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TUBERCULOSIS PREVENTION PROJECT

Improving TB Control by Removing Health System Barriers in Georgia

Assessment Report ***2013***

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ABBRIVIATIONS

AIDS	Acquired Immunodeficiency Syndrome
DH	District Hospital
DOT	Direct Observed Treatment
FN	Family nurses
FP	Family Physicians
GPIC	The Global Fund Projects Implementation Center
HIV	Human Immunodeficiency Virus
HMIS	Health Management Information System
HSO	Health System Operators
HUES	Health Utilization and Expenditure Survey
IC	Insurance Company
MDG	Millennium Development Goal
MDR-TB	Multi-drug-resistant tuberculosis
MoLHSA	Ministry of Labor, Health and Social Affairs
NCDC	National Centre for Disease Control and Public Health
NCTBLD	National Center for TB and Lung Diseases
NTP	National Tuberculosis Program
PHC	Primary Health Care
PPP	Pubic Private Partnership
SSA	Social Service Agency
STBP	State TB Programme
SVAP	State Village Ambulatory Programme
TB	Tuberculosis
TGF	The Global Fund
WHO	World Health Organization

BACKGROUND

The inclusion of "Contribution to Health Systems Strengthening (HSS)" in the new Stop TB strategy explicitly acknowledges that effective and sustainable TB control relies on the general health system, especially on well-functioning Primary Health Care. Weak health systems pose many barriers to effective TB control.

Since independence the health care system of Georgia is in a regular reform state. The first big-bang reform was initiated in 1996, introducing the separation of the health care financing, stewardship and provision. In 1999, the Government embarked on the privatization of the sector - all health providers became subject to the commercial law, some hospitals and outpatient clinics were privatized, though stocks of the most of facilities were still under the state ownership. Shortly after the Rose Revolution, the government came up with two main reform plans: Plan I "100 New Hospitals" - massive hospital privatization, which aimed at downsizing and upgrading of the hospital sector. In result, some hospitals were privatized to private investors though the reform has been put on hold because of economic downturn and Russia -Georgia conflict in 2008.

Plan II "State Medical Insurance" - the novel approach for ensuring service provision to the poorest layers of population was directed to establishing and institutionalization of the Pubic Private Partnership (PPP) in the sector. Specifically, in 2007 the state financed health vouchers provided to the poor were exchanged by the latter into the health insurance policy, administered by the private insurance companies (IC). According to Health Service Utilization and Expenditure Survey (HUES) 2010, this reform showed to be successful in improving access of poor to health services and decreasing out of pocket payments.

The last intervention of the government in PPP scheme was the changes made in health care state programs in 2010. Eventually, ICs participating in governmental programs were bound to certain out of 26 "medical-administrative areas", with obligation of constructing hospitals in these regions and making them operational by June 2012, thus ensuring service provision to beneficiaries of State Medical Insurance programs. In addition to this, in summer 2011, the Government decided to hand over the full responsibilities of the health service provision including public health services to the ICs, in their respective medical areas starting from January 2012.

The ICs are requested to: a) design and operate health service networks in their respective areas through rightsizing physical infrastructure and human resources; b) ensure continuous quality service provision to entire population including public health services; and c) administer selected state financed health programs. The purchasers of state programs will contract the HSOs for implementation of the State Health Programs.

NEW MODELS OF HEALTH SERVICE DELIVERY

The government's new big bang reform on complete privatization of health service delivery being materialized at the beginning of 2012, desires close look as it will have certain implications on the delivery of effective public health services to the entire population. Effectiveness of proposed reforms relies on network of providers and integration of services to provide a range of public health services and control the costs of services. In response, the new owners of district hospitals referred as Health System Operators have to establish network relationships. More specifically, as a result of the reforms three major types of health service modalities are identified in the country.

- The first health service delivery system **"Model A" -** when the hospital is owned and operated by IC's sister company "Health System Operator (HSO)" and the rest of the providers are either

independent or owned by other investors. In this model the HSO has the responsibility of organization and provision of health services to entire population in the given geographical area, including those insured under the state medical insurance programs.

- The second health service delivery system **"Model B" –** when all service providers are owned and operated by HSO except of village ambulatories and are responsible for service provision to entire population.
- The Third health service delivery system **"Model C" –** when the HSO owns and operates few medical facilities and bear the responsibility of providing continuous health care services to the population, while other private investors own the majority of the medical infrastructure.

COMMON BARRIERS TO ACCESS TB CARE

Tuberculosis is a complex disease requiring cooperation between the TB service and the rest of the health care system and social services. Effective and sustainable TB control relies on the general health system, especially on well-functioning primary health care (PHC). Weak health systems pose many barriers to effective TB control. Barriers to access to TB care can be present in interconnected areas as: barriers associated with the health care system, care process barriers, barriers related to wider contextual issues, and barriers associated with patients' personal characteristics and behavior. In the health care system, insufficient funding can be identified as an underlying problem resulting in a decrease in screening coverage, low salaries and outdated infrastructure. Access to care depends on a complex interaction of multiple factors. These include issues such as responsiveness of service provision to the needs of users (availability, accessibility, affordability, appropriateness and acceptability), and patients' health-seeking behavior, which is influenced by socio-cultural, behavioral, financial and organizational factors[1],[2].

TUBERCULOSIS CONTROL IN GEORGIA

Georgia currently has the fifth highest rate of TB in the European region with an estimated 100 incident cases per 100,000 populations in 2010. Preliminary data from 2011 show a total of 5490 patients being registered for treatment in the National Tuberculosis Program (NTP). Of these, 4247 are new cases and 1243 are previously treated patients. Outcomes among those with a positive sputum smear or culture are: success - 76%; default - 7%; died - 3%; failure - 2%; transfer out (moved to another country) - 1%; transferred to category IV treatment - 10%; not evaluated - 1%. In terms of drug-resistant TB, 11.0% of patients newly diagnosed with TB in 2011 had multidrug resistance-TB (MDR-TB). This number was 31.5% among previously treated patients. Outcomes for these patients are still being analyzed. There were 1155 TB cases reported in the prison (21% of all reported cases) and 4335 reported in the civilian sector.

As noted above, in 2011, the Government of Georgia began a major health sector reform in the country. Apart from privatization of the health service delivery the reform also included the integration of previously vertical programs—including the National Tuberculosis (TB) Program—into the general health care systems. While these changes have the potential to provide increased access to TB care along with quality improvement in TB services, concern remains about the handling of TB by the private general health care (PHC) system.

[1] Penchansky and Thomas 1981

[2] Gulliford et al. 2002

PURPOSE OF THE RESEARCH AND METHODOLOGY

OBJECTIVES OF THE RESEARCH

It is obvious that insurance Industry being charged with the new business of health service organization and delivery will face problems at the beginning due to the lack of experience, knowledge and scarcity of professional health system managers in the country. The impact of these crucial structural changes potentially may have negative implications on the effectiveness and efficiency of the health service delivery and the priority public health services in particular. As evidence suggests, weak health systems pose many barriers to effective TB control therefore it becomes vital that new service delivery models are assessed, system barriers effecting TB control program identified and at least minimized enabling the country to meet respective MDG.

The Overall purpose of the subject research is to explore barriers to effective health care provision of TB services to identify possible approaches for structural and functional improvements to services that are responsive to patients' needs, address health systems barriers by increasing the capacity of local health services, and improving staff attitudes, motivation and communication skills. More specifically, Identify how the governance, service organization and procedures including type and level of service organization, financing and provider-payment mechanisms practiced in the private health system models create incentives and barriers that affect the delivery of quality TB service.

RESEARCH MEHODOLOGY

The assessment methodology comprised a mix of site visits and observation, face-to-face semi structured interviews, desk-based research and review of existing reports, documents and secondary data. Summary of Methods are outlined below:

Desk Review: Review of documents was a major part of the evaluation.

Semi-structured Interviews: Semi-structured Interview tool was used for the key policy makers on the national, Regional and District level, Health service operators, providers, procuring agencies and development partners involved in TB Control. Prior to visiting key informants, semi-structured interview topic guides were developed to help ensure systematic coverage of questions and issues.

Appreciative enquiry – An approach that helps to explore successes and positive experiences in dialogue with individuals and groups of people have been applied in order to strengthen understanding of why something worked well, and how success might be replicated.

Field Analysis - a useful and quick visual tool used to gain an overview of the different forces driving or resisting change that the project is trying to bring. Using Force Field Analysis helped to analyze the forces working for and against a policy and its realization.

Triangulation of findings - examination of data from the above sources have been carried out to arrive at conclusions and formulate recommendations.

The four major sources of data: people, site visits to selected health system models in Lagodekhi, Dedoplistkharo and Abasha, documents and information system were used during the assessment.

MAIN FINDINGS

NATIONAL TB PROGRAMME GOVERNANCE AND MANAGEMENT

According to the National Programme for Tuberculosis Control in Georgia (2005-2011) National Center for TB and Lung Diseases (NCTBLD) is acknowledged as a main entity responsible for the governance of the TB program implementation in the country. However, no legal actions have been put in place that makes NCTBLD a legitimate agency for overseeing the status of TB and implementation of the TB programme. Moreover there is no clear understanding of the role of governor that enables effective functioning of the NCTBLD. According to State TB Programme NCTBLD is mainly responsible for: a) provision of in-patient TB services, b) selected Lab diagnostics in particular parts of the country. Another Important public agency responsible for TB surveillance is National Centre for Disease Control and Public Health (NCDC). The latter is also in charged with producing annual TB statistics and reporting to the Government, Ministry of Labor, Health and Social Affairs (MoLHSA) and World Health Organization (WHO).

Governance and Management of TB Service provision is fragmented

ORGANISATIONAL STRUCTURE OF SERVICE PROVISION

There are now many stakeholders involved in TB control in Georgia—some public and some private—with varying degrees of TB experience and expertise. If until 2012 TB care had been provided as a vertical program through public sector, the role of private health care providers were emphasized in 2012.

Public Private Partnership and integration of TB service provision into the general health system fostered in 2012

In 2011 the program was headed by the NCTBLD. There were TB clinical and monitoring specialists working in each region through TB dispensaries. There were also TB "cabinets" located under the jurisdiction of TB dispensaries, and there were "DOTS Spots" throughout urban regions. Lab tests were conducted by TB Dispensaries and the NCTBLD. In patient services were provided by 5 public hospitals with 400 beds for TB care[3]. Some of these are general Infectious Diseases hospitals with beds dedicated to TB care (i.e. Batumi) (Table 1).

Table 1: Comparative analysis of TB service providers before and after the reform

	2011		2012	
TB Case Identification and treatment in out-patient settings			PHC Health Providers	Private
	District TB Dispensary	Public	TB Unit at outpatient department of the DH	Private
	TB Cabinets	Public	*Closed and Functions moved to DH*	
	DOTS Spots	Public	*Closed and Functions moved to DH*	
In-patient treatment	NCTBLD	Public	NCTBLD	Public
	TB Hospitals	Public	TB Hospitals	Public
Lab Services	NCTBLD	Public	NCTBLD	Public
	…		NCDC	Public

In rural settings, TB care could have been provided by village doctors and nurses with supervision from the NCTBLD. Under the old system, patients could self-refer for TB diagnosis and care to TB dispensaries

[3] 1 in Tbilisi (NCTBLD) which is the national reference TB hospital and one each in Abastumani, Batumi, Kutaisi and Zugdidi

or cabinets and if diagnosed with TB, the costs of their care were free of charge. Self-referral was primary method for accessing TB services in the country.

A primary health care model is being proposed as the major system to be utilized for health care in Georgia as of 2012. The family physicians (FP) and Family nurses (FN) being responsible for screening services in their catchment area, have been identified as a first contact point for patients, while in past patients were going directly to TB Dispensaries in case of suspicious TB symptoms. It is notable, that all rural FP&FN became private providers since 2008. They are registered as an independent physical persons being licensed to provide PH services to the population.

Although most Georgians are aware of the existence such services, they still prefer to seek care from specialists. As a result, primary care physicians are widely under-utilized, with many patients preferring to go straight to secondary level care to seek TB specialists' services. For example, a preliminary analysis of TB patients receiving care at the NCTBLD in Tbilisi found that more than 77% were self-referred and only 14% were referred by PHC providers. This has an important bearing on TB case identification.[4] The findings referred above have been largely confirmed by the key informants interviewed during the assessment.

Rural PHC sector remains largely underutilized

The reform of health services delivery privatization also emphasized downsizing of physical infrastructure under public domain and resulted in moving the functions of public TB Dispensaries, TB Cabinets and DOTS Spots into the out-patient settings of the privately owned and managed District Hospitals (DH). During the privatization of the district health infrastructure, the state failed to foresee integration of TB related functions into the DH thus state building norms developed lacked requirements for TB service provision. Consequently the newly built DHs do not qualify for international building and infection control for TB cases.

District hospitals do not qualify for the international building and infection control standards and norms

TB in-patient services still remain under the state ownership and are managed by the state. If in past all TB related lab services were provided by the NCTBLD and its laboratories in the country, in 2012 this function has partially been delegated to the regional lab network of the NCDC.

Integration of vertical TB programme into the general health system is summarized in the Table 2 below.

Table 2: Extent of Integration of each function of TB Service into the overall general health care system

Health System Function	Elements of Integration	Village	District	Regional	National
Stewardship and governance	1: Regulatory mechanisms				
	2: Accountability framework				
Service delivery	3: Human resources for counseling and testing				
	4: Human resources for laboratory testing				
	5: Human resources for care and treatment				
	6: Physical infrastructure for counseling and testing				
	7 Physical infrastructure for laboratory testing				
	8: Physical infrastructure for care and treatment				
	9: Procurement and supplies of laboratory equipment				
	10: Procurement and supplies of medicines				
Demand generation	11: Financial incentives	NA			
	12: Information, education and communication	NA	NA	NA	
Monitoring and evaluation	13: Data collection and recording				
	14: Data analysis				
	15: Reporting systems				

[4] Improving Quality of TB services under the New Service Delivery Mechanism in Georgia, Key Recommendations, February 2012

	16: Performance management system	NA	NA	NA	NA
Planning	17: Planning				
Financing	18: Fund pooling				
	19: Provider payment methods				
	20: Funding source				
	21: Cross-programme use of funds				

	This element is **fully or predominantly** integrated into the general health system, i.e. this element is (quasi) exclusively under the management and control of the general health care system.
	This element is **partially** integrated into the health system or; this element is integrated in some but not all cases, i.e. this element is managed and controlled both by the general health care system and a specific programme-related structure.
	This element is **not**, or only to a very limited extent, integrated into the health system as a whole, i.e. this element is (quasi) exclusively under the management and control of a specific programme-related structure which is distinct from the general healthcare system.
NA	Does not apply

NATIONAL TB PROGRAMME FINANCING AND FUNDING STREAMS

The country remains to be dependent on external funding for effective implementation of NTP. The largest share of external funding is from the Global Fund followed by USAID supported TB project. Public share of financing is from general taxation pooled at national level and allocated to the State TB programme on an annual basis mostly focusing on service delivery and limited provision of medicines for the treatment of latent TB cases (Table 3).

Financing of the TB services is mostly reliant on donor funding

Table 3: Comparative analysis of State TB Programme Funding in 2011 and 2012[5]

2011		2012				
Activity	**Total Budget allocation**	**Total Budget allocation**	**Variance**	**NCTBLD**	**Other TB service providers**	**NCDC**
Ambulatory Services	2 902 120	3 190 000	287 880	287 880	2 902 120	
Laboratory Control	1 043 670	-				
Reference Laboratory	419 650	1 003 600		480 000		525 000
Surveillance	96 000	165 000	69 000			165 000
MDR Cases	528 020	-				
In Patient Treatment (including MDR)	5 669 410	4 950 000	-719 410	4 950 000		
Penitentiary System Medicines and other supplies	-	200 000			200 000	690 000
TOTAL	**9 615 200**	**9 508 600**	**-106 600**			

Resource allocation and budgeting are driven by retrospective data. These data do not take into account the rapidly changing case-mix and the burden of multidrug resistance, which is likely to increase, nor do they take account of the rapid increase in the incidence of human immunodeficiency virus (HIV) and acquired immunodeficiency syndrome (AIDS). However the 2012 State TB programme budget allocates more funding to the ambulatory services and surveillance in order to shift TB service provision from in-patient towards outpatient settings (Table 3).

State resource allocation and budgeting are driven by retrospective data

[5] Source: State Health Programme 2011 and 2012(GOG Decree #92, 15.03.2012)

TB SERVICE PROCUREMENT / STATE PROGRAM IMPLEMENTING AGENCIES

The National TB Programme is financed through two funding sources – State Budget and Global Fund.

State Programmes - Two state programs cover TB service package as defined by the government. These programmes are:

State Village Ambulatory Programme (SVAP) - According to the programme FPs and FNs are responsible for screening of populations' health status and referral to the next level of care when required, as well as management of the DOT by FNs. The Social Service Agency (SSA) is designated as main procurement agency for the given state programme. If in past, the main public procurement agency directly contracted PHC providers, starting from 2012 contracting this responsibility has been handed over to the district HSO. Thus the SSA contracts HSOs for the implementation of the SVAP in their coverage area with the responsibility to directly contract PHC providers (FP/FN). The SVAP defines fixed monthly payment[6] for FP and FN to cover salaries, communal costs, medicines and consumables. The programme does not cover programme management/administration costs and does not allow HSO to change FP&FN payment methods, volume and reporting[7]. HSO also lacks the power to demand detailed/customized reporting from FP&FN other than defined by the SVAP.

HSOs serve as a financial intermediary simply channeling funds from SSA to FP&FN

State TB Programme (STBP) – The package of services financed by STBP are schematically provided in the Table 4. The latter describes services included and covered by the programme, procurement agency, service provider as well as provider reimbursement methodology.

Table 4: Services covered under STBP and payment methods

	Type of Service	Purchaser	Service Provider	Payment Method
1	**Ambulatory Services**			
1.1.1	Clinical Diagnosis of all suspected Cases	SSA	DH	Per Case
1.1.2	Sputum collection for analysis at the referral Laboratory	SSA	DH - TB Specialist and TB Nurse	
1.2.1	Supervision of diagnosed and/or post hospitalization treatment of patients by TB Specialist	SSA	DH and TB Specialist and TB Nurse	Monthly Voucher
1.2.2	Instrumental and lab testing of diagnosed and/or post hospitalization treatment of TB patients	SSA	DH	
1.2.3	Sputum collection for analysis at the referral laboratory for diagnosed and/or post hospitalization treatment of TB patients	SSA	DH - TB Specialist and TB Nurse	
1.3.1	Supervision of DOT	SSA	DH - TB Specialist and TB Nurse	Monthly Voucher
1.3.2	DOT	SSA GPIC	DH - TB Specialist and TB Nurse FN	
1.4	Treatment of latent TB Cases	SSA	DH - TB Specialist and TB Nurse	Monthly Voucher
2	**Surveillance and TB program management/ monitoring**			
2.1	contact tracing and screening	NCDC	District Epidemiologists	
2.2	Confirmation of positive cases and referral for further treatment	NCDC	DH - TB Specialist and TB Nurse	
2.3	Procurement of TB medicines for treatment of latent TB cases	NCDC	NCDC	
2.4	TB program management and monitoring including:	NCDC	NCDC	Global Budget
2.4.1	Supervision and monitoring of Ambulatory service	NCDC	NCDC	

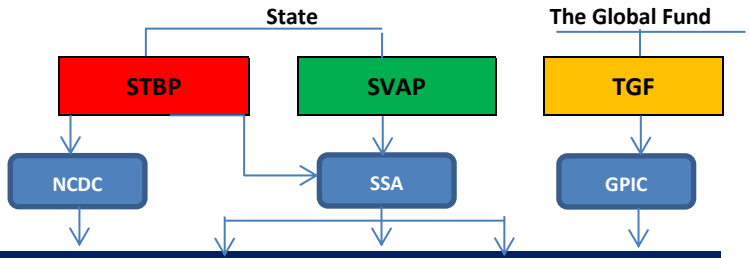
[6] FN-500 GEL; FN – 280 GEL
[7] Contract between SSA and HSO

	providers and primary health care network			
2.4.2	Supervision of protocols and utilization of the TGF supplied medicines and food vouchers	NCDC	NCDC	
2.4.3	Routine monitoring of the quality of MDR TB patient register and prompt action in case of observed weaknesses	NCDC	NCDC	
2.4.4	Monitoring and planning of DOT implementation on the regional level	NCDC	NCDC	
3	**Laboratory Services**			
3.1	Sputum / study materials transportation	NCDC	NCDC & NCTBLD	Global Budget
3.2	Specific lab test			
3.3	Quality Control			
4	**In-patient Services**			
4.1	Hospital treatment of TB patients	SSA		Per Diem
4.2	Hospital based diagnostic services for complicated TB patients		NCTBLD & other TB Hospitals	Per Diem
4.3	Surgery			FFS within established limits

The Global Fund Projects Implementation Center (GPIC) - TGF funding is not integrated into the STBP, though is provides funding for medicines, lab tests, and salaries for regional coordinators and nurses responsible for DOT.

In summary, State TB programme funding and implementation is fragmented (Table 5). While it demonstrates moving from vertical state provided system towards integrated public-private mix, fragmentation and problems of service coordination between different implementing agencies are observed and described in following sections.

Table 5: TB Service Procurement and funding sources



Service Procurement	NCDC	NCTBLD	DH	TB Hospitals	GPIC
FD & FN					
DOTs Nurse					
TB Specialist & TB Nurse					
In-patient Services					
Program Management	NA	NA	NA	NA	NA
Drugs					
Drugs for Sensitive cases					
Drugs for TB patients including MDR/XDR					
Diagnostics					
Sputum Bacteriology					
DST					
X-Ray					
Other tests					
Surveillance					
Epidemiological Surveillance					

Clinical Surveillance					
Supplies					
Drugs					
Lab tests					
Logistics					
Transport					
Drugs					
Lab services					
HMIS Forms					
HMIS					
TB program Management					
Regional Coordinator	50%[8]	50%			
Epidemiologists[9]	50%[10]				

PAYMENT FOR TB SERVICE PROVISION

The newly integrated system is taking place within a public-private mix. While TB services are still paid by the state, they are delivered in settings where profit is the driving motivation. TB care has never been shown to be profitable and there is a need for other incentives for success[11].

STBP Management at the HSO level

The new arrangement of the STBP and SVAP implementation does require coverage of the management fee for HSOs. However, none of these state projects have a budget line dedicated to program management; neither such expense is factored in the service reimbursement rates. Eventually the latter restricts the HSO's ability to actively monitor programme implementation and take corrective actions when deemed required.

Absence of management fee for HSOs in the state programs creates lack of motivation for effective programme implementation

Primary Health Care Level

Primary care facilities (Village Ambulatories) are the entry point into the health care system. Family Practitioners and Nurses are based in buildings owned by the State. FP&FN are registered as physical legal entities, individually contracted by the DH and receiving fixed salary through State Village Ambulatory Program. As described above, according to the SVAP FPs and FNs are responsible for screening of populations' health status and referral to the next level of care when required, as well as management of the DOT by FNs.

Village FP and FN Functions are poorly defined

[8] 50% of salary of regional coordinator is paid by NCDC and 50% by NCTBLD

[9] District epidemiologists are hired by municipal governments. 50% of their salaries are covered by NCDC and another half by municipalities.

[10] 50% of salaries for district epidemiologists is paid by NCDC for contact investigation services

[11] Dr. Jennifer Furin, Improving Quality of TB services under the New Service Delivery Mechanism in Georgia, Key Recommendations, 2012

According to the key informants and patient's daily registers checked during the assessment on average 3-5 patients (of all ages) visit FPs from their medical catchment area. Active screening of population's health is hampered by lack of transportation and inability to cover the transportation costs, thus limiting this activity to passive identification of suspected TB patients. Those suspected on TB are referred to TB specialists at DH for initial diagnosis. Patients with Confirmed TB return to FP with prescribed treatment scheme for receiving DOT. It's notable that no official referral mechanism is used to provide client information to the referral site (DH), though a special form is used by TB specialists when TB patients with prescribed treatment is referred back to the FP/FN for DOT.

In-patient service payment methods defined by the STBP creates incentives for cost inflation

Active Screening is hampered by absence of transportation means and motivation of PHC providers

The fixed monthly payment system for primary care-based providers (FP & FN) of TB care does not have a performance-related element. This system encourages FP/FN to minimize the scope of services delivered, prevents the primary care provider from acting as a gatekeeper because the provider does not benefit by maximizing the number of patients identified and referred to TB specialists as well as patients completed prescribed TB treatment.

Village FP a FN payment system does not have a performance-related element

In order to maximize effectiveness of DOT and DOTS, the FN in addition to the monthly salary covered under the SVAP is paid a lump sum of 50 GEL per month to perform DOT functions on Saturday mainly financed by TGF TB Programme[12]. According to the forecast there is a need for 180 DOT nurses, while the TGF budget is only sufficient to cover 130 DOT nurses. To cope with budget deficit the GIPIC elaborated a sliding scale for paying incentive to respective staff. As a result the DOT nurse receives incentive once or twice per quarter. The given arrangement negatively effects motivation of nurse. According to the findings of the assessment, a DOT service provided by the FNs does not always follow established procedures. Often 2-3 day dose of TB treatment drugs are provided to the patient due to the transportation problems faced by latter. No official system is established that monitors implementation by FNs. This raises concerns of effectiveness and efficiency of DOT and DOTS interventions in general.

Incentives for effective implementation of DOT and DOTS exists but formal supervision and monitoring system is absent.

Out-patient Specialized TB Services

Out-patient specialized TB services are mainly provided by the TB Specialist and a nurse. In past they were staff of publicly owned TB Dispensaries but since 2012 they are deployed at the DH as a permanent staff. The STBP defines fixed monthly salary for TB specialists and nurses in an amount of 360 GEL and 280 GEL respectively which is not based on the number of patient visits and or quality of provided services.

TB specialists in the District Hospitals are offered a fixed monthly salary and does not have performance-related element

Out-patient Diagnostics

Reimbursement rates for the package of ambulatory diagnostic services are defined by the STBP and performed at the DH level. The HSO is reimbursed monthly on per case basis. According to key informants set rates are far less of the realistic prices of services prescribed per guidelines, thus DH subsidizes the cost of diagnostic services from their own revenues. The latter creates perverse incentive for providers to intensify identification of suspected cases and further diagnostics.

[12] GPIC

Theoretically, underfunding of diagnostic services may potentially raise a problem of DH willingness to participate in the program implementation in following years, however the assessment revealed that HSOs are contractually responsible to implement state programs for next seven years in exchange of property received from the state. Thus the HSOs are forced to further bear financial burden and seek for alternative coping mechanisms.

Although the assessment was interested to find out examples of coping mechanism used by the HSO, but more in depth research was required that was beyond the scope of the given task. Hypothetically, the given system of payment without close supervision and monitoring potentially may result in artificial escalation of number of suspected cases by recording non-existent patients in order to cover the funding gap.

PHC providers are poorly equipped with knowledge and practical skills.

In-patient TB Services

Hypothetically, deficient funding of the diagnostic services alongside with the absence of close supervision and monitoring may result in artificial escalation of diagnostic service provision for suspected cases.

TB hospitals are paid a fee-for-service for surgical cases. These are classified according to 7 Clinical Service Groups. Each Clinical Service Group attracts a different payment rate. This payment system can lead to cost inflation in the secondary care sector for three reasons. First, payment-per-case creates perverse incentives for providers that encourage them to increase the number of admissions and investigations to maximize funding. Second, because some types of cases attract more payment than others there is an incentive for providers to change the coding on diagnoses to those that will be reimbursed at higher rates. Interviews with key informants confirm that this practice exists but the scale on which it occurs is not known.

Third, interventions that attract higher per-diem rates are encouraged at the expense of other more cost-effective options.

Reimbursement rates for diagnostic services defined by STBP do not cover actual costs, thus forcing DH to cover difference from private revenues

A further problem with the hospital payment system is that the method used for calculating the Per-Diem reimbursement rate for conservative treatment is weighted according to what category of hospital is providing the service. Hospitals with a greater proportion of qualified staff, with expensive equipment on site, with a larger number of beds and more space per bed are reimbursed at a higher Per-Diem rate. This encourages retention of staff, the use of a large number of beds, the preservation of sizeable space per bed and investment in equipment. However, it discourages downsizing to improve efficiency because a downsized hospital is paid less per case and it also discourages shifts from inpatient care to community care because this results in a net loss of revenue.

HUMAN RESOURCES

Most of the PHC providers (FP/FN) interviewed noted that have been trained in TB related issues within the frames of the 8 months training in Family Medicine 4-5 years ago and since then not all of them have had an opportunity to exercise their TB related competencies in practice. Even though training programs supported by the GF and USAID projects covered a substantial number of providers, few respondents had a chance to benefit from. Target audience of such trainings was mainly medical staff

deployed under the vertical TB system, while the PHC providers lacked this opportunity. Almost all of them expressed willingness to have additional courses as part of continuous medical education. Especially the screening of patients for TB signs and symptoms and basic clinical monitoring of patients on TB therapy were named as most required topics for training by respondents. Lack of knowledge about TB is a serious problem in the general public as well. According to the assessment, health workers provide patients with very limited information during medical consultations.

Furthermore, PHC respondents also raised a problem related to lack of official linkages with the specialized TB services. Whereas such linkages exist are mainly informal and based on good working relationship between individuals on these two levels.

MEDICINES

Medicines for TB treatment are mainly procured from TGF and handed over to NCTBLD for further distribution to the TB cabinets at the DHs at no cost. The stock of medicines is defined based on the number of patients on treatment and forecast of new TB cases in defined time period and sent to the regional coordinator. The latter distributes medicines to the DHs. The TB specialist from DHs orders volumes and types of drugs to be delivered to village ambulatories for treatment of sensitive and resistant TB patients.

Lack of official linkage between PHC providers and Specialized TB services are observed.

At the end of the year most DH have a substantial stock balance at hand. Regardless the fact that these medicines are of humanitarian nature, according to the tax legislation of Georgia the DH is held responsible for tax obligations on the stock balance at the end of the year. Anecdotal evidence suggests that in selected cases taxes to be paid on unutilized stock of medicines is two-three times higher of the overall annual STBP budget.

Inadequate drug forecast pared with underutilization due to low identification rates puts DH under the tax regimen.

TESTING AND DIAGNOSIS

The function of testing and diagnosis being vertical and completely controlled by the NCTBLD has been fragmented with the changes proposed in 2012 (Table 5). In past skin tests for contact investigation and microscopy was performed at TB Dispensaries in each district (64 locations) of the country, while in the new system design the function of skin test for contact investigation was handed over to NCDC.

Table 6: Distribution of testing and diagnostic functions

	FP	DH/TB Hospitals	NCDC	NCTBLD
TB blood test		✓		✓
Mantoux testing for latent TB cases			✓	
Chest X-ray		✓		
Microscopy			✓	✓
Culture			✓	✓
Drug susceptibility testing				✓

The NCDC administers this function through contracting epidemiologists of the Municipal Public Health Departments by covering 50% of their monthly salary. Contact investigation, a core activity in TB control, is crucial to an effective program. As per KII findings, it is notable that in spite of short term training provided the district epidemiologists lack practical skills that potentially impacts effectiveness of contact

Laboratory services are functionally and geographically scattered

investigation function. All quality assurance practices, including the evaluation of TB control activities, entail a continuous analysis of outcomes and the processes leading to these outcomes. However, NCDC lacks capacity and funding for close monitoring and performance appraisal of epidemiologists.

Absence of electronic reporting system and variety of reforming obligations puts an administrative burden on the service delivery points

Delays in availability of reports/data for analysis

The microscopy test function has moved from TB Dispensaries and TB cabinets to 9 NCDC laboratories scattered in the country alongside with the sputum culture tests primarily performed at NCTBLD. Out of these nine laboratories only seven are operational at present, therefore the underserved locations are served by NCTBLD laboratory located in the capital. Drug susceptibility testing remained unchanged and is performed only at NCTBLD.

Functional distribution of lab test between two entities (NCDC and NCTBLD) alongside with geographical spread of few laboratories requires well organized and coordinated logistical support that ensures quality and timeliness of diagnostic services.

LOGISTICS

Logistics is managed and organized by the Regional units represented by Regional Coordinator, driver and supervisor. Regional Coordinator is paid by the GPIC through NCTBLD, while the supervisor and a driver are paid by the NCDC. Due to the lack of transport and staff financed under the STBP, the driver visits the district only once per week and delivers drugs according to predefined schedule, collects materials for lab test and delivers results of the test from previous week. The given logistical arrangement creates certain barriers for timely access of diagnostics and treatment. Namely, suspected TB patients and those being on treatment are requested to submit samples for lab testing only on the day when the logistical team's planned visit is and wait for test results for follow-up actions/treatment at a minimum of one week.

Fragmentation of TB testing and diagnostics data limits development of the evidence based annual budget

Logistical system deployed often results in delays of diagnosis and treatment initiation.

REPORTING AND ANALYSIS

Reporting system analysis revealed that reporting forms are available and utilized, however, these forms is mostly paper based filled in by respective staff at service delivery points. The burden of filling in different forms and registers (drug and patient registers, treatment and drug utilization forms) according to the key informants takes about 40%-50% of staff time.

Reporting forms are transferred to the regional center on a monthly base where the regional coordinator inputs information from all subordinated districts into the electronic form and generates regional aggregated data. Subject to the number of districts under the subordination of the regional coordinator preparation of aggregated electronic reports takes on average one to two months. The electronic data from all regions are inputted into the MIS system operated by the NCTBLD for further

analysis. The given system limits NCTBLD to analyze data on a timely manner and take corrective actions when deemed necessary.

TB is included in a list of notifyable diseases. The notifications are submitted to NCDC. The latter also receives TB related information on a quarterly base according to the state approved statistical form and performs analysis for the annual statistics. Though same forms are received by both, NCDC and NCTBLD, occasionally the difference in reports are observed which questions the reliability of TB surveillance data.

The situation is more complicated with the monitoring of the testing and diagnostic compliance with national guidelines. This system is largely fragmented (Table 6). Data on the number and type of lab and instrumental diagnostics test per case are collected by DH, TB hospitals and NCTBLD and reported to SSA for reimbursement purposes, while those performed by lab network of NCDC are maintained at NCDC. There is not a single depositary where aggregated data is stored and analyzed for evidence based annual budgeting purposes. Notwithstanding the fact, that there is not a single entity responsible for monitoring of the testing and diagnostic compliance with national guidelines.

No single entity is responsible for monitoring service quality

Table 7: Reporting of Diagnostic Tests

	REPORTED BY	REPORTED TO		
		SSA	NCDC	NCTBLD
Ambulatory lab test and diagnostics	DH, TB Hospitals, NCTBLD	✓		
Microscopy	NCDC & NCTBLD	✓	✓	✓
Culture	NCDC & NCTBLD	✓	✓	✓
Drug susceptibility testing	NCTBLD	✓		✓

SUMMARY OF FINDINGS

Analysis shows wide range of problems within the system negatively effecting on the success of TB program and services in the country. The Table 8 below summarizes barriers by level, type and impact on TB control functions.

Table 8: Barriers effecting TB service functions

Level of Barrier	Type of Barrier	IMPACT ON TB SERVICES						
		Case Identification	Diagnosis	Contact Investigation	Treatment	Supply and Logistics	Reporting & Analyses	IEC
Governance & Stewardship	Fragmented Governance and Management of TB Service provision	*						
Funding & Service Procurement	Fragmentation of funding sources between different state programs, service purchasers and implementing entities	*	*			*	*	*
Payment Methods	HSOs serve as a financial intermediary simply channeling funds from SSA to FP&FN	*					*	*
	Absence of management fee for HSOs in the state programs creates lack of motivation for effective programme implementation	*	*		*		*	*
	Village FP a FN payment system does not have a performance-related element	*	*		*			*
	Incentives for effective implementation of DOT and DOTS exists but formal supervision and monitoring system is absent				*			
	TB specialists at District Hospitals are offered a fixed monthly salary and does not have performance-related element		*				*	*
	Reimbursement rates for diagnostic services defined by STBP do not cover actual costs, thus forcing DH to cover difference from private revenues			*				
	In-patient service payment methods defined by the STBP creates incentives for cost inflation				*			
Service organization	Fragmentation of services on each level	*	*			*	*	*
	Village FP and FN Functions are poorly defined							
	Active Screening/case identification is hampered by absence of transportation means and motivation of PHC providers	*						
	Laboratory services are functionally and geographically scattered		*					
HR and Infrastructure	PHC providers are poorly equipped with knowledge and practical skills	*						*
Supply and Logistics	Inadequate drug forecast pared with underutilization due to low case identification rates puts DH under the tax regimen							
	Logistical system deployed often results in delays of diagnosis and treatment initiation		*		*			
Supervision and Monitoring	Absence of a single entity responsible for supervision and monitoring of service quality						*	
	Absence of Management fee in the state programs	*		*	*		*	*
Reporting	Absence of electronic reporting system and variety of reforming obligations puts an administrative burden on the service delivery points						*	
	Delays in availability of reports/data for analysis						*	
	Fragmentation of TB testing and diagnostics data limits development of the evidence based annual budget						*	

In summary, TB service are so fragmented that there is no difference between different health service organization models assessed under the given research.