



Policy Research Paper # 56

Methodological Guideline

NHA Sub-accounts for TB system in Kyrgyzstan

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The classification approach we use is based on the Producers' Guide (WHO, WB, USAID), which is derived from the System of Health Accounts (SHA) classification scheme, and the NHA classifications developed specifically for Kyrgyzstan. The classifications that were developed in this guideline was shared and agreed with the NHA team and TB experts based at the WHO Headquarters in Geneva.

Abbreviations

ACSM	Advocacy, Communication and Social Mobilization
BCG	Bacille Calmette Guérin
CHSD	Centre of Health System Development under KR MOH
DOTS	Strategy of TB Control, based on principles of direct supervised treatment/therapy
DOTS PLUS	Strategy of fight with multi resistant TB forms
OECD	Organization on economic cooperation and development
EQA	Ensuring quality control in laboratories
FGP	Family Group Practitioners
FMC	Family Medicine Centres
FS	Financial Sources
GFATM	Global Fund for Control of AIDS, TB and Malaria
GUIN	Main Department for Punishment Execution, MOJ KR
HCF	Health Care Facilities
HC	Health Function
HF	Financing Organizations
HP	Health Providers
ICRC	International Committee of Red Cross
ICHA	International Classification of Health Accounts
IPT	Isoniazid Preventive Therapy
KfW	German Development Bank
KR	Kyrgyz Republic
MHIF	Mandatory Health Insurance Fund , KR MOH
MIA	Ministry of Internal Affairs of the KR
MOD	Ministry of Defence
MOH	Ministry of Health
MOJ	Ministry of Justice
NGO	Non Governmental Organization
NHA	National Health Accounts
NTBC	National TB Centre
OOP	Out Of Pocket Payments
PAL	Pulmonary Health Practical Approach to Lung Diseases (Kyrgyz Finnish programme)
PHC	Primary Health Care
PPM	Public-Private Mix administration
PTDF	Pre-Trial Detention Facility
RC	Economic Classifier by Line Items
RCI&E	Republican Centre of Informatics and eepidemiology
RMIC	Republican Medical Informational Centre, KR MOH

SES	Sanitary -Epidemiological Station or Service
SWAp	Sector Wide Approach
TB	Tuberculosis
USAID	US Agency for International Development
WHO	World Health Organization

Introduction

National Health Accounts (NHA) provide a complete description of all resources in the health sector, including public spending, household spending and donor spending. It allows policy makers to follow how resources are allocated amongst different health sector priorities, and to check whether these funds are allocated efficiently and equitably. It can also be used to track expenditures to improve transparency and accountability.

The NHA in Kyrgyzstan were developed on the basis of *Guidelines to Producing National Health Accounts*, also known as the *Producers' Guide* (World Health Organization, World Bank, and United States Agency for International Development 2003) with application of the methodology used in the international classification of health accounts (ICHA) and budget classification of the Kyrgyz Republic. The NHA Working Group, which included representatives from the Ministry of Health, Mandatory Health Insurance Fund, the Center for Health System Development as well as representatives from the National Statistical Committee and the Ministry of Finance, adapted the NHA methodology to allow alignment of international NHA classifiers to classifiers accepted in Kyrgyzstan (including budget classifiers): changes which were also reflected in the tabulations used in reporting of the NHA. The first NHA study and report was produced in Kyrgyzstan in 2006 using 2004 data. The second NHA report, which used 2006 data, was produced in 2008, and captured both the public and private expenditures within the health system.

NHA do not capture expenditures for specific diseases or health programs. Hence, sub-analyses for specific conditions or programs have involved development of disease-specific NHA sub-accounts; for example NHA sub-accounts for HIV/AIDS, tuberculosis (TB), malaria, reproductive health and child health. NHA sub-accounts on specific diseases and health programs allow more detailed and comparative analysis of health system financing. For TB, sub accounts allow provision of detailed information to national policy makers, to answer a number of critically important questions, such as:

- How are funds mobilised for TB control?
- What is the burden of TB expenditures on households (HH) and governments?
- Are the current funds sufficient to achieve the targets set?
- Who provides services for TB patients?
- What services do they provide?
- What resources do they use?

In 2007, the Kyrgyz Ministry of Health and Mandatory Health Insurance Fund indicated their readiness and willingness to start the development of NHA sub-accounts for TB. The main objective of this exercise is to obtain more detailed information on the size of financing and financial flows in the TB system, reinforce the usefulness of NHA as an analytical tool and further improve the quality of the National Health Accounts.

To date, worldwide, around 40 countries have developed NHA sub-accounts on HIV/AIDS. Among the CIS countries NHA sub-accounts have been developed in Russia and Ukraine. In the CIS, the first NHA sub-accounts for TB was developed in Georgia with the assistance of USAID.

Current methodological guideline aims to address any methodological issues to develop NHA sub-accounts for TB suitable for the Kyrgyz context. Within the framework of any disease-specific sub-accounts it is necessary to identify the sector and disease boundaries and provide appropriate definitions for the types of expenditures that should form the scope of the sub-analysis. The next step is to determine how these expenditures will be classified. The approach we have adopted allows for international comparability while, at the same time, taking into account the country context to appropriately tailor the sub-analysis to the epidemic and to address national policy priorities.

1. Boundaries of TB programme

The boundaries of a TB control programme set the limits for types of expenditures captured in an NHA sub-analysis for TB services in the country. The TB sub-analysis includes both the healthcare services and non-medical activities which relate to the provision of care for TB.

Definition of TB patient and expenditures for TB programme

Tuberculosis patient is as a person who has been diagnosed with infection caused by *Mycobacterium tuberculosis*: a potentially fatal contagious disease that can affect almost any part of the body but is mainly an infection of the lungs.

TB expenditures include the funding of activities/services provided to TB patients that impact on their health status and those aimed at preventing TB transmission among the general population. TB expenditures are subdivided into (1) direct health expenditures related to the TB programme, (2) health related expenditures for the TB programme, and (3) non-health care expenditures related to the TB programme.

Direct health expenditures related to the TB programme include the funding allocated to the following activities:

- TB Prevention activities:
 - Isoniazid Preventive Therapy (IPT)
 - Bacille Calmette Guérin (BCG)
 - Advocacy, Communication and Social Mobilization (ACSM)
 - Practical Approach to Lung Diseases (PAL)
 - Active Mass Screening
- Treatment and diagnostic services for TB patients:
 - First line and second line drugs
 - Sputum smears and microscopy
 - Culture
 - Drug sustainability testing
 - Diagnostic imaging for TB patients
- Administration of TB services for:
 - Prevention, monitoring, and treatment activities for TB
 - Routine programme management and supervision activities for DOTS¹
 - EQA: ensuring quality control in laboratories
 - Support of social security and health insurance
 - PPM (Public-Private Mix) administration

Health related expenditures for TB programme includes two types of expenditures:

- Capital formation for provider institutions
 - Equipment (microscopes, fridges, ice box (for transporting sputum), etc.)
- Education and training of health personnel
 - Training abroad
 - National training
 - Research and development (R&D) for TB treatment and control

Addendum items, which are non-health expenditures include:

- Social rehabilitation
- Social support

¹ DOTS, as defined by WHO comprises xxx, and in the Kyrgyz context consists of the following: (i)

Space and time boundaries

Space boundaries

The space boundary for TB sub-accounts is not limited to expenditures within the borders of the country. The sub-analysis includes health expenditures incurred by Kyrgyz citizens outside of the Kyrgyz Republic, but excludes expenditures of foreign citizens who are temporarily within the country and receive services for TB.

Time boundaries

The NHA sub-accounts for TB cover the period January–December 2006 as this time period coincides with the fiscal year in Kyrgyzstan.

Table 1. Functional Definition and Boundaries by TB activities

Criteria	Boundaries	Obstacles
Space	<p>Includes direct health and health-related expenditures incurred by Kyrgyz citizens and residents who are detected with TB.</p> <p>Excludes TB expenditures incurred by foreign citizens in Kyrgyzstan as these expenditures are not relevant to policy.</p> <p>Includes donor spending (both cash and in-kind) whose primary purpose is the production of health and health-related goods and services in Kyrgyzstan.</p>	Estimating donor spending on the planning and administration of such health and non-health assistance
Monetary unit	<p>All foreign monetary units are converted into Som (the local currency).</p> <p>For further analysis the results could be expressed in US dollars and PPP for international comparisons.</p>	
TB patients	<p>Individuals registered at the national recording system as TB patient.</p> <p>Distinguish by:</p> <ul style="list-style-type: none"> ▪ <u>New cases</u>: new smear-positive, new smear-negative/unknown/not done, other new and new extrapulmonary; ▪ <u>Readmission cases</u>: relapse, treatment after failure, treatment after default and other re-treatment); ▪ <u>MDR TB</u>: is defined as TB that is resistant at least to INH and RMP. Cases that are multiply-resistant to any other combination of anti-TB drugs but not to INH and RMP are not classed as MDR-TB 	

Prevention activities	<p>Includes expenditures for all types of TB vaccination and other preventive activities undertaken within the national TB programme.</p> <p>Includes estimated expenditures for annual preventive care (screening) done by the MoH, MoE and Ministry of Justice, donors and others.</p>	<p>Difficult to distinguish TB preventive activities amongst other preventive activities conducted within the national TB programme as a lump sum payment is provided for these activities.</p> <p>Difficult to distinguish the expenditures directed specifically for TB preventive activities out of all healthcare expenditures by the MoJ.</p>
Diagnostics	Includes estimated expenditures for lab-tests and x-rays/diagnostic images at all levels of care.	Difficult to isolate expenditures for lab-tests and x-rays/diagnostic images at the health facilities level, as a lump sum payment is provided for any-kind of laboratory test and x-rays but not only for TB.
Therapies (treatment strategies)	<p>Includes all curative care treatment for TB patients, including TB patients in prisons.</p> <p>Excludes expenditures reported by the national HIV/AIDS program, which also may benefit TB patients who are detected as having HIV/AIDS.</p>	If a patient is detected as being HIV positive while he/she is under TB treatment then he/she will finish treatment at TB facility and then be referred for to AIDS centre for HIV/AIDS treatment.

2. Classifications for NHA sub-accounts for TB

To reflect the structure of TB service provision and show the flow of funds within the TB services the classifications for TB sub-accounts use the NHA framework based on the principles of international classification of expenditures (*“Guideline to producing NHA” (WHO, 2003)*) and budget classification of the Kyrgyz Republic. Existing budget classifications used by the Ministry of Finance and Central Treasury for the State Budget development and control formed the basis for NHA sub-accounts classifications for TB. Basic structure of international classification is used for financing sources and financing organizations.

Financing sources

TB services in Kyrgyzstan are financed from three main sources: (i) *public funds (FS 1)*, (ii) *private funds (FS 2)* and (iii) *external financing (FS 3)*.

Table 2. Classification scheme for financing sources (FS)

FS 1 Public funds
FS 1.1 Territorial government Funds (<i>State budget</i>)
FS 1.1.1 Central government revenue (<i>Republican budget</i>)
FS 1.1.2 Provincial government revenue (<i>Local budgets</i>)
FS 1.2 Social Fund
FS 2 Private funds
FS 2.1 Contributions from employers
FS 2.2. Household funds
FS 2.2.1 <i>Co-payment</i>
FS 2.2.2 <i>Special means (fee for service)</i>
FS 2.2.3 <i>Out-of-pocket payments (un-official payments)</i>
FS 2.2.4 <i>Other</i>
FS 2.3 Not-for-profit institutions servicing individuals
FS 3 External financing²
FS 3.1 SWAp
FS 3.2 Parallel financing (Donors)

FS.1 Public Funds: include the state budget and the budget of the Social Fund of the KR. The State Budget consists of transfers from the Republican (FS 1.1.1) and Local budgets (FS 1.1.2) of oblasts.

FS.2 Private Funds: the following types of revenues from households are reflected in the structure of private funds (FS 2.2);

Co-payment Funds (FS 2.2.1) – the participation of citizens in the payment for healthcare services received by them from healthcare facilities which operate in the system of a Single Payer, and which are beyond the scope of financing provided for in the Program of State Benefits for delivery of medical and sanitary care to citizens of the Kyrgyz Republic.

Special Funds (FS 2.2.2) – the funds of health facilities and agencies that are generated when paid by patients and legal entities when they get certain health care and services.

² In accordance with ICHA this category has been renamed from “External Aid” to “External Financing”

Households' Out-of-Pocket Payments (FS 2.2.3) – all payments of households made in the health system of the country including direct payments of population when buying drugs in pharmacies.

Other (FS 2.2.4) – all other relevant types of expenditures that can not be classified in the above categories.

Not-for-profit institutions (FS 2.3), servicing individuals – the funds allocated by national NGOs or non-commercial organizations.

FS.3 External Financing: those funds which come from abroad (other world) in order to finance the health system of KR in the current year. The external resources include external loans, grants and technical assistance provided by foreign legal entities and physical persons.

SWAp (FS 3.1) – the donor funds allocated to support the National Health Strategy within the context of Sector-Wide Approach (SWAp) which began in 2006.

Parallel financing (FS 3.2) – relevant expenditures of all other donors which are providing funds to support any TB programmes

Financing organizations

Financing organizations in the Kyrgyz NHA system for TB services are divided into two main groups: (i) *Public sector (HF.A)* and (ii) *Non-governmental sector (HF.B)*.

Table 3: Classification scheme for financing organizations/Agents (HF)

<p>HF.A STATE GOVERNANCE SECTOR</p> <p>HF1.1 State run public authorities except social welfare funds</p> <p> HF 1.1.1 Central governance bodies</p> <p> HF 1.1.1.1 Ministry of Health</p> <p> HF 1.1.1.3 Ministry of Justice (GUIN)</p> <p> HF 1.1.1.4 Ministry of Education</p> <p> HF 1.1.1.6 Ministry of Internal Affairs</p> <p>HF 1.2 Social welfare funds</p> <p> HF 1.2.1 MHIF under MOH KR</p> <p>HF.B NON-GOVERNMENTAL SECTOR</p> <p>HF 2.3 Private household payments</p> <p>HF 2.4 NGO</p> <p>HF. 3 REST OF THE WORLD</p> <p>HF 3.1 Donor organizations</p>
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HF.1 State Governance Sector

The Territorial Departments (HF 1.1) include financing agents that have intra-sector health facilities under certain ministries and agencies of KR, in particular the following:

- HF 1.1.1.1 Ministry of Health
- HF 1.1.1.3 Ministry of Justice (GUIN)
- HF 1.1.1.4 Ministry of Education
- HF 1.1.1.6 Ministry of Internal Affairs

MHIF under MOH KR (HF 1.2) – the Mandatory Health Insurance Fund, national-level financing organisation that performs functions of a single payer in the health system of the KR and provides financing within the health sector from the State Budget as well as health insurance contributions from the employers.

HF.2 Non-Public Sector

Out-of pocket payments of households (HF 2.3) – all expenditures of households incurred within the health system of the KR, including direct payments for drugs purchased at pharmacies .

Non-commercial facilities servicing the households (HF 2.4) are the national NGOs or non-commercial institutions allocating funds within the health system of the country.

HF 3 Donor organizations: the organisations that allocate funds from sources outside of the KR health sector, such as state and private loans, grants, and technical assistance.

Providers of health services

Providers of TB health services in the health system of the Kyrgyz Republic, both public and private, are divided into main categories and sub-categories. They are classified by the type of care delivered and goods in accordance with the ICHA and budget classification of the Kyrgyz Republic.

Table 4: Classification scheme for health providers (HP)

<p>HP 1 Hospitals</p>	<p>HP 1.1 General hospitals (<i>Territorial Hospitals</i>) HP 1.2 Mental Health and Substance Abuse Hospitals HP 1.2.1 Psycho-neurological hospitals (dispensaries) HP 1.3 Specialty Hospitals (other than mental health and substance abuse) HP 1.3.2 TB hospitals HP 1.3.2.1 National TB Centre HP 1.3.2.2 Centre for TB fighting (City +Oblast) HP 1.3.2.3 TB hospitals (adult+children) HP 1.3.2.4 TB dispensary HP 1.3.2.5 TB hospitals in Prisons</p>
<p>HP 2 Nursing and residential care facilities</p>	<p>Care for patients and rehabilitation centers HP 2.1 Medical rehabilitation hospitals HP 2.1.1 TB Rehabilitation Centre HP 2.2 Residential mental retardation, mental health and substance abuse facilities Sanatoriums for TB patients HP 2.9 All other residential care facilities HP 2.9.1 Sanatoriums for TB patients</p>
<p>HP.3 Providers of ambulatory health care</p>	<p>Polyclinics and services of physicians and nurses HP 3.1 FMC and FGP services HP 3.1.1 FMC HP 3.1.2 FGP</p>
<p>HP 4 Retail Sale and other providers of medical goods</p>	<p>Retail and other providers of medical goods HP 4.1 Pharmacies</p>
<p>HP 5 Provision and administration of public health programmes</p>	<p>Sanitary-preventive services and facilities HP 5.1 Blood transfusion stations HP 5.2 Sanitary-epidemiological and anti-plague stations (Public health surveillance) HP 5.8 AIDS Control Centers HP 5.9 Health centers and health education activities (public health centers)</p>
<p>HP 6 Administration of general management of health care and health insurance</p>	<p>Not categorized health related activities and services HP 6.1 Central Office of the Ministry of Health HP 6.2. MHIF administration office HP 6.3 Centralized accounting offices HP 6.3.1 Centralized accounting offices (MOH)</p>

<p>HP 7 Other producers of health services</p> <p>HP 8 Institution providing health related services</p> <p>HP 9 External funding</p>	<p>HP 6.3.3 Other health expenditures offices</p> <p>HP 6.9 All other providers of health administration</p> <p>HP 6.9.1 National TB Centre</p> <p>HP 7.1 Private households as providers of care</p> <p>HP 7.3 All other industries as secondary producer of health care</p> <p>HP 7.3.1 Centers providing social support</p> <p>HP 8.3 Other institutions providing health care services</p> <p>External funding</p>
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Functions

This classification shows the functional breakdown by type of medical goods and services delivered by TB providers in the Kyrgyz health system, with consideration of functions directly related to the current health sector activity and financed both from public resources and from OOPs.

Table 5: Classification scheme for distribution of health services by function (HC)

HC.1 Services of Curative Care
HC.1.1 Inpatient curative care
HC.1.1.1 New cases
HC.1.1.1.1 Internal medicine (First line drug)
HC.1.1.1.2 Surgery
HC.1.1.1.3 Other
HC.1.1.2 Retreatment cases
HC.1.1.2.1 Internal medicine (First line drug)
HC.1.1.2.2 Surgery
HC.1.1.2.3 Other
HC.1.1.3 MDR TB
HC.1.1.3.1 Internal medicine (First and second drugs)
HC.1.1.3.2 Surgery
HC.1.1.3.3 Other
HC.1.3 Outpatient curative care
HC.1.3.1 New cases
HC.1.3.1.1 First line drug
HC.1.3.1.2 Other
HC.1.3.2 Retreatment cases
HC.1.3.2.1 First line drug
HC.1.3.2.2 Other
HC.1.3.3 MDR TB
HC.1.3.3.1 First and second line drugs
HC.1.3.3.2 Other
HC.2. Services of Rehabilitative Care
HC.3. Services for long-term nursing care
HC.3.1 Inpatient long-term nursing care (including Hospice)
HC.3.3 Long term nursing care: home care
HC.4 Ancillary services to medical care
HC.4.1 Clinical laboratory : diagnostic tests
HC.4.1.1 Smears
HC.4.1.2 Culture
HC.4.1.2 Culture DST (drug susceptibility testing)
HC.4.2 Diagnostic imaging for TB patients
HC.4.3 PPD test (skin test)
HC.4.9 All other miscellaneous ancillary services
HC.5 Medical goods dispensed to outpatients
HC.5.1 Pharmaceuticals and other medical non-durables for TB patients
HC.5.1.1 Prescribed medicines
HC.5.1.2 Over-the-counter medicines
HC 5.1.3 Other medical non-durables
HC.5.2 Therapeutic appliances and other medical durables for TB patients

HC. 6 Prevention and public health services to fight against TB

- HC.6.1 Maternal and child health; family planning and counselling for TB patients
 - HC.6.1.1 IPT (Isoniazid Preventive Therapy)
 - HC.6.1.2 BCG for newborn children
 - HC.6.1.3 Other
- HC.6.2 School health services fighting TB
- HC.6.3 Prevention of communicable diseases: prevention of TB
 - HC.6.3.1 Ensure tuberculosis infection control in health care and congregate settings
 - HC.6.3.2 Tracing of the persons had contacts with TB patients
 - HC.6.3.3 Screening of the persons had contacts with TB patients
 - HC.6.3.4 BCG (Bacille Calmette Guerin vaccine) other than to newborns)
 - HC.6.3.5 Advocacy, Communication and Social Mobilization (ACSM)
 - HC.6.3.6 Routine surveillance and monitoring
 - HC.6.3.7 Defaults tracing
 - HC.6.3.8 DOTS – routine programme management and supervision activities
 - HC.6.3.9 Practical Approach to Lung diseases (PAL)
 - HC.6.3.10 Training
 - HC.6.3.11 IPT for adults
 - HC.6.3.12 Active Mass Screening
 - HC.6.3.13 EQA: ensuring quality control in laboratories
 - HC.6.3.14 Surveys to measure TB burden and impact of TB control (periodic surveys)
 - HC.6.3.15 PPM (Public-Private Mix) administration
 - HC.6.3.16 All other prevention of TB activities
- HC.6.9 All other miscellaneous public health services related to TB

HC.7 Health administration and health insurance for TB activities (other than TB program management and administration)

- HC.7.1 General government administration of health
 - HC.7.1.1 General government administration of TB programme and implementation
 - HC.7.1.2 Administration, operation, and support of social security (as payer of TB treatment)
- HC.7.2 Health administration and health insurance: private
 - HC.7.2.1 Health administration and health insurance: private social insurance (as payer of TB treatment)

HC. nsk. HC expenditure not specified by kind

HCR.1- 5. Health-related functions

- HCR.1 Capital formation
 - Equipments
 - Buildings
 - Others
- HCR.2 Education and training of health personnel
 - Training abroad
 - National training
 - Other
- HCR.3 Research and development in TB
- HCR. 4 Health-related expenditure not specified by kind
 - AD.1 Social rehabilitation
 - AD.2 Social support

Line Items of expenditures

This classification scheme shows the use of financial resources by items of expenditures which correspond to budget classifier used in the Kyrgyz Republic. These items of expenditures are divided in two main categories: recurrent expenditures and capital investments which, in turn, are further disaggregated and demonstrate more complete picture of expenditures of health service providers.

Table 6: Economic classifier of health expenditures (RC)

RC 1 Recurrent expenditures
RC 1.1 Staff related expenditures
RC 1.1.1 Salary
RC 1.1.2 Contributions to Social Fund
RC 1.1.3 Travel allowance
RC 1.2 Procurements and services
RC 1.2.1 Procurement of consumables
RC 1.2.1.1 Expenditures on procurement of medicines and bandages
RC 1.2.1.2 Expenditures on procurement of equipment, inventory and consumables
RC 1.2.1.3 Expenditures on food
RC 1.2.2 Services
RC 1.2.2.1 Payment for water, electricity, heating and telephone
RC 1.2.2.2 Expenses on rent and maintenance of own vehicles
RC 1.2.3 Other procurements and services
RC 1.5 Subsidies to providers
RC 1.6 Stipends
RC 2 Total capital investments
RC 2.2 Procurement of main equipment and durables
RC 2.4 Capital repair

3. TB sub-accounts tables

Within the framework of the TB sub-accounts, the main actors in the TB system in Kyrgyzstan are divided into the following categories:

- **Financing Sources (FS)** – are funds, such as public or private, allocated to financing agents and health care providers, recorded in health accounts of the country. For example, republican budget, OOP, NGO, donors, etc.
- **Financing Agents (HF)** – are the ministries and other agencies that manage the funds allocated by the Financing Sources and use these funds for payment or purchase of health services, medical supplies and other activities recorded under national health accounts of the country. For example, the MoH, Ministry of Economy and Finance, Ministry of Justice, MHIF, OOP, NGOs, etc.
- **Health Care Providers (HP)** – a category of health sector actors, which are the end users or beneficiaries of funds and receive these in exchange for performance results recorded in health accounts. For example, hospitals, FMC, FGP, etc.
- **Health Care Functions (HC)** – are the types of healthcare services and activities delivered by healthcare providers, recorded in country health accounts. For example, inpatient care, outpatient care, etc.
- **Economic Classifier (RC)** – refer to the funds allocated to healthcare providers, which are allocated based on economic principles/articles in accordance with economic classifiers of expenditures/budget classifier. For example, the recurrent expenditures include salary, utilities, etc.

There are five tables developed to reflect the trends of financial flows between the health system actors as follow:

- Financing sources → financing agents;
- Financing agents → healthcare providers;
- Health care providers → functions;
- Financing agents → functions;
- Healthcare providers → expenditure items;

Table 1 reflects the financial flows from *financing sources* to “*financing agents*” ($FS \rightarrow HF$), i.e. allows estimation of the share of funds allocated to TB system by financing source and finance agents. In addition, it indicates the source of funds and also shows the funding sources used by each financing agent. This table reflects critical aspects of distribution of financial contributions to the health system among the major types of financing sources.

Table 2 reflects the financial flows from *the financing organizations* to *healthcare providers* ($HF \rightarrow HP$) and indicates ‘who’ finances the providers and ‘what’ health services are financed. This table demonstrates the flow of funds from financing organizations to health service providers, which in a consistent way allows description of those who pay and for what they pay in the health system.

Table 3 shows how expenditures on different *health functions* are channeled through the various types of *providers* ($HP \rightarrow HC$), i.t. it tells “who does what”. This table provides a useful perspective on the contribution of different types of providers to the total spending on specific types of services. For example, in many countries community public health services are

provided by hospitals as well as by ambulatory health care providers. Having this table, it is possible to examine total expenditure on public health programmes and see the shares of spending accounted for by hospitals and ambulatory care providers, to gain a perspective of where spending for this important health system function is located.

Table 4: shows the financial flows from *the financing agents* to *particular functions* ($HF \rightarrow HC$) and indicates who finances what types of services in the TB control system. This table reflects the valuable issues essential to consider when formulating policies of health finance; for example, distribution of resources by priority services (infection control). This table enables representation of data on general and specific distribution of resources among the main types of health goods and services; also this table represents the information of public and private financing agents which are performing various functions.

Table 5 provides information on expenditures of *healthcare providers by items* ($HP \rightarrow RC$). This table enables presentation of detailed characteristic of how both the public and private care providers distribute funds economically, i.e. streamline the funds either to the current needs or capital long-term investments. A similar analysis of expenditures by providers allows development of policies for payroll, investments, expenditures for pharmaceuticals and other important expenditures.

4. Data collection

The process of data collection for TB sub-accounts is based on information on public expenditures from the official reports (Central Treasury, MHIF, etc) and surveys (provider, donor and user). The sources of data are presented in the table 7.

Table 7: Sources of data

Funding	Source
<p><u>Public expenditures</u></p> <p>Republican Budget</p>	<p>Financial Reports from the Central Treasury under the MoF</p> <p>Financial Reports from the Ministry of Health</p> <ul style="list-style-type: none"> - TB sub-accounts tables to be filled by the MoH specialist <p>Health facilities, the data from internal reporting systems (other than TB sub-accounts tables)</p>
<p>MHIF</p>	<p>Financial Reports from the MHIF reporting system</p> <p>A provider survey to identify expenditures for:</p> <ul style="list-style-type: none"> - TB units within Territorial Hospitals (General Hospitals); - TB specialists (TB office) within the outpatient care facilities (FGP, FMC).
<p><u>Non-public expenditures</u></p> <p>Co-payment and special means Special means</p>	<p>Financial Reports from the Ministry of Health Financial Reports from the MHIF reporting system</p>
<p>Out of pocket expenditures</p>	<p>A user survey:</p> <ul style="list-style-type: none"> - Sample the target population – TB patients - Develop the questionnaire - Field work to gather data - Data analysis
<p><u>External Funding</u></p> <p>Donors (Grants, humanitarian aids)</p>	<p>Donor Reports (GF, WHO, etc.): MoF: Public Investment Programme (PIP)</p> <p>Donor survey:</p> <ul style="list-style-type: none"> - Develop questionnaires: tables to fill in by the donors; <p>Social Fund:</p> <ul style="list-style-type: none"> - Reports on humanitarian aid

Provider survey

The structure of delivery of TB services in Kyrgyzstan is presented at different levels and in different facilities, such as specialized TB hospitals and TB Wards in General (Territorial) Hospitals at the secondary level; and TB specialists (room) in FMC/FGPs at the primary levels. To data from the specialized TB hospitals are received from the official reports identified in the table 7. However, the general (territorial) hospitals and FMC/FGP report their expenditures in aggregate manner. To resolve this dilemma a provider survey is needed to conduct. Two survey instruments were developed to administer at two types of facilities: General (Territorial) Hospitals and FMCs/FGPs. In Annex 1 the instruments are presented.

- (1) *TB Wards in the Territorial Hospitals*: the questionnaire was administered at all 7 General health facilities including Territorial Hospitals and Republican Psychiatric Hospital (see below tables 8). The instrument was sent to the Territorial MHIFs, which supervise each of the Territorial Hospitals to assist to fill in the tables. The representatives of TD MHIF were trained by the TB sub-accounts team.

Table 8: TB facilities in Kyrgyzstan 2007

Name	Amount
Tertiary level	
TB Ward within Republican Psychiatric Hospital	1
Secondary level	
TB Ward within City TH	6
Primary level	
TB room (office) in FMCs/FGPs	54

Source: Socium Consult, National TB Centre, 2008

- (2) *TB specialists (rooms) in FMCs/FGPs*: there are 54 rooms at the primary care level (table 8). Based on the epidemiological data (table 9) the highest prevalence of TB in 2007 was recorded in Chui, Osh oblasts and in two biggest cities Bishkek and Osh over 100 cases per 100,000 populations. This mapping exercise justifies the selection of the region (oblast) to conduct the survey. Two districts were studied in these 2 oblasts, selected on the basis of prevalence. .

In accordance with the statistics norms, a sample of 15 FMCs/FGPs provides 20-30% confidence interval at 95% confidence level, which allows estimating the total expenditures at the primary levels.

Table 9: TB Prevalence and mortality in 2006-2007, per 100,000

Oblasts	Prevalence		Mortality	
	2006	2007	2006	2007
Kyrgyzstan	110,9	108,8	10,2	9,6
Batken	84,1	80,3	5	6,6
Jalalabad	97,3	91,9	6,8	6,1
Issyk-Kul	66,6	74,8	3,7	3,5
Naryn	101,2	89,1	6,7	7,8
Osh	97,3	102,9	9,2	7,8
Talas	110,8	109,8	7,4	10,6
Chui	161	158,5	16	12,1
Bishkek City	143,4	131,7	17,4	18,1
Osh city	96,4	103,3	12,8	12,0
Prisons	1 995,8	1 767,0	505,5	430,1

Source: National TB Centre, 2008

Two questionnaires consist of 3 parts: (i) data on general total expenditure of the health facility by sources, (ii) expenditures of TB Ward/room by line items; and (iii) expenditures of TB Ward/room by activities (functions). These questionnaires don't self administered; the TB sub-accounts team assisted the financier/accountant to fill in the tables in the questionnaire.

Donor survey

To identify methodological approach to get comprehensive data on external funds that was adapted to the local context an experience of other countries was reviewed. According to the revision a questionnaire is developed which includes the total expenditures by sources, activities (functions) and line items if it's applicable. All the donors were included into the survey.

The instrument was piloted with a few donors; mainly there were comments on the process of conducting this survey and one technical. One of them was how to administer this questionnaire; it's necessary to meet with each donor and explain the reason of this survey and assist the financier to fill in the tables. The final questionnaire is presented in Annex 2.

User survey

To capture out of pocket expenditures by households is needed to conduct a user survey. It's necessary to identify the target population – TB patients and sample them to have it representative at oblast level. Besides, the questionnaire has to be developed to gather all the necessary data.

5. Conclusions and Recommendation

The following aspects have been identified while data was gathering and the process of institutionalization was on the way:

- The data on external financing was gathered but it was not complete fully. The reason is that because not all international donors provided detailed requested information. Besides, most of the donors provided data in an aggregated form and it couldn't be detailed in the format of the existing NHA classifications.
- Despite the fact that providers' data by functions was collected at health facility levels directly from providers but the data turned out insufficient and not accurate. Thus, data on financing of providers by functions differs a lot from the data on financing of line items.
- Data on out of pocket expenditures is not complete. Only special funds are reflected in this report which can be derived from reports on state financing; but expenditures of households incurred directly at TB facilities was not reflected in the analysis due to the fact that users' survey was not conducted because of time and budget constraints.

Recommendations

- To identify the institution ("Institutional home") that will be in charge of further introduction of NHA Sub-accounts for TB into the TB system is an important step for further development of NHA Sub accounts for TB in Kyrgyzstan. For example, MHIF is in charge of development of general NHA in the Kyrgyzstan. So, it is recommended to institutionalize sub account on TB either into the Republican Centre of Information and Epidemiology or National TB Centre. In a long-term perspective, when TB system will be included into «Single Payer» System, then this activity can be transferred to MHIF.
- It is necessary to continue work on gathering data from donors/international organizations. In particular, to conduct a detailed donor survey not only on their total expenditures but also by their breakdown that should assist to conduct more qualitative data analysis on TB expenditures.
- In order to solve the issue of insufficiency of data on providers by functions, it is necessary to develop a guideline how to disburse and calculate expenditures in the health facilities when direct funds for some TB services are not intended but only a lump sum is directed. Once the guideline is developed the trainings for providers' personnel could be hold if necessary.
- To fill in the gap on out of pocket payments data, it is necessary to conduct user survey (TB patients).

ANNEXES

Annex 1: Questionnaire to study the performance of TB health facilities

Q. 1.1: Questionnaire for TB room in the FMCs/FGPs

Name of organization _____
 Name of respondent _____
 Respondent's position _____
 Telephone _____
 Date of data gathering _____

Part 1. Total expenditures of health facility in 2007

<i>1. Please specify the budget sources for your health facility (soms)</i>	
Government expenditure	
MHIF funds	
Fee for services	
Donor funds	
Other sources (identify): _____	
TOTAL	

Part 2. Expenditures of health facility for the activities related to TB

2. Please specify the amount of expenditures for TB activities by line items (soms)	
2.1 Staff related expenditures	
2.1.1 Salary	
2.1.2 Contributions to Social Fund	
2.1.3 Travel allowance	
2.2 Procurements and services	
2.2.1 Procurement of consumables	
2.2.1.1 Expenditures on procurement of medicines and bandages	
2.2.1.2 Expenditures on procurement of equipment, inventory and consumables	
2.2.1.3 Expenditures on food	
2.2.2 Services	
2.2.2.1 Payment for water, electricity, heating and telephone	
2.2.2.2 Expenses on rent and maintenance of own vehicles	
2.2.3 Other procurements and services	
2.3 Total capital investments	
2.3.1 Procurement of main equipment and durables	
2.3.2 Capital repair	

3. Please specify the amount of expenditures for TB activities by activities (soms)	
3.1 <i>Diagnostic</i>	
3.1.1 Smears	
3.1.2 Culture	
3.1.3 Culture DST (drug susceptibility testing)	
3.1.4 Diagnostic imaging for TB patients	
3.1.5 PPD test (skin test)	
3.1.6 All other miscellaneous ancillary services (indicate) _____	
3.2 <i>Treatments with drugs</i>	
3.2.1 Drugs, prescribed according to DOTS	
3.2.2 Other drugs (indicate) _____	
3.3 <i>Prevention activities</i>	
3.3.1 <i>Maternal and child health; family planning and counselling for TB patients</i>	
3.3.1.1 IPT (Isoniazid Preventive Therapy)	
3.3.1.2 BCG for newborn children	
3.3.1.3 Other (indicate) _____	

3.3.2 <i>Prevention of communicable diseases: prevention of TB</i>	
3.3.2.1 Ensure tuberculosis infection control in health care and congregate settings	
3.3.2.2 BCG (Bacille Calmette Guerin vaccine) other than to newborns	
3.3.2.3 Advocacy, Communication and Social Mobilization (ACSM)	
3.3.2.4 Routine surveillance and monitoring	
3.3.2.5 Defaults tracing	
3.3.2.6 DOTS – routine programme management and supervision activities	
3.3.2.7 Practical Approach to Lung diseases (PAL)	
3.3.2.8 Training	
3.3.2.9 IPT for adults	
3.3.2.10 Active Mass Screening	
3.3.2.11 Other (identify)	

Q. 1.2: Questionnaire for TB Hospitals/Dispensers, TB unites within the Territorial Hospitals and Rehabilitation centers

Name of organization _____
Name of respondent _____
Respondent's position _____
Telephone _____
Date of data gathering _____

Part 1. Total expenditures of health facility in 2007

1. Please specify the budget sources for your health facility (soms)	
Government expenditure	
MHIF funds	
Co-payment	
Fee for services	
Donor funds	
Other sources (identify): _____	
TOTAL	

Part 2. Expenditures of health facility for the activities related to TB

2. Please specify the amount of expenditures for TB activities by line items (soms)	
2.1 Staff related expenditures	
2.1.1 Salary	
2.1.2 Contributions to Social Fund	
2.1.3 Travel allowance	
2.2 Procurements and services	
2.2.1 Procurement of consumables	
2.2.1.1 Expenditures on procurement of medicines and bandages	
2.2.1.2 Expenditures on procurement of equipment, inventory and consumables	
2.2.1.3 Expenditures on food	
2.2.2 Services	
2.2.2.1 Payment for water, electricity, heating and telephone	
2.2.2.2 Expenses on rent and maintenance of own vehicles	
2.2.3 Other procurements and services	
2.3 Total capital investments	
2.3.1 Procurement of main equipment and durables	
2.3.2 Capital repair	

3. Please specify the amount of expenditures for TB activities by activities (soms)	
3.1 Diagnostic	
3.1.1 Smears	
3.1.2 Culture	

3.1.3 Culture DST (drug susceptibility testing)	
3.1.4 Diagnostic imaging for TB patients	
3.1.5 PPD test (skin test)	
3.1.6 All other miscellaneous ancillary services (indicate)	
3.2 Treatment	
3.2.1 New cases	
3.2.1.1 Internal medicine (First line drug)	
3.2.1.2 Surgery	
3.2.1.3 Other (identify)	
3.2.2 Retreatment cases	
3.2.2.1 Internal medicine (First line drug)	
3.2.2.2 Surgery	
3.2.2.3 Other (identify)	
3.2.3 MDR-TB	
3.2.3.1 Internal medicine (First line drug)	
3.2.3.2 Internal medicine (Second line drug)	
3.2.3.3 Surgery	
3.2.3.4 Other (identify)	

Annex 2. Questionnaire for donors' survey regards to health expenditures in KR

No	QUESTION	ANSWER
001	Name of organization	
002	Name of respondent	
003	Position of respondent	
004	Telephone	
005	E-mail	
006	Date	
007	<u>Our organization agrees, that the information resulted in this questionnaire, can be announced. What do you mean in here?</u>	YES <input type="checkbox"/> NO <input type="checkbox"/>

The questions resulted below in Part 3 concern financial payments of your organization in 2007 on the activity related to tuberculosis in the Kyrgyz Republic. The activity connected with tuberculosis is not limited to exclusively medical programs which main task - to influence health status of people which live with tuberculosis during the certain period of time, but includes also the programs aimed at prevention of distribution of tuberculosis and covering the population as a whole (for example information campaigns, propaganda activity, etc.).

No	QUESTION	ANSWER
008	Did you support any programs/activities related to tuberculosis in 2007? <i>Please, select all possible options</i>	1. Yes, we provided funds to fight tuberculosis <input type="checkbox"/> 2. Yes, we supported activities in tuberculosis area through general health program <input type="checkbox"/> 3. No (If "No", please finish interview) if we finish interview here, then I would advise to do a pre-selection not to waste time and efforts! <input type="checkbox"/>
009	Please specify an amount of the general expenditures of your organization on " activities related to tuberculosis " in the Kyrgyz Republic in 2007 (includes in-kind donations)?	Amount (If you fill this cell, please move to question 033) please recheck! There is no question #033: _____ Can't provide information / <input type="checkbox"/>
010	If you could not provide the information on the amount of the funds spent on tuberculosis, provide <u>approximate percent</u> from your general expenses for health (from specified in the answer 009) which went on the programs/activity connected with tuberculosis this question contradicts #009.	% to total health expenditures: _____

Please indicate, how much funds were spent exclusively for activities related to tuberculosis in 2007? In this part specify amounts of financial payments both on medical and non-medical activities related to tuberculosis. Remember, that some general or sectoral medical projects can contain tuberculosis component.

No	QUESTION	ANSWER
011	Name of a project/program	

012	Name of Executive organization of this project						
013	Cost of a project/program (specify actual expenses)						
014	length of a project	Start:	Finish:				
015	goal of a project:						
016	Please give a brief description of the project						
017	Field of project activity what is meant in here?						
018	Expenditures by type of providing services (HF)						
		TA	Education	Capital equipment	Drugs and medical supplies	Capital renovation	Other operational cost
018.1. Outpatient curative care							
018.1.1. New cases							
018.1.2. Retreatment cases							
018.1.3. MDR TB							
018.2. Inpatient curative care							
018.2.1. New cases							
018.2.2. Retreatment cases							
018.2.3. MDR TB							
018.3. Ancillary services to medical care (including laboratory testing)							
018.4. Medical goods dispensed to outpatients what kinds of goods are going to be included here?							
018.5. Prevention and public health services to fight against TB							
018.5.1 Maternal and child health; family planning and counselling for TB patients							
018.5.2. School health services fighting TB							
018.5.3. Ensure tuberculosis infection control in health care and congregate settings							
018.5.4. Advocacy, Communication and Social Mobilization (ACSM)							
018.5.5. Surveys to measure TB burden and impact of TB control (periodic surveys)							
018.5.6. DOTS – routine programme management and supervision activities							

018.5.7. EQA: ensuring quality control in laboratories						
018.5.8. contact tracing						
018.5.9. Screening of contacts						
018.5.10. Practical Approach to Lung diseases (PAL)						
018.5.11. Training						
018.5.12. All other prevention of TB activities						
018.6. Gift-in-kind						
018.7. Provision of equipment etc.						
018.8. Other services						
019	Comments, if any					