases die of it;
- untreated TB patient is a source of infection and transmits disease to at least 10-15 people a year;
- Treatment of drug-susceptible TB is long-term, and requires 6-9 months, and for MDR-TB the course takes approximately 24 months.
- improper treatment causes development of the most severe (often incurable) form of TB as MDR-TB. Besides, such patient becomes the source of infection;
- early detection and proper treatment ensures successful treatment outcome for almost all drug susceptible TB cases and prevention of resistant TB;

- case detection, treatment, education and other public health interventions are so closely interconnected in TB control, that their separation is impossible and unacceptable. This causes distinctness of TB control financing mechanisms;
- TB is associated with severe social problems, poverty, malnutrition and poor living conditions. Clearly, TB control interventions go beyond the health care domain and are closely related to the level of economic development and poverty eradication.

2. Global response to TB emergency

Since 1990s TB control approaches have been standardized under the guidance of WHO. DOTS strategy has been developed and implemented in more than 180 countries. In 2000 Partnership "STOP-TB" was established. It is a global movement that should accelerate social and political actions to stop spreading TB in the world. The first step made by partnership STOP-TB was the elaboration of STOP-TB Global plan for 2001-2005. Based on the achievements of that period a new version of STOP-TB Global Plan for 2006-2015 was developed. Its purpose is to reduce the TB burden by 2015 by reaching the Millennium Development Goals and targets of STOP-TB partnership.

II. 5-year National TB Control plan

The purpose of this document is to outline an ambitious, yet achievable 5-year plan for TB control efforts in Georgia for the period of 2007-2011. It is based on the global approach to TB control STOP-TB strategy and on the International Standards on TB Care.

The plan outlines the goal, objectives, targets and activities of tuberculosis control in Georgia in the 5-year period. The plan draws on the experience of recent decade and consultations with stakeholders at global, regional and local levels.

1. Goal, objectives, targets and implementation components of the National TB Program (NTP)

a. Goal

The overall goal of 5-year plan for tuberculosis control in Georgia (2007-2011) is to reduce the socioeconomic burden of TB on families and communities by decreasing mortality, morbidity and transmission of TB as well as preventing the development of drug resistance.

b. Objectives

- Expansion and enhancement of a quality DOTS strategy;
- Development of the capacities for the treatment of MDR-TB patients and implementation of DOTS-plus strategy;

- Integration of tuberculosis control in health care reform;
- Implementation of a framework for collaborative activities of TB/HIV co-infection control;
- Participation of the patients and the community in TB control and in reduction TB associated stigma
- Support of TB-related research.

c. Targets

In the light of the global plan to stop TB the outcome targets for the 5 year plan period are as follows:

- by 2007:
  - a case detection rate to be >70%;
  - treatment success rate to be >85%.

During the following years obtained outcomes should be maintained and improved.

- by 2010
  - all patients with MDR-TB to have a full access to treatment under the DOTS-Plus strategy;
  - treatment success for MDR-TB patients to exceed 60%.

- by 2011
  - TB incidence rates to start to decrease;
  - MDR-TB incidence rates to start to decrease.

III. Implementation components

1. *Objective 1.* Expansion and enhancement of a quality DOTS strategy.

Implementation of a quality DOTS strategy will provide every TB patient with diagnostics, treatment and case management in accordance with WHO recommended DOTS strategy. This objective is crucial for the proposed plan and is an essential condition for the success of tuberculosis control in the country.

Pilot projects implemented in the city (DOTS-Spots project, carried out in Tbilisi with the support of MSCI/USAID) and the rural regions (PHC integration project implemented in Shida Kartli in collaboration with British Organization “Merlin’) may serve as good examples of successful high-quality DOTS implementation.

These tested and successful projects are the best models for the full implementation of high-quality DOTS strategy throughout the country. This is critical for the improvement of the rates of successful treatment, reducing development of new MDR-TB cases and creating conditions for introducing treatment against multidrug-resistant TB (DOTS-Plus).

Full implementation of a high-quality DOTS strategy throughout the country should be finalized by the end of 2008.

1.1 Political commitment for TB control

1.1.1. Increased and sustained financing of TB control

Political commitment and adequate financing are essential for successful implementation of a high-quality DOTS and TB control in Georgia. TB control is one of the most cost-effective public health interventions. Investing in TB control program can yield significant savings for Georgia by reducing the burden of TB morbidity and mortality, preventing disease transmission, preventing and reducing drug-resistant TB cases.

At present the Government funds mainly diagnostic and treatment activities, but other activities related to DOTS implementation and adequate TB control are financed by partner and donor organizations (GFATM, ICRC, GOPA/KfW, MSCI/USAID, Merlin, WHO, MSF).

There is a need in increased and sustained financing of diagnostic and treatment activities during the next 5 years, in order to increase the amount and the quality of these services and to implement WHO recommended DOTS-plus strategy for the treatment of drug-resistant TB in Georgia. Taking into account that the majority of partnership and donor programs will be finished during this period, the government should provide funding of the activities covered by these programs. Besides mobilization of financial resources implementation of this intervention needs also **improvement of TB control financial mechanisms**. It will provide integrity of these interventions.

1.1.2 Coordination of TB control

Ministry of Labour, Health and Social Affairs is responsible for planning and implementation of TB control in Georgia.

The Country Coordinating Mechanism (CCM), that was established for the coordination of Global Fund projects - "Fight AIDS, Tuberculosis and Malaria" - is the best tool for providing intersectoral collaboration in TB control. Therefore CCM should become the coordinating body for all stakeholders involved in TB control (National TB program, Governmental and non-governmental organizations, public organizations, etc.).

Ministry of Labour, Health and Social Affairs should plan and manage TB control activities in Georgia through National Tuberculosis Program. Therefore, the status and the structure of the National Tuberculosis Program should be clearly defined (see section 3.3).

1.2. TB detection

Bacteriology is recognized as the principal method for diagnostics of tuberculosis in Georgia. Symptoms characteristic for TB, chest radiograph findings and other instrumental and laboratory examinations are helpful tools in case detection, but definitive diagnosis requires bacteriologic confirmation.

1.2.1. Sputum-smear microscopy

Sputum-smear microscopy still remains the fastest and most accessible method for TB diagnostics. Thus, maintaining its high-quality is the essential condition for DOTS expansion and strengthening.

In order to fulfill this task it is necessary to maintain and enhance the achievements that (with the support of the partners - WHO, ICRC, GTZ/GOPA/KfW, Merlin, MSCI/USAID) made possible significant improvement of case detection in Georgia, particularly:

- reorganization-optimization of bacteriologic laboratories;
- providing laboratories and sputum collecting points with equipment and materials;
- transportation of samples (from sputum collecting points to bacteriologic laboratories and from bacteriologic laboratories to the National Reference Laboratory);
- quality control by National Reference Laboratory;
- continuous education of laboratory staff according to WHO recommendations.

1.2.2. Culture examination and drug-susceptibility test

Routine culture examination is the principal method for TB diagnostics. It is most important for diagnosing MDR and smear-negative forms of TB (especially in case of TB/HIV co-infection). Routine culture examination should become the standard of care for all patients with TB and the TB suspects and be fully implemented in the frames of 5-year plan:

- Phase 1 - 2007-2008, confirmation of all bacterioscopycally and clinically diagnosed TB cases by culture;
- Phase 2 - 2010-2011, Culture examination of all TB patients and TB suspects.

Two laboratories will perform AFB culture in Georgia:

- National Reference Laboratory (National Centre for TB and Lung Diseases) will cover Tbilisi and the East Georgia;
- Kutaisi Laboratory (TB and Lung Diseases Center for West Georgia) will provide culture examination for the West Georgia. Kutaisi Laboratory will be established with the support of ICRC and Global Fund TB projects.

National Reference Laboratory of NCTLBD should perform drug susceptibility (DST) tests on at least one isolate of *Mycobacterium tuberculosis* from each patient with positive culture.

NRL quality control is carried out by the Supranational Reference Laboratory of Antwerp Institute of Tropical Medicine. The results of quality control are perfect with 100% coincidence. But with the increase of work-load and the introduction of DOTS-Plus the NRL will need to further upgrade equipment with new technologies (see section 2.3).

1.2.3. Active case finding

In line with the WHO recommendations detection of TB cases in Georgia is passive, i.e. individuals with respiratory symptoms refer to the health facilities themselves.

Active case finding should be held in high-risk population such as:

- close contacts of patients with smear positive pulmonary TB (AFB+);
- prison population;
- HIV infected patients;
- military recruits;
- selected groups of population (in case of necessity), including IDPs and injection drug addicts.

1.3. Standardized treatment and patient support

1.3.1 Standardized treatment with directly observed therapy (DOT)

TB treatment in Georgia is carried out with the use of standardized regimens. These are developed on the basis of WHO recommended evidence-based international standards. Treatment of every patient should be performed using DOT.

Standardized treatment with DOT ensures completion of therapy, high cure rates and a reduction of the risk of acquiring of drug-resistance.

1.3.2. Patient-centered care

Patient-centered care and patient support during the course of treatment facilitates adherence to therapy. This approach is based on mutual respect between the patient and the care provider. On this purpose the full range of patient support tools should be used including patient counseling, education and incentives (e.g. distribution of food). The experience of the "Food Incentive Pilots" (Merlin-Shida Kartli, GTZ/GOPA/KfW-Kvemo Kartli, MSCI/USAID-Tbilisi) and Global Fund projects funded and rolled out throughout the country shows, that given approach significantly improves patients adherence to therapy. Therefore, patient-centered care and patient support should be considered as an essential component for a high-quality DOTS expansion.

1.4. Effective drug supply and management system

1.4.1. Planning of procurement and distribution of anti-TB drugs

A reliable, uninterrupted supply of high-quality anti-TB drugs is essential for implementing of the DOTS strategy.

The German Government through GTZ and GOPA/KfW provides Georgia with high-quality first-line anti-TB drugs, but this support will be finished at the end of 2007. Thus, by this time the effective centralized procurement and distribution system should be developed. As STOP TB Partnership has established Global Drug Facility, an unique organization, ensuring quality and affordability of TB drugs, Georgia should continue procurement of anti-TB drugs through this organization. In order to avoid stock-outs, needs on drugs will have to be assessed and orders placed in a timely fashion.

1.4.2. Regulation of anti-TB drugs

Lack of control of TB drug sales in pharmacies contributes to their improper use and the development of drug-resistance. In order to prevent retail pharmacies from dispensing TB drugs to patients and provide their centralized procurement and distribution, **uncontrolled sales in pharmacies should be interdicted**.

1.5. Monitoring system and impact evaluation

Expansion and enhancement of a high-quality DOTS Strategy requires development of an effective monitoring and evaluation system. Such a system is necessary in order to:

- introduce surveillance over TB epidemiology in the country;
- assess TB control efficiency;
- evaluate the effectiveness of investments;
- identify problem areas that need to be addressed.

Monitoring and evaluation system design should conform to WHO standards (e.g. definition of cases, treatment outcomes, etc. (see annex 2). It will enable measurement of NTP performance against established international standards.

1.5.1. Recording and Reporting system

The currently used recording and reporting system in Georgia is based on WHO recommendations. Improvement of its quality requires:

- establishment of an unified recording and reporting system in the country (for civil and penitentiary sectors);

- development of unified National database for all notified TB cases;
- involvement of recording and reporting in the training of TB staff;
- assessment of completeness and timeliness of submissions of the registration forms;
- provision of technical assistance by NTP during supervision;
- central and regional supervision over recording and reporting and provision of feedback;
- integration of laboratory results in the overall TB recording-reporting system;
- implementation of electronic reporting systems;
- provision of compulsory notification of all TB cases by health care providers to unified national TB database.

1.5.2. Supervision

As an integral part of monitoring and evaluation, supervision is an important component for expansion and enhancement of high-quality DOTS. This is a regular process with the aim to:

- check and correct recording and reporting forms on the site;
- provide staff (physicians, nurses, laboratory staff) with methodological consultations;
- improve attitudes towards their tasks;
- evaluate correspondence of diagnosing and treatment activities with the national recommendations;
- assess laboratory activities;
- evaluate drug management;
- assess patients education activities undertaken by medical personnel;
- identify problems and solve them timely.

Supervision in Georgia is conducted from the central and regional levels.

2. *Objective 2.* Development of the capacities for the treatment of MDR-TB patients and implementation of DOTS-plus strategy

2.1 DOTS-plus and stages of its implementation

The principal TB control objective for Georgia in the following 5-year period is the development of the capacities for diagnostics, treatment and management of MDR-TB patients through implementation of the WHO recommended DOTS-plus strategy. DOTS-plus should become an integral component of TB control system in Georgia.

The most severe form of tuberculosis - MDR-TB - has emerged as one of the most serious problems for Georgia. MDR-TB strains are resistant to the first-line drugs (at least to izoniazide and rifampicin) and associated with the high rates of morbidity and mortality.

Currently, treatment of MDR-TB is not available in Georgia and such patients have very little hope of recovery. Besides, they are the sources of infection for the others.

Diagnosis and treatment of MDR-TB patients requires much more financial, technical and human resources than of those with drug-susceptible TB.

By 2010 all patients with MDR-TB should have access to DOTS-plus treatment. On this purpose the following activities are to be implemented:

- a pilot project with the support of MSF will start in 2006, in frames of which 50 patients with MDR-TB will receive adequate treatment;
- in 2006 ICRC and GOPA/KfW will start pilot project for MDR-TB patients in penitentiary system. This project has received approval from WHO Green Light Committee (GLC);
- Georgian NTP should prepare and submit application to GLC, in order to implement DOTS-plus treatment under Global Fund (GF) financing. Follow-on applications to GLC should be prepared and submitted for any expansion of MDR-TB treatment projects;
- By 2007 it is planned to finish construction of a new building and reconstruction of an existing facility of National Centre for TB and Lung Diseases (NCTBLD), where patients with MDR-TB will be placed;
- In 2007 GF Project will start to finance treatment of 50 MDR-TB patients;
- In 2008-2010 Global Fund will support treatment of additional 100 patients with MDR-TB.

Actually, about 300 patients with MDR-TB per year are in need of treatment in Georgia. In order to make treatment of MDR-TB available for all patients in Georgia during the next 5-year period, the Government should provide significant financial support. It is crucial for filling the gap between the treatment under donor-funded projects and the real needs and after the finalization of the projects undertaken by donors, the Government will have to provide full financing of MDR-TB treatment.

2.2 Treatment

2.2.1 Treatment principles

The principles to be ensured in the treatment of MDR-TB are as follows:

- treatment takes at least 2 years (instead of 6 months course for drug-susceptible TB) and includes in-patient and out-patient regimens;
- treatment should be carried out using second-line expensive drugs (cost per patient $15.000-$17.000 in the open market versus GLC cost $5.000-$6.000; in comparison with the cost of first-line drugs for drug-susceptible TB - per treatment course purchased through GDF - 20 USD);
- each doze of the drug should be given under the directly observed therapy during the entire course of treatment;
- as the second-line drugs are associated with severe adverse effects and high toxicity, their correction should be provided by the full availability of the drugs and necessary tests;
- hospital, providing the treatment, should meet the special standards;

- out-patient facilities should have sufficient infrastructure, ensuring close supervision, (The basis for the fulfillment of this principle of DOTS-Plus will be the existence of high quality DOTS);
- as treatment of MDR-TB is long-term and heavy, patients and their families need special support (psychological, educational, facilitating, etc).

2.2.2 Role of surgery for the treatment MDR-TB

The Surgical department at the National Centre for TB and Lung Diseases provides surgical treatment for special cases of pulmonary or extrapulmonary TB. Introducing MDR-TB treatment in the country will increase the role of surgery, as in some cases of MDR-TB surgical interventions are directly indicated for improvement of treatment results.

2.3 Laboratory

Culture examination and drug-susceptibility tests have essential role in detection and treatment of drug-resistant cases.

At present, National Reference Laboratory (NRL) of National Centre for TB and Lung diseases performs the following tests:

- culture;
- identification of Mycobacteria;
- drug-susceptibility test for the first-line anti-TB drugs.

But in order to introduce DOTS-plus strategy significant investments in NRL are required that will ensure its upgrading and expanding, particularly:

- enhancement of capacities to provide bacteriologic tests for all the patients and those with suspected TB;
- introduction of drug-susceptibility tests for the second-line drugs;
- implementation of automated systems for culture and susceptibility tests;

2.4 Infection Control

TB infection control measures, meeting WHO requirements, should be carried out in all TB related healthcare facilities in Georgia, to prevent hospital transmission of TB to health care provides, especially at those facilities, where patients with MDR-TB receive care. TB infection control activities include following aspects:

- administrative control;
- environmental control (ventilation systems, ultraviolet lamps, etc.);
- personal respiratory protection for care providers.

2.5 Training

Training of medical personnel (clinicians, laboratory staff, nurses, infection control specialists) is of utmost importance for successful treatment of MDR-TB through DOTS-plus strategy. The MSF and ICRC pilot projects for the treatment of MDR-TB create excellent opportunities for staff training, especially for clinicians and nurses. Additional need for training should be satisfied through training on the local and international levels.

2.6 Surveillance

Introduction of MDR-TB treatment requires simultaneous modification of surveillance system. It should include results of culture, drug-susceptibility tests and data from the monitoring of MDR-TB treatment (see annex 3).

3. Objective 3. Integration of tuberculosis control in health care reform

TB control is an integral part of the overall Georgian health care system and of an ongoing system reform process. Many of the points being addressed in healthcare reform, apply to the control and management of TB. Improvement of financial mechanisms, establishment of optimal organizational structure, increase of salaries, improvement of medical education and retraining, upgrading and refurbishment of buildings and equipment - all these problems are common for the overall healthcare system as well as for TB services.

3.1 TB control and the role of Primary Health Care

In the ongoing reform process of the healhcare system of Georgia it should be considered, that conducting of TB control is impossible without close collaboration between TB and Primary Health Care services. PHC should become the integral part of DOTS expansion. The necessity of such a close cooperation is suggested by the experience of pilot projects, which were implemented in cooperation with the partners, and which need to be implemented countrywide.

The functions of PHC in TB control are as follows:

- considering that the patients refer to the PHC mainly due to respiratory symptoms, the PHC providers should timely suspect TB and refer the patients to the specialized TB services for further examination and diagnosis;
- PHC staff should provide directly observed treatent (DOT) to the TB patients;
- PHC staff should create a sufficient environment to provide patients adherence to the treatment;
- PHC providers should educate TB patients, their families and community in TB issues;
- PHC providers should work in coordination with TB services when participating in TB case management.

In order to enable PHC providers to perform the above mentioned functiones, they should receive continuous technical assistance should be trained according to the NTP training plan.

3.2 Specifities of the organization of PHC activities in TB control in Rural and Urban regions

Due to differences in infrastructure, design of PHC activities in TB control in rural and urban regions differ as well.

3.2.1 Rural model

This model is based on the experience of the project carried out in Shida Kartly with the support of British organization "Merlin". As a result of the project activities, PHC providers were effectively intergrated into TB control. Such integrated activities significantly increased the rate of referal of the TB suspects to specialized TB services and reduced the rate of defaults. The model intends to:

- improve infrastructure of TB services in the region;
- train PHC providers;
- create incentives for PHC providers;
- ensure regular supervision of rural teams by DOT nurses, in order to:
    - provide technical assistance in case management;
    - ensure uninterrupted drug supply;
    - coordinate activities for compulsory visits and examination of patients;
    - guarantee technical assistance in completing recording and reporting forms;
    - exchange information between PHC and TB services;
- provide incentives to patients (food, reimbursement of travelling costs) in order to increase their adherence to treatment;
- educate TB patients and their families.

A described model is recognized as the best one for implementation of TB control in rural regions. It should be implemented in the whole country in 2007-2008.

3.2.2 Urban model

This model is based on the experience of the project carried out by MSCI/USAID in Tbilisi. The goal was to improve quality of directly observed therapy in the city. The project was successfully implemented by openning DOTS-Spots at general polyclinics. These are offices in polyclinics, staffed by specially trained DOTS nurses, who supervise taking of drugs by TB patients. The model has the following advantages:

- DOTS spots were established within the walking distance of TB patients residence, that doesn't require travelling costs;
- treatment reduces psychological barriers caused by stigma;
- established supportive environment provides better adherence to treatment;
- simplifies surveillance of the DOTS nurses' performance.

DOTS spots have been considered as the most optimal way for conducting DOT in cities and towns. It needs expansion in Tbilisi and through urban areas in Georgia.

3.3. Organizational structure and staffing

National Tuberculosis Program is a system for conducting tuberculosis control in the country. Its functions are as follows:

- developing of recommendations for the Ministry of Labour, Health and Social Affairs regarding TB control policy;
- elaborating of recommendations for the Ministry of Labour, Health and Social Affairs with regards to planning TB control measures in the country;
- carrying out planned TB control activities under the guidance of the Ministry of Labour, Health and Social Affairs;
- carrying out of monitoring and evaluation of TB control under the guidance of the Ministry of Labour, Health and Social Affairs;

National TB program is represented by three levels: central, regional and district.

Central level is represented by National Centre for TB and Lung diseases. It is a head institution for National TB program:

- NTP management is its structural unit;
- NRL is a structural unit of NCTLD;
- it is an university clinic in Phthisiology;
- it is a referral clinic for difficult diagnostic and treatment cases of pulmonary and extrapulmonary TB (including extrapulmonary TB, surgery, children TB departments);
- it is the centre for scientific research of tuberculosis;
- it coordinates TB control on regional (including penitentiary system) and district (including PHC) levels with the assistance of TB coordinators.

Regional level is represented by regional TB dispensaries coordinating TB control in the region.

District level is represented by district TB offices, that coordinate TB control activities in the district (in close collaboration with PHC provide management of TB cases).

For the structure of National Tuberculisis see annex 4.

The functions of the Central level of NTP are as follows:

- management and coordination of NTP;
- planning of NTP;
- monitoring and evaluation of TB control;
- elaboration of diagnostic and treatment standards and methodological recommendations;

- functioning as a referral centre for difficult diagnostic and treatment cases of pulmonary and extrapulmonary TB (including extrapulmonary TB, surgery, children TB departments);
- providing in-patient and outpatient services for Tbilisi and the regions of Georgia;
- management of NRL, quality control of laboratory network;
- coordination of scientific-research;
- cooperation with all governmental and non-governmental, donor, international organizations and communities and coordination of their activities;
- elaboration of training programs and plans, development of human resources;
- centralized distribution and management of TB-drugs and diagnostic materials;
- epidemiological surveillance and conduct of National TB register;
- providing supervision from the central level;
- developing and implementation of public educational programs, provision of incentives.

Functions of regional level of NTP are as follows:

- management and coordination of NTP on the regional level;
- monitoring and evaluation of TB control in the region;
- provision of TB diagnose and treatment (out-patient and in-patient);
- distribution and management of TB drugs and diagnostic materials;
- training of regional TB control staff;
- supervision from the regional level;
- developing and implementation of public educational programs and provision of incentives.

Functions of district NTP:

- implementation of NTP activities on the district level;
- providsion of TB diagnose and treatment (out-patient and in-patient);
- management of TB drugs;
- recording and reporting;
- providing patients with incentives in order to reach better adherence;
- development and implementation of public educational programs and provision of incentives.

3.4 Medical education and training

NTP should collaborate with universities and higher medical schools in terms of reforming TB curriculum and tailoring for modern international standards (STOP-TB Strategy, International Standards on TB Care). This refers to both under- and post-graduate systems of education. The TB care providers (TB doctors, laboratory staff, nurses) should be provided with regular (once in 2 years) re-training courses.

3.5 TB control in penitentiary system

Persons in penitentiary system are at considerably increased risk for development of active tuberculosis.

Support of the International Committee of Red Cross (ICRC) made it possible to implement TB control in penitentiary system of Georgia. As a result, TB associated mortality and morbidity rates have been reduced (including MDR-TB).

ICRC also provided significant technical assistance in the integration of penitentiary and civil sectors. With this regard, establishment of National Reference Laboratory and support of it's operations, is of utmost importance. Considering that responsibility of medical care of prisoners has been transferred in the competence of the Ministry of Labour, Health and Social Affairs and ICRC project is scheduled to be finished in 2007, it is essential to provide penitentiary system in transitional period and later on with the following:

- the detailed plan for transferring responsibility on TB control in penitentiary system from the Ministry of Justice to the Ministry of Labour, Health and Social Affairs;
- active case finding;
- isolation of TB patients from healthy prisoners in order to prevent transmission;
- provision of directly observed treatment;
- uninterrupted supply of anti-TB drugs;
- implementation of DOTS-Plus;
- education of prisoners;
- follow-up care for persons released from prisons, to ensure completion of treatment.

4. *Objective 4.* Implementation of a framework for collaborative activities of TB/HIV co-infection control

The presence of HIV infection is the greatest risk for development of active TB in patients infected with M. Tuberculosis. Taking into consideration the concerns, that the number of HIV/AIDS cases will increase in Georgia in coming years, close collaboration of TB and HIV/AIDS services acquires a significant importance. On this purpose HIV/TB Working Group is proposed, with the following responsibilities:

- development of collaborative activities;
- planning and coordination;
- development of collaborative training curricula;
- providing continuous medical education;
- elaboration HIV/TB co-infection treatment guidelines;
- expanding of activities beyond the health domain and providing community participation;
- operational research of joint HIV/TB activities.

Coordination of the activities of the Working Group should be carried out by the Ministry of Labour, Health and Social Affairs and the Country Coordinating Mechanism. The Working Group should include representatives from NTP/NCTLD, Georgian AIDS Centre, academic institutions, public health officials, NGOs, partner and donor organizations working on HIV/AIDS and TB problems.

4.1 Decrease the burden of TB in people with HIV/AIDS:

- Active case finding - all patients diagnosed with HIV infection should undergo active case finding for tuberculosis;
- Treatment of latent tuberculosis in HIV infected individuals;
- Establishing tuberculosis infection control measures to prevent nosocomial infection in HIV patients.

4.2 Decrease the burden of HIV in TB patients:

- Providing all TB patients with voluntary counseling and testing;

4.3 Treatment of HIV/TB co-infection

Every HIV infected person with confirmed TB and every TB patient with confirmed HIV/AIDS should be provided with adequate treatment for both diseases in accordance with WHO recommendations. The treatment should be conducted in close collaboration by the Centre of Infectious Pathology, AIDS and Clinical Immunology and the National Centre for TB and Lung Diseases.

4.4 Monitoring and evaluation of collaborative HIV/TB activities

On the basis of WHO guidelines TB and HIV/AIDS services should develop unified system for monitoring and evaluation and agree on a core set of indicators. This process will ensure assessment of quality, effectiveness, coverage and accessability of collaborative TB and HIV/AIDS activities. Referal linkages between different services and organizations (TB, HIV/AIDS, Primary healthcare and other services) should be provided. The patient info confidentiality should be ensured in this process.

5. *Objective 5.* Participation of the patients and the community in TB control and in reduction TB associated stigma

Participation of the patients and the community in TB control is an essential point for successful implementation of STOP-TB strategy. As it was shown by the studies carried-out in Georgia, the level of patients' and general public awareness in TB issues is low. Though segments of population have information about TB symptoms and the ways of its transmission, very often their knowledge is not expressed in their adequate behaviour. People very often seek care from non-specialists or try to solve the problem by themselves, having no understanding of the danger that uncompleted treatment may cause to their health. Many people are not informed that TB diagnostics and treatment is free of charge, or that tuberculosis is a curable disease. Lack of such knowledge is the major reason of their poor involvement in TB control. Thus, it can be concluded, that the most effective intervention with this regard will be the development of communication and public education strategies.

5.1 Community education strategy

In order to provide the community participation in TB control and the increase of public awareness, NTP should develop TB communication strategy ensuring full conformity of all campaigns with this strategy. The strategy should be focused on the following:

- providing population with information about TB symptoms, to ensure timely referral of patients to TB care facilities;
- informing the population, that TB diagnostics and treatment is free of charge in the frames of the State Program, ensuring that, lack of awareness does not cause failure in patients' referral to TB services;
- informing the population that TB is a curable disease in order to prevent stigmatization of TB patients;
- providing population with information about risks associated with interrupted, incomplete and improper treatment, in order to avoid development of MDR-TB.

Education of population should be carried out through regular information campaigns. Such interventions should address general population and TB patients, as well as target groups (medical staff of different profiles, decision-makers, business people, etc). The campaigns should be conducted by means of distribution of printed and electronic media, video and audio materials, also, by means of permanent communication with the journalists and the representatives of the society.

The infrmation materials should contain short, clear and exact information.

5.2 Community participation

NGOs, communities and public unions, in coordination with NTP will play a crucial role in distribution of accurate information about TB, patient support and reduction of stigma. With this regard Georgian Orthodox Church acquires the crucial function.

6. *Objective 6.* Support of TB related research

6.1 Operational research

Activities that involve evaluation and assessment of outcomes are called Operational Research. Operational research gives possibility to determine the best ways for implementing the interventions and to monitor their impact.

Necessity of operational research is highlighted in STOP-TB Global Plan (2006-2015). Development and implementation of operational research is an integral part of NTP functions and duties.

Funding of operational research should be taken into consideration while planning NTP. Besides, it is necessary to promote international cooperation in order to provide operational research with financial and human resources.

6.2 Scientific Research on TB in Georgia in the Context of Global Goals

The objective of STOP-TB Global Plan is the development of new tools for TB diagnostics, treatment (drugs) and prevention (vaccine). Georgia can contribute in achieving this objective by means of scientific research. This needs full utilization of an existing potential, namely:

- Experience, obtained through the research projects, carried out at NTCBLD jointly with US National Institutes of Health, US Civil Research and Development Foundation and the US Biotechnology Exchange Program;
- Undergraduate and postgraduate departments at universities;
- National Reference Laboratory;
- Possibility to train young scientists of NTCLBD with the support of the international collaborators.