Financing HIV/AIDS and Tuberculosis interventions in Estonia

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ABSTRACT

This report was prepared by Claudio Politi, health system and policy analyst, WHO Regional Office for Europe and Triin Torvand, expert on health economics at the Estonian National Institute for Health Development (NIHD), with relevant contributions from Jarno Habicht, Head of the WHO Country Office in Estonia, Aljona Kurbatova, Head of the Department of Health Strategy and Planning of the NIHD, Kristi Rüütel HIV/AIDS expert and HIV/AIDS-TB project coordinator NIHD and Vahur Hollo, Head of the National TB Registry of the NIHD.

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Abbreviations

AIDS	acquired immunodeficiency syndrome
ARV	antiretroviral
CSW	commercial sex worker
DOTS	directly observed treatment, short course
EHIF	Estonian Health Insurance Fund
GFATM	Global Fund to Fight AIDS, Tuberculosis and Malaria
HAART	highly active antiretroviral therapy
HCV	hepatitis C virus
HPI	Health Protection Inspectorate
HIV	human immunodeficiency virus
IDU	injecting drug user
LLC	Limited Liability Company
MDR-TB	multidrug-resistant tuberculosis
MoER	Ministry of Education and Research
MoJ	Ministry of Justice
MoSA	Ministry of Social Affairs
MSM	men who have sex with men
M+E+S	monitoring, evaluation, supervision
MST	methadone substitution therapy
NGO	nongovernmental organization
NIHD	National Institute for Health Development
NSP	needle and syringe exchange programme
OST	opioid substitution therapy
PEP	post-exposure prophylaxis
PHC	primary health care
PLWHA	people living with HIV/AIDS
STI	sexually transmitted infection
TB	tuberculosis
VCT	voluntary counselling and testing
WHO	World Health Organization

Executive Summary

This report presents current progress within the project “Scaling up treatment and care for HIV/AIDS and tuberculosis (TB) and accelerating prevention within the health system in the Baltic States: Estonia, Latvia and Lithuania”. In particular, the report presents a detailed cost analysis of public health programmes covering all main sources of financing and services provided to the target population – HIV/AIDS and TB patients – in Estonia. The authors synthesize the results in a chart showing the flow of funds, highlighting relevant organizational and financial links among the different components of the health system.

The analysis of the flow of funds provides an overview of the financing system through the four functions: revenue collection, resource pooling, service purchasing and service provision. The analysis enables policy makers to assess potential areas of coordination and synergies among several agents within the health system. Costs are estimated for the year 2005.

The authors believe that the analysis of the flow of funds could be developed to describe alternative organizational and financial scenarios (for illustrative purposes a hypothetical scenario is presented for the year after the GFATM will have expired) and to include projections of financial requirements for health services. UNAIDS and the World Health Organization’s Stop TB department are providing tools for projections and planning purposes that are complementary to the flow of funds analytical approach.

Through the analysis of the flow of funds and findings of the project, some critical issues emerge in fragmentation of financing, limited active purchasing, missing services, patients’ perspectives, and health providers’ perspectives. The Estonian HIV/AIDS-TB working group shares the recommendations for addressing the main critical issues and supporting the project’s follow up.

1. Introduction

The World Health Organization is carrying out a project to scale up treatment and care of people with HIV/AIDS and TB and to accelerate prevention within the health systems of the three Baltic States: Estonia, Latvia and Lithuania. The rationale for the project is the relatively high prevalence of multi-drug resistant tuberculosis coupled with an HIV/AIDS epidemic concentrated mainly among injecting drug users (IDUs). The TB and HIV/AIDS programmes share a high proportion of clients, many of whom are IDUs from socially marginalized segments of the population.

This report furthers developments in the economic analysis of financing HIV/AIDS and TB interventions that A. Alban and J. Kutzin presented in their report.[1] In particular, the authors carry out a detailed cost analysis of public health programmes, covering all the main sources of financing and services provided by Estonia to the target population. The authors synthesize the results in a chart that shows the flow of funds and highlights relevant organizational and financial links among the various components of the health system.

The aim of the flow of funds is to provide baseline information for scenarios or projections and to assist joint planning and budgeting processes. The flow of funds could also become a policy tool to assess the overall efficiency of the system and comprehensive coverage of services. It has been proposed to keep data and information regularly updated and to expand the analysis to other areas of the health system.

The methodological approach adopted for the analysis is the WHO financing framework presented at the 56th WHO Regional Committee for Europe in September 2006.[2] The framework focuses on the main functions of the health financing system: revenue collection, pooling, service purchasing and service provision.

The present report was finalized after circulation in the HIV/AIDS and TB working group for comments and contributions.

2. HIV/AIDS and TB epidemics in Estonia

2.1 HIV/AIDS

The first HIV case in Estonia was registered in 1988. From 1988 to 1999, there were 96 registered cases. During the second half of 2000 and into 2001, there was a drastic rise in the number of new cases. Due to the sudden increase, the Ministry of Social Affairs proclaimed a concentrated HIV epidemic on 14 February 2001. Starting in 2002, the number of officially registered cases decreased; in 2005, 621 new cases were registered, and in 2006 there were 668 new cases. By the end of 2006, there were 5731 people diagnosed with HIV. In 1992 the first

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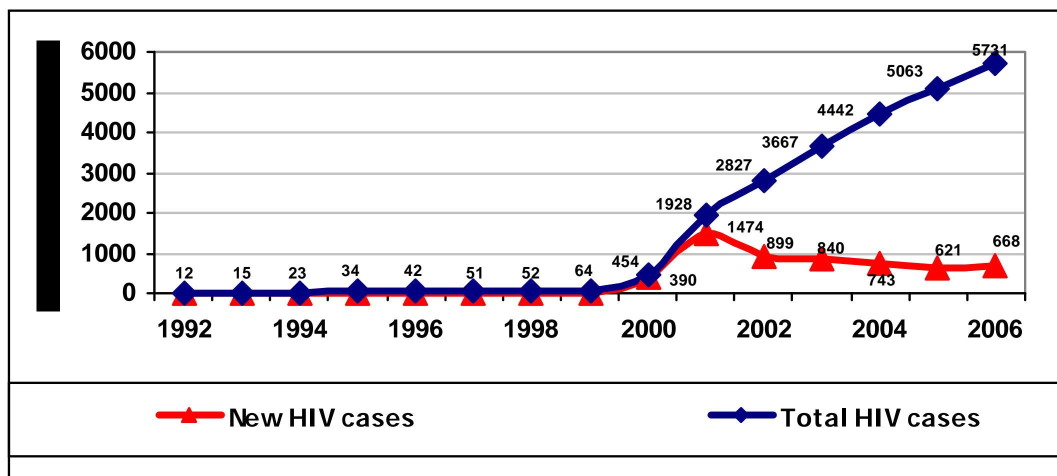
[1] *Scaling up and care for HIV/AIDS and TB and accelerating prevention within the health system in the Baltic States - economic, health financing and health system implication.* Copenhagen, WHO Regional Office for Europe, 2006.
[2] Approaching health financing policy in the European Region, (www.euro.who.int/Document/RC56/ebd01.pdf, accessed 14 August 2007).

AIDS case was diagnosed, and by the end of 2006, there had been 134 diagnoses. There were 30 diagnoses of AIDS in 2005 and 38 in 2006.[3]

Figure 1. Registered new HIV cases and cumulative HIV cases in Estonia in 1992–2006



Source: Estonian Health Protection Inspectorate (HPI)

From 1988 to 1999, the main mode of HIV transmission in Estonia was sexual (both homosexual and heterosexual). Since 2000, the infection has been transmitted mainly through the use of contaminated syringes. Although the data is incomplete, an increase in heterosexual transmission has been detected since 2002. Thus, according to the data of the AIDS counselling services, in 2001 IDUs constituted 90% of new cases detected by the services, while they were 72% in 2002, 53% in 2004 and 48% in 2006. Although this data is not based on information of all HIV-positive cases, the NIHD says that HIV has started to spread from injecting drug users to their sexual partners. Two counties, Harjumaa and Ida-Virumaa, are particularly affected.

[3] Rüütel K, Lõhmus L. *HIV/AIDS in figures in Estonia 2006*. Tallinn, Tervise Arengu Instituut, 2006.

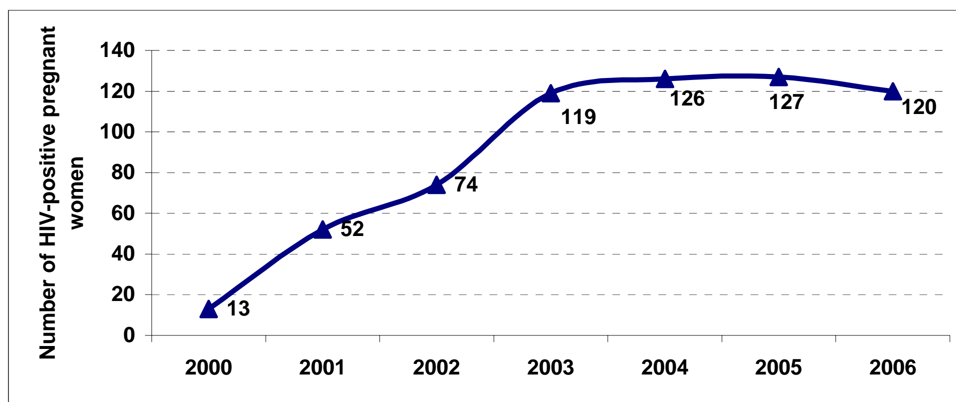
Table 1. Geographical distribution of new HIV cases among counties

COUNTY	Population	2000	2001	2002	2003	2004	2005
Harjumaa (Tallinn included)	521 410	28	584	399	362	287	278
Harjumaa (without Tallinn)	121 210	3	56	22	39	25	15
Tallinn	400 200	25	528	377	323	262	263
Hiiumaa	10 289	-	-	1	-	-	-
Ida-Virumaa (Narva included)	174 809	358	863	476	428	417	268
Ida-Virumaa (without Narva)	107 312	56	454	261	245	224	147
Narva	67 497	302	409	215	183	193	121
Jõgevamaa	37 647	-	-	1	1	-	1
Järvamaa	38 255	1	3	1	1	2	-
Läänemaa	28 101	-	-	-	1	-	1
Lääne-Virumaa	66 743	1	8	3	20	11	6
Põlvamaa	31 954	-	-	1	-	1	-
Pärnumaa	89 660	-	4	-	1	2	1
Raplamaa	37 093	-	4	3	-	1	-
Saaremaa	35 356	2	1	-	2	-	-
Tartumaa	148 872	-	4	13	20	16	1
Valgamaa	35 059	-	-	1	-	-	-
Viljandimaa	56 854	-	3	-	1	2	1
Võrumaa	38 967	-	-	-	2	-	-

Source: Rüütel K, Lõhmus L. HIV-nakkus ja AIDS arvudes 2005 [HIV-infection and AIDS in figures, 2005]. Tallinn, Tervise Arengu Instituut, 2006.

The first HIV-positive pregnant woman in Estonia was diagnosed in 1993. The first childbirth by an HIV-positive mother took place in 1999. The total number of HIV-positive pregnant women by the end of 2006 was 631. Some of these pregnancies were terminated or ended with a miscarriage. By the end of 2006 the total number of known childbirths to HIV-positive mothers was 376, and by that time 23 children had been infected through vertical transmission (National HIV Reference Laboratory).

Figure 2. HIV-positive pregnant women (2000–2006)

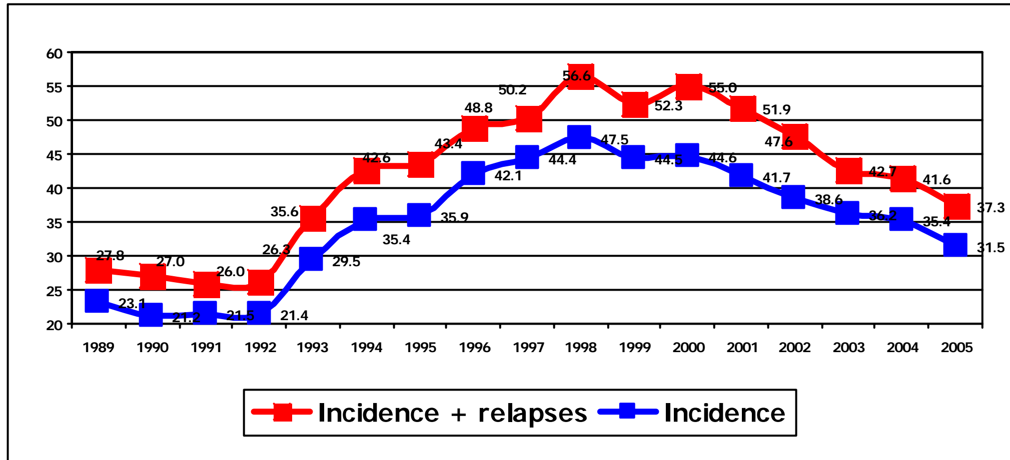


Source: National HIV Reference Laboratory

2.2 Tuberculosis

According to the data of Estonian TB Registry, the incidence of TB started to rise in the beginning of the 1990s from 26.0 per 100 000 to 56.6 per 100 000 in 1998. Since then the epidemiological situation has improved and in 2004 the rate was 39.4, in 2005 it was 32.6, and in 2006, 30.1, respectively 532, 439 and 403 cases. Multi-drug resistance has been a serious problem in Estonia. In 2005 approximately 13.5% of all TB cases were MDR-TB.

Figure 3. TB incidence rate per 100 000 population in Estonia in 1989–2005

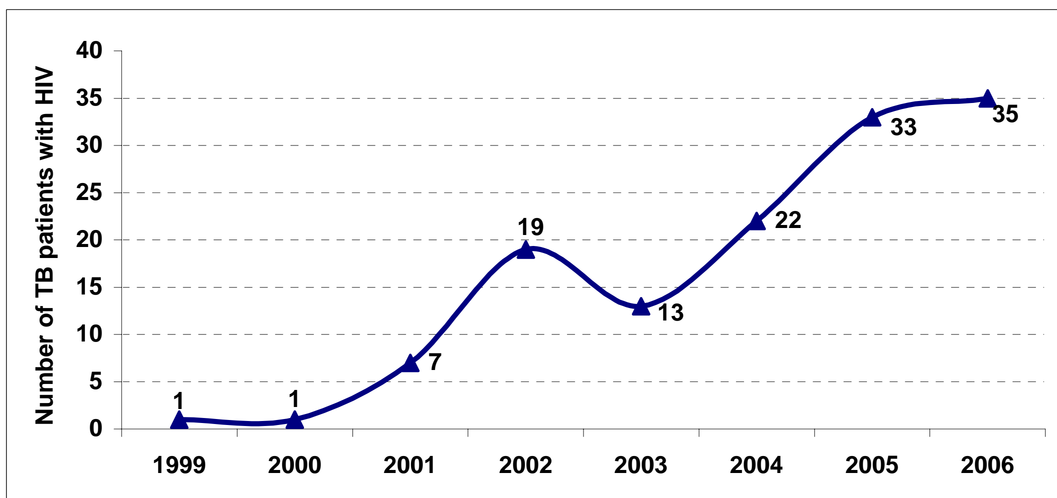


Source: National TB Registry

2.3 Tuberculosis and HIV/AIDS

All tuberculosis patients are also offered a possibility to take the HIV test and the majority accept. In 1997 HIV was diagnosed in a TB patient for the first time. By the end of 2006, 132 tuberculosis patients with HIV had been registered, from ages 15 to 59, with more than half between the ages of 20–29.

Figure 4. Tuberculosis patients with HIV (1999–2006)



Source: National TB Registry

TB-HIV/AIDS in prisons

The first HIV case in a penal institution was registered in May 2000. In the same year, 80 prisoners with HIV were detected (20% of all new HIV cases registered that year). In the following years the proportion of prisoners among new HIV cases increased. In 2003, 266 detainees were detected with HIV (32% of all new cases). In 2005, the proportion of prisoners among new HIV cases decreased to 19%. In 2006 there were more than 600 HIV-positive prisoners in Estonian prisons. Most prisoners were infected before imprisonment. There have been seven cases (according to the Ministry of Justice) of HIV transmission in prison: one from tattooing, five through sharing syringes and one unknown).[4]

In 2005 there were 24 TB cases in Estonian prisons. Generally, the number of TB cases was quite stable during the period 1996–2005.

3. The Estonian health financing system

3.1 Recent trends in health expenditure

Total health expenditure in the years 2003–2005 was 5.3%, 5.5% and 5.1% of GDP respectively, which is relatively low compared to countries with similar per capita income. As share of GDP it has declined gradually over the last ten years, along with all public spending. However, the annual increase in total health expenditures in absolute terms was around 4% in late 1990s and has been 14% in recent years. In 2005 the increase of total health expenditure was 12.9%.

The relatively low public spending does not seem to be offset by large private spending to the same extent as in comparable countries. However, the share of private spending rose from 10.8% in 1997 to 22.5% in 2000. Since 2000 private spending has been just over 20%; in 2005 the share was 23%. The absolute lion share of this is out-of-pocket; very little is channelled through pre-payment mechanisms. Public health expenditure as a share of total public expenditure dropped from 14.4% in 1997 to 10.6% in 2002. Since then, it has increased each year, reaching 11.5% in 2004, putting Estonia slightly below the regional average. The priority given to health by the government is in line with that of other countries in the region. However, Estonia was once well above these countries, and there is probably a long ways to go before it reaches levels of the pre-2004 EU Member States.

3.2 The health financing system

Health care is largely publicly financed. Since 1992, earmarked payroll taxes have been the main source of health care financing, accounting for approximately 65% of total health expenditure. Other public sources include state and municipal budgets – approximately 8% and 2% of total health expenditure, respectively. Private sources account for 25% of total expenditure.

Pooling agencies for HIV and TB services are the Estonian Health Insurance Fund (EHIF), Ministry of Social Affairs, Ministry of Justice and municipalities. The EHIF pools funds transferred from the Taxation Agency (earmarked payroll taxes) and from the state budget. Its funds are then allocated to the four regional branches for health care services on a per capita

[4] Rüütel, Lõhmus, op. cit.

basis, adjusted for regional differences in age structure in the case of primary care. Disease prevention and health promotion activities are also financed from EHIF funds.

The Ministry of Social Affairs pools funds from the state budget to finance emergency services for the uninsured (allocated through the EHIF), ambulance services (allocated through the Health Care Board) and public health programmes,[5] the last managed by the NIHD. However, some functions (purchasing medicines, vaccines) are exercised by Ministry of Social Affairs departments. The Ministry of Justice receives funds from the state budget to provide health care in prisons. Municipalities use parts of their budget to finance social and health-related services at the local level but the actual allocations vary a lot in terms of amounts and areas of investment.

Private health insurance is very limited; there is only one commercial insurer, which entered the market in 2002. The public share of total health expenditures is relatively high, at 76% and 4.2% of GDP in 2004. Eighty-seven per cent of public expenditure on health care comes through the health insurance system, constituting 66% of total health expenditure in 2004. In that year, national funding accounted for 8.5% – and municipalities 1.3% – of total health expenditures. The government mostly finances ambulance services, emergency health care services for uninsured people and public health programmes.

Local municipalities have no clear responsibility to cover health care expenditures and therefore financing practices vary widely.[6] Mainly municipalities spend on care for the uninsured (in addition to nationally covered emergency care), transport to health care facilities, public health programmes and offsetting out-of-pocket payments. At the same time other municipalities are covering some costs of general practitioner (GP) services in their region, but in-kind contributions for GPs are quite common (for example, working space). In the capital area special allocations have been made for communicable diseases. In addition, municipalities owning hospitals contribute to their financing.

Out-of-pocket payments comprise statutory cost-sharing for EHIF benefits, direct payments for services outside the EHIF benefits package or from non-EHIF-contracted providers and informal payments. They constituted about 21% of total health expenditures in 2004. Most out-of-pocket payments (53%) are for pharmaceuticals and dental care (23%). According to the National Health Accounts, households paid 45% of total pharmaceutical expenditure and 61% of dental care expenditure out-of-pocket in 2004.

Other private expenditure – less than 3% – includes employer-paid health care travel insurance, health check-ups and pharmaceuticals (mainly bought by foreign visitors but also by corporations).

3.3 The Estonian Health Insurance Fund

The core purchaser of health care services is the EHIF, which purchases most care for insured people (94% of total population), except ambulance service. EHIF funds are collected centrally

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[5] There are seven national health programmes and strategies: National Tuberculosis Prevention Program 2004–2007; National Strategy on Prevention of Drug Abuse 2005–2012; National Strategy for Prevention of Cardiovascular Diseases 2005–2020; National HIV/AIDS Prevention Strategy 2006–2015; National Program for Public Health Research and Development 1999–2009; National Children's Rights' Strategy and National Cancer Prevention Strategy 2007–2015.

[6] Municipalities' health care expenditures comprised between 0% and 8% of their budgets in 2005.

to balance regional income disparities. Then pharmaceutical and temporary sick leave benefits are administered centrally, but 98% of health care funds are allocated to the EHIF's four regional departments according to crude capitation without any need adjustments. The exception is primary health care (PHC), for which a more sophisticated formula is used. The remaining funds are centrally managed for a small range of expensive or infrequent procedures for which regional allocation would not be feasible, including bone marrow transplants, peritoneal dialysis, some areas of oncology and haematological treatment.

The EHIF signs yearly contracts with providers. The general terms of the contracts are negotiated among the Estonia Hospital Union, the Estonian Society of Family Practitioners and the EHIF. However, the details of the contracts are negotiated between EHIF regional departments and individual providers. The contracts are legally binding documents and specify levels of payment, service volumes by specialty, maximum waiting times, etc. Contract performance is monitored by the EHIF regional departments, and financial penalties are applied in the case of non-fulfilment. The EHIF has made very effective use of contracts in the recent rationalization of hospital services. In 2003, there were 530 PHC contracts, 215 for specialized outpatient care, 50 for inpatient care and 360 for children's dental care. In 2007, the respective numbers have slightly decreased, to 475, 174, 31 and 322.

In 2005, the EHIF expenditures were proportioned as: 59.7% health care services (including some health promotion and disease prevention), 12% pharmaceuticals, 17.4% sick leave benefits, 1.2% operating costs and 7.8% reserves. Of the total expenditure for health care services, 31% is allocated to hospitals and 35% to outpatient care providers. Hospitals remain the main curative, rehabilitative and long-term nursing care providers. The EHIF spends 79% of its health budget on specialist care (including inpatient and outpatient specialist care) and 13% on PHC. The remaining 8% is distributed between dental care (5%), long term care (2%) and disease prevention (1%).

3.4 The National Institute for Health Development

The main objectives of the NIHD, under the Ministry of Social Affairs, are the on-going development of health and improvement of the quality of life of the Estonian population. It conducts research, development and implementation activities in the health and social sectors, including:

- research on public health and life quality, including biomedicine, epidemiology, bio statistics, health economics, occupational health and behaviour, the health status of population groups and the health effects of environmental hazards;
- preparations and proposals for policies to improve the health status of the population, forecasts and development plans and programmes and internal and national strategies for the Ministry of Social Affairs;
- national and international research and development activities;
- collection, analysis and distribution of data on health promotion, social protection and health care, quality assurance standards for social and health services and competency requirements for specialists.

In addition to its parent ministry, it also receives funds from the Ministry of Education and Research, the NHIF and international funds. In 2005 the institute's budget for health promotion

including TB and HIV prevention was 3.78 million euros (corresponding to 73% of its total budget).

In 2005 the NIHD was responsible for the implementation of the following strategies and projects relevant to HIV/AIDS and TB:

- National strategies and programmes funded through the Ministry of Social Affairs
- National Tuberculosis Prevention Programme 2004–2007
- National Strategy on Prevention of Drug Abuse 2005–2012
- National HIV/AIDS Prevention Programme 2002–2006
- National Programme for Public Health Research and Development 1999–2009
- National Programme on Child and Adolescent Health 1995–2005

National projects funded by the EHIF

- Network of Health Promoting Hospitals
- Health Promotion in Counties and Local Municipalities
- Activities of the School Health Councils

EU-funded international projects

- Capacity Building for Public Health Promotion in Central and Eastern Europe
- Closing the Gap – Strategies for Action to Tackle Health Inequalities
- Integration into the Legitimate Labour Market of Women Involved in Prostitution and Human Trafficking

Non-EU funded international projects:

- GFATM project Enhancement of the Fight against HIV in Estonia.

Pooling of funds

The NIHD was established in 2003 by merging the Institute of Experimental and Clinical Medicine, the Estonian Centre for Health Education and the Public Health and Social Training Centre. One of the reasons for its establishment was a need for integrated management of public health initiatives on a governmental level. Previously, the Estonian Centre for Health Education had been responsible for substance abuse prevention, the Public Health and Social Training Centre for TB prevention and the National AIDS Prevention Centre for HIV prevention. The NIHD became responsible for implementing public health strategies under the Ministry of Social Affairs. That meant that all the recourses allocated from the national budget to those strategies are managed by the NIHD, creating more coordinated efforts. Despite the unified management, it is still not possible to shift money from one strategy to another. Resources allocated from the national budget to HIV prevention cannot be reallocated to TB prevention during the budget year, for example.

Planning and contracting mechanisms

NIHD internal guidelines specify planning and contracting mechanisms. The aim of the guidelines is to assure the accuracy and accountability of all purchases (including services). The NIHD contracting procedure is compulsory for all purchases of goods and services over 70 000

krooni (or 4475 euros) that do not require national contracting procedures. The head of the centre is responsible for accurate implementation of the contracting procedure; the head of the department is responsible for justifying the items to be purchased, soliciting tenders and identifying the best offer, and the legal department is responsible for insuring the accuracy of contracts.

All NIHD employees are subject to the law on public tenders. The contracting procedure consists of the following stages.

- Invitation to tender: tenders must be solicited from at least three suppliers. Bids must include general information about the bidding organization, a description of the items, price calculation and payment and warranty details. Invitations to tender are sent out by the specialist appointed by the head of the department by e-mail, fax or post.
- Evaluation of the bids: The specialist responsible for the purchase prepares a comprehensive memo about the bids received and an application for purchase, which will be reviewed by the head of department and all others responsible for the procedure. The memo must include the name of the items, the number of bids received and the price of the cheapest and most effective offer as well as the basis for making the recommended choice.
- Negotiating: Negotiations are initiated by the highest ranking official or that official's representative, including attorneys, financial managers and other relevant parties.
- Accepting a bid: The organization that has submitted the winning bid is informed in writing about the selection process. All organizations whose bids are rejected are also notified in writing.
- Contracting: Pre-payment is not allowed, except under unusual circumstances, which must be described in writing and added as a memo to the contract. A draft contract is prepared and then reviewed by the head of department for conformance to the interests of the NIHD and national public health strategies.

Regardless of the financing source, all procurement has to be conducted according to the described procedures, enforced by decree of the NIHD director.

4. Financing TB and HIV interventions – Flow of funds

4.1 Pooling and purchasing

The main sources of financing are compulsory health insurance contributions and taxes, as dispersed in the national budget. Local taxes are directly collected by local governments. External sources targeted to support TB and HIV/AIDS interventions are provided by donors through the Ministry of Social Affairs. It is estimated[7] that 122.4 million krooni, 1.4% of the total health expenditure, were spent in prevention and treatment of HIV/AIDS and TB.

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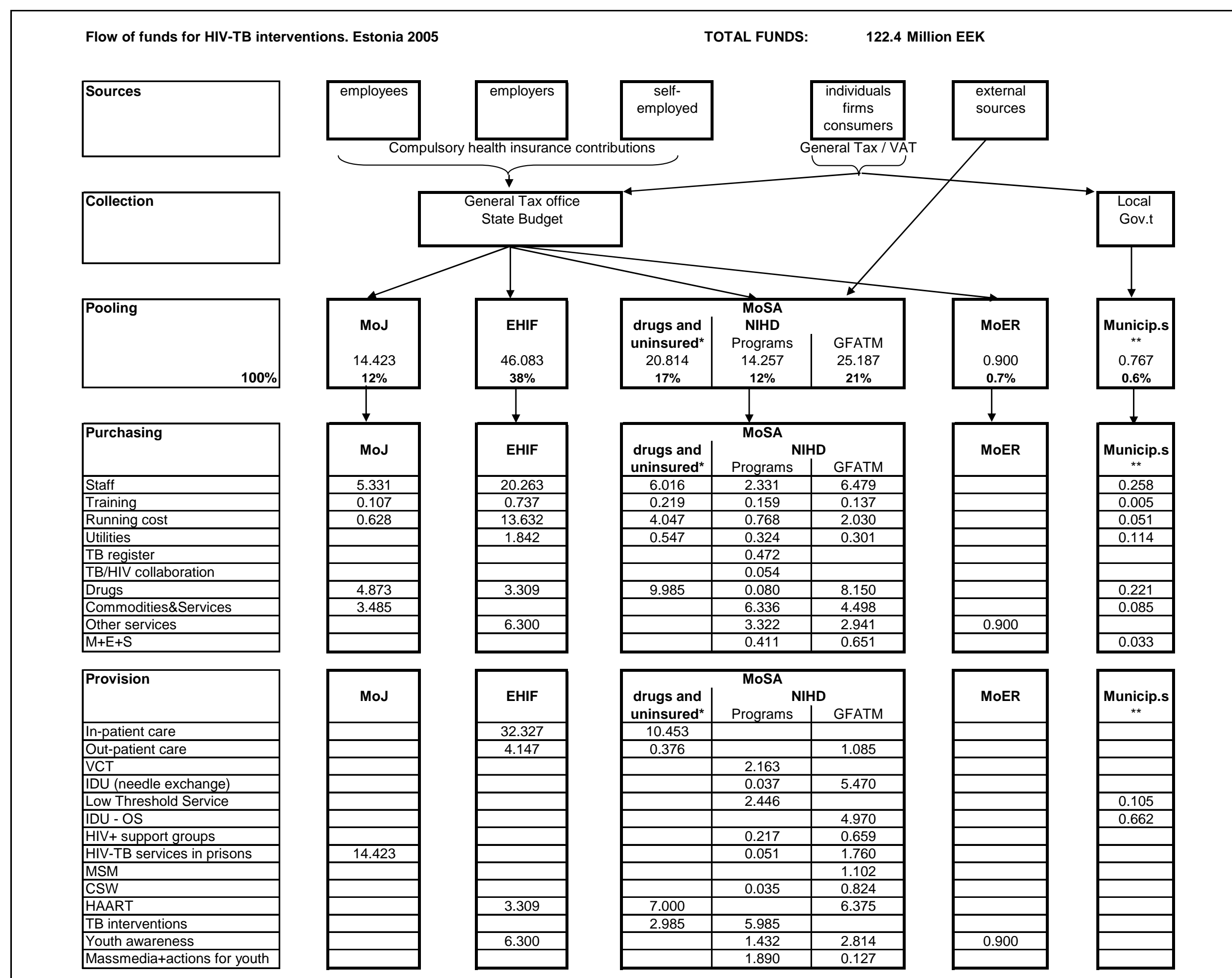
[7] Please see annex 2 for details of estimating methods.

Figure 5. Flow of funds for financing HIV/AIDS and TB interventions in 2005, millions of krooni



Pooling	MoJ	EHIF	MoSA: drugs and uninsured*	MoSA: NIHD Programs	MoSA: NIHD GFATM	MoER	Municip.s **
	14.423	46.083	20.814	14.257	25.187	0.900	0.767
100%	12%	38%	17%	12%	21%	0.7%	0.6%

Purchasing	MoJ	EHIF	MoSA: drugs and uninsured*	MoSA: NIHD Programs	MoSA: NIHD GFATM	MoER	Municip.s **
Staff	5.331	20.263	6.016	2.331	6.479		0.258
Training	0.107	0.737	0.219	0.159	0.137		0.005
Running cost	0.628	13.632	4.047	0.768	2.030		0.051
Utilities		1.842	0.547	0.324	0.301		0.114
TB register				0.472			
TB/HIV collaboration				0.054			
Drugs	4.873	3.309	9.985	0.080	8.150		0.221
Commodities&Services	3.485			6.336	4.498		0.085
Other services		6.300		3.322	2.941	0.900	
M+E+S				0.411	0.651		0.033

Provision	MoJ	EHIF	MoSA: drugs and uninsured*	MoSA: NIHD Programs	MoSA: NIHD GFATM	MoER	Municip.s **
In-patient care		32.327	10.453				
Out-patient care		4.147	0.376		1.085		
VCT				2.163			
IDU (needle exchange)				0.037	5.470		
Low Threshold Service				2.446			0.105
IDU - OS					4.970		0.662
HIV+ support groups				0.217	0.659		
HIV-TB services in prisons	14.423			0.051	1.760		
MSM					1.102		
CSW				0.035	0.824		
HAART		3.309	7.000		6.375		
TB interventions			2.985	5.985			
Youth awareness		6.300		1.432	2.814	0.900	
Massmedia+actions for youth				1.890	0.127		

Notes: ** Selected drugs for TB and HIV/AIDS patients + coverage for uninsured*
*** Only data from Tallinn municipality are available*

Source: please refer to annex 2

The World Health Report 2000 identifies active (or strategic) purchasing as a major option for improving performance of health system. Active purchasing means making proactive decisions about which health care services should be purchased, how and from whom, unlike passive purchasing whereby a predetermined budget is followed or bills are simply reimbursed retrospectively.[8]

The following agents pool funds in order to buy or directly provide services for HIV/AIDS and TB: the Ministry of Social Affairs, the EHIF, the Ministry of Justice, the Ministry of Education and Research and municipalities. The NIHD and EHIF are partially pursuing active purchasing. The NIHD's establishment in 2003 was an important step to improve coordination among public health programmes; the internal process for planning and contracting represents a clear move towards strategic purchasing. What seems still to be missing is some flexibility within NIHD in managing budget lines among programmes and an adequate monitoring and evaluation system. In other words, it would be important to integrate the contracting process with a set of indicators to monitor and evaluate providers' performance.

[8] Figueras J, Robinson R, Jakubowski E (eds.). Purchasing to improve health systems performance. Copenhagen, European Observatory on Health Systems and Policies, 2005.

The **Ministry of Social Affairs**, the main pooling agent, receives funds from the national state budget and from external sources. It directly purchases HAART and TB drugs (7 and 2.9 million krooni, respectively)[9] and allocates the other funds to the NIHD, which manages several national health programmes (see section 3.4), totalling 41 million krooni. Each of these national programmes has a vertical line in the NIHD budget and manages a separate pool of funds. Transfers from one programme budget to another are not possible. However, the NIHD recently has experimented with horizontal planning and budgeting processes to limit financial fragmentation.

Figure 6. Flow of funds in NIHD HIV/AIDS programmes in 2005, millions of krooni

	NIHD			
	National Tuberculosis Program **5.985**	Drug Abuse Strategy **4.006**	HIV/AIDS Program **4.266**	GFATM **25.187**
Purchasing				
Staff		1.566	0.765	6.479
Training	0.121	0.022	0.015	0.137
Running cost		0.386	0.382	2.030
Utilities			0.324	0.301
TB register	0.472			
TB/HIV collaboration	0.054			
Drugs	0.080			8.150
Commodities&Services	5.257	0.345	0.734	4.498
Other		1.522	1.799	2.941
M+E+S		0.165	0.246	0.651
Provision				
VCT			2.163	
IDU (needle exchange)		0.037		5.470
Low Threshold Service		2.446		
IDU - OS				4.970
HIV+ support groups			0.217	0.659
HIV-TB services in prisons			0.051	1.760
MSM				1.102
CSW			0.035	0.824
HAART				6.375
TB interventions	5.985			
Out-patient care				1.085
In-patient care				
Youth awareness		0.511	0.921	2.814
Massmedia+actions for youth		0.657	1.232	0.127

Source: please refer to annex 2.

The **EHIF** receives funds from the national budget and purchases inpatient and outpatient medical services and drugs for HIV/AIDS and TB patients, in addition to providing cash sick benefits. The total cost for TB and HIV/AIDS inpatient care has been estimated at 32.3 million krooni, and outpatient care at 4.1 million krooni. The cost of HAART covered by EHIF was 3.3 million krooni. Together with NIHD, GFTAM and the Ministry of Education and Research, the EHIF financed youth awareness activities, particularly in counselling centres, in the amount of 6.3 million krooni in 2005. All together the EHIF spent 46 million krooni, 38% of the total estimated costs of HIV/AIDS and TB interventions in 2005. EHIF sick benefit coverage amounted to about 19.8 million krooni for HIV/AIDS patients and 3 million krooni for TB patients.

[9] The Ministry also finances inpatient health care services for uninsured HIV-positives, and will finance outpatient care for them beginning in October, 2007.

The **Ministry of Justice** is responsible for health care in penal institutions. The present structure of its budget does not reveal the proportion of funds dedicated to prevention and treatment of TB and HIV/AIDS. Its budget is 14.4 million krooni, of which approximately 40% is spent on staff and 60% on drugs and recurrent costs.

The **Ministry of Education and Research** allocates 0.9 million krooni to youth awareness activities in the educational system.

Municipalities have different capacities of collecting funds, according to the wealth of the population. Although financial resources are limited, their activity is extremely relevant as they provide social services and assistance to the population at high risk of TB and HIV/AIDS.

Some coordinated purchasing procedures are already in place. For instance, the Ministry of Social Affairs buys drugs on behalf of the Ministry of Justice, which transfers the funds to the former. These arrangements are extremely useful for exploiting economies of scale and increasing efficiency, and extending them to other items should be explored. Approximately 1% of total funding is devoted to training; it might be worthwhile to identify any potential for synergy and collaboration in this area as well.

4.2 Service provision

The main services for HIV/AIDS and TB prevention, treatment and care are provided by a mix of public and private providers, NGOs and other voluntary institutions, as follows:
HIV/AIDS services:

- voluntary counselling and HIV testing;
- training, personal counselling and STI services for young people;
- harm reduction (including needle exchange and maintenance therapy) and STI services for IDUs;
- counselling and STI services for commercial sex workers (CSW);
- counselling for men who have sex with men (MSM);
- support and self-help groups for people with HIV and AIDS;
- antiretroviral (ARV) therapy for people with HIV and AIDS; treatment of opportunistic infections, including tuberculosis; case management;
- prevention of mother to child transmission of HIV;
- prevention of occupational exposure, post-exposure prophylaxis;
- awareness campaigns for the general population; and

TB services

- DOTS
- contact tracing
- prophylactic treatment.

Each type of service and related cost will be presented in the following section. Methodology of cost estimation and detailed cost information are presented in annexes 1 and 2.

Voluntary counselling and testing (VCT)

In 2005 there were six AIDS counselling centres serving 6380 clients. Their objective is to guarantee the availability of HIV testing and counselling services to all who want them, especially those in high risk groups. HIV and syphilis testing in these centres is anonymous and free of charge. Clients receive pre- and post-test counselling. In case of a positive HIV result, the client is referred to an infectious disease specialist. The NIHD finances VCT, verification tests included, in all AIDS counselling cabinets from the National HIV/AIDS Prevention Programme funds. VCT is also carried out in youth counselling centres and in penal institutions. The EHIF pays all costs for youth counselling centres for clients up to age 24 who have health insurance. VCT in penal institutions is paid for by the GFATM and the Ministry of Justice, verification tests are paid for by the NIHD. VCT in hospitals and outpatient clinics is covered by the EHIF.

Table 2. Cost of VCT in AIDS counselling centres in 2005

	Costs (krooni)	%	Purchasing Agent
Staff	694 560	32	NIHD
Training	13 891	0.6	NIHD
Running costs	324 000	15	NIHD
Utilities	288 000	13	NIHD
Commodities and services			
medical sundries	184 392	9	NIHD
condoms	42 120	2	NIHD
laboratory services	489 050	23	NIHD
informational materials	18 720	1	NIHD
M+E+S	108 144	5	NIHD
TOTAL (krooni)	**2 162 877**	**100**	
(euros)	**138 233**		

Source: please refer to annex 2

Needle exchange and low-threshold services

According to recent studies there are 13 800 IDUs in Estonia.[10] The immediate aim of the counselling and needle exchange services for injecting drug users is to stop the spread of HIV and to reduce other harm caused by injecting illegal drugs. The indirect aim is to motivate the users to give up drugs and apply for treatment. The provision of the counselling and needle exchange services was started with pilot projects in 1997. Nationally, the service was financed from 2001 by the Gambling Tax Fund for counselling projects in six towns. Since 2003, it has been financed from the national programme (with cosponsors Finland, Germany, Tallinn and Tapa). Needle exchange centres are financed by the GFATM, low-threshold service is covered by the NIHD and the utilities costs of the low-threshold centres are paid from municipal budgets.

In 2005 there were 10 stationary needle exchange centres and 14 field work centres; 3 new low threshold centres were opened in 2005. In the beginning of 2007, were 14 stationary needle exchange centres, 18 field work centres and 3 low threshold centres. In these centres, aside from needle exchange, clients are counselled on getting help, safe injecting methods and safe sexual behaviour and are encouraged to give up injecting in favour of other methods or maintenance treatment. All the service providers are NGOs. There were approximately 80 700 visits to needle exchange centres in 2005. In 2006, 7427 visits were made in low threshold centres and 152 404 visits to needle exchange centres.

[10] Uusküla A, Abel K, Rajaleid K, Rüütel K, Talu A "The Prevalence of Injecting Drug Use in Estonia, Study Report" National Institute for Health Development, University of Tartu, Imperial College London, 2005.

Table 3. Costs of needle exchange and low threshold services in 2005, in krooni

	Costs (krooni)	%	Purchasing Agent
Staff	4 803 846	60	GFATM, NIHD
Training	86 782	1	GFATM, NIHD
Running costs	972 769	12	GFATM, NIHD
Utilities	167 133	2	GFATM, municipalities
Commodities and services			
medical sundries	31 000	0.4	GFATM, NIHD
syringes	928 669	12	GFATM, NIHD
condoms	379 842	5	GFATM, NIHD
disinfectants	174 715	2	GFATM, NIHD
medical check-ups	26 800	0.3	NIHD
informational materials	49 270	1	GFATM, NIHD
M+E+S	438 379	5	GFATM, NIHD
TOTAL (krooni)	**8 059 205**	**100**	
(euros)	**515 077**		

Source: please refer to annex 2

Methadone substitution therapy (MST)

The aim of MST is to effect opiate withdrawal by replacing intravenously injected narcotics with orally taken methadone. In 2005 there were seven centres offering MST (currently eight), four in Tallinn and three in eastern Estonia. The GFATM funded MST in six centres, and one (Lääne–Tallinna Keskhaigla) was financed by the city of Tallinn. Altogether three private enterprises and two hospitals delivered methadone substitution therapy and there were approximately 121 clients per service providing organization.

Table 4. Costs of methadone substitution therapy in 2005

	Costs (krooni)	%	Purchasing Agent
Staff	1 881 792	33	GFATM, municipality
Training	37 636	1	GFATM, municipality
Running costs	388 530	7	GFATM, municipality
Utilities	100 515	2	GFATM, municipality
Commodities and services			
methadone	1 995 492	35	GFATM, municipality
medical sundries	686 433	12	GFATM, municipality
medical check-ups	260 223	5	GFATM, municipality
M+E+S	281 612	5	GFATM, municipality
TOTAL (krooni)	**5 632 232**	**100**	
(euros)	**359 965**		

Source: please refer to annex 2.

Psychosocial support for PLWHA

In order to improve their quality of life, PLWHA and their intimates need integrated health, psychological and social counselling, welfare services and legal advice. The friends and relatives of HIV-positive people need support. Approximately 10% of HIV-positive people attended support groups in 2005 (165 people, detainees excluded). All five organizations that offered this service were nongovernmental. The services were mainly paid for by the GFATM and the NIHD.

Table 5. Costs of psychosocial support for PLWHA in 2005

	Costs (krooni)	%	Purchasing Agent
Staff	509 732	58	GFATM, NIHD
Training	7 794	1	GFATM, NIHD
Running costs	189 403	23	GFATM, NIHD
Utilities	71 845	8	GFATM, NIHD
Commodities and services			
medical check-ups	5 650	0.6	GFATM
informational materials	7 619	0.9	GFATM
M+E+S	84 476	10	GFATM, NIHD
TOTAL (krooni)	**876 518**	**100**	
(euros)	**56 019**		

Source: please refer to annex 2.

Men who have sex with men (MSM)

According to the Estonian Gay Association there are an 8000–15 000 estimated homosexual men in Estonia (as a rule, 3%–6% of an adult male population). Their testing and counselling is like that of other population groups. The Estonian Gay and Lesbian Information Centre was established in 2004. There were 803 visits to the centre and 4909 telephone consultations in 2005. In 2006 the respective figures were 965 and 4176. The HIV prevention services and commodities offered in the Gay and Lesbian Information Centre are financed by the GFATM.

Table 6. Costs of the HIV prevention services in the Estonian Gay and Lesbian Information Centre in 2005

	Costs (krooni)	%	Purchasing Agent
Staff	294 368	27	GFATM
Training	5 887	1	GFATM
Running costs	417 606	38	GFATM
Utilities	36 000	3	GFATM
Commodities and services			
condoms	117 880	11	GFATM
lubricants	139 080	13	GFATM
informational materials	36 000	3	GFATM
M+E+S	55 096	5	GFATM
TOTAL (krooni)	**1 101 917**	**100**	
(euros)	**70 425**		

Source: please refer to annex 2.

Commercial sex workers (CSW)

It is difficult to evaluate how many people are involved to prostitution in Estonia. Based on expert opinion, there may be 3000–5000. Counselling of CSW is very important for HIV/AIDS prevention. The main services offered to CSW include prevention of sexually transmitted infections and safe sex counselling. In 2005 there were two centres for CSW, managed by the AIDS Support Centre and Life Line NGOs. Approximately 851 visits were made to them in 2005 and 979 in 2006. The main funds for HIV prevention services come from the GFATM, and some activities are covered by the NIHD.

Table 7. Costs of HIV prevention services for commercial sex workers in 2005

	Costs (krooni)	%	Purchasing Agent
Staff	281 143	33	GFATM
Training	5 623	1	GFATM
Running costs	151 759	18	GFATM
Utilities	20 400	2	GFATM
Commodities and services			
condoms	22 320	3	GFATM
lubricants	31 346	4	GFATM
STI analyses and treatment	35 550	4	GFATM
medical check-ups	224 613	26	GFATM
informational materials	10 000	1	GFATM
M+E+S	76 691	8	NIHD, GFATM
TOTAL (krooni)	**859 445**	**100**	
(euros)	**54 929**		

Source: please refer to annex 2.

Health care services for people with HIV and AIDS

Patients testing positive for HIV are referred to an infectious diseases doctor for medical surveillance, further examination, treatment, counselling and contact tracing. There were 255 people who had received ARV treatment by the end of 2005. All the ARV drugs are free of charge. Drugs are purchased through centralized public procurement. In 2005 the GFATM contributed 6 375 078 krooni and the Ministry of Social Affairs contributed 7 000 000 krooni to cover the cost of ARV drugs. One of the drugs (Retrovir) was financed by the EHIF for its insureds. In 2005 the cost of Retrovir was 3 309 000 krooni. Altogether, the cost of ARV drugs was approximately 16.7 million krooni in 2005.

Table 8. Cost of health care services for people with HIV/AIDS in 2005

	Costs (krooni)	%	Purchasing Agent
Inpatient care	7 820 456	29	EHIF, Ministry of Social Affairs
Outpatient care	2 913 209	11	EHIF, GFATM
ARV drugs	16 684 078	61	EHIF, GFATM, Ministry of Social Affairs
TOTAL (EEK)	**27 417 742**	**100**	
(euros)	**1 752 313**		

Source: please refer to annex 2.

Raising youth awareness

The main activities here include training of teachers and students, media campaigns and distribution of informational materials. The main funds for raising awareness among school children come from the budgets of the GFATM, NIHD, EHIF and Ministry of Education and Research.

Youth counselling centres offer individual counselling for young people on sexual and reproductive health matters, sex education for school children and STI counselling and testing (including HIV). As these services are closely integrated it is difficult to separate the costs for more detailed analyses.

Table 9. Costs of youth awareness activities and media interventions in 2005

	Costs (krooni)	%	Purchasing Agent
Training for teachers	832 704	6	GFATM, NIHD
Information materials for teachers	836 861	6	NIHD
Youth counselling centres	6 300 289	47	EHIF
HIV and illegal drug prevention activities in schools for children with special needs	1 366 214	10	NIHD, GFATM, Ministry of Education and Research
Training of schoolchildren	1 519 699	11	GFATM
Training of vocational schools' students	590 763	4	GFATM
Media campaigns	1 029 289	8	GFATM, NIHD
Actions for youth	476 192	4	NIHD
Internet	402 384	3	NIHD
International cooperation	108 772	1	NIHD
TOTAL (krooni)	**13 463 167**	**100**	
(euros)	860 453		

Source: please refer to annex 2.

TB services

There are five separate TB departments in Estonia with 230 beds, including 30 for compulsory treatment. There is one separate department for the prison system (40 beds). Each of the 15 counties has its own central hospital, which is responsible for TB treatment and some contact tracing activities. The costs of staff training, TB registration, TB/HIV collaboration, DOTS and laboratory services are financed by the NIHD.

TB/HIV collaboration activities included personnel training and distribution of information to patients. If a TB patient has health insurance, the doctors' visits, analyses and treatment costs are paid by the EHIF. The Ministry of Social Affairs pays for the treatment of uninsured patients; and the Ministry of Justice pays for that of prisoners. Most drug costs (2 985 000 krooni) are covered directly by Ministry of Social Affairs.

Table 10. The total public health cost of TB interventions in 2005

	Costs (krooni)	**%**	**Purchasing Agent**
Training	121 424	0.3	NIHD
TB registration	471 934	1	NIHD
TB/HIV collaboration	54 279	0.1	NIHD
Inpatient care	34 959 228	75	EHIF, Ministry of Social Affairs
Outpatient care	2 694 423	6	EHIF, Ministry of Social Affairs
Commodities and services			
drugs	3 065 230	7	NIHD, Ministry of Social Affairs
DOTS	4 582 581	10	NIHD
laboratory services	674 228	1	NIHD
TOTAL (EEK)	**46 623 327**	**100**	
(euros)	**2 979 774**		

Source: please refer to annex 2.

TB and HIV services in prisons

The main HIV/AIDS prevention activities in Estonian prisons are voluntary counselling and HIV testing, HIV/AIDS education for prisoners and staff, counselling and psychological support, and distribution of condoms, lubricants and disinfectants. HIV testing is recommended for first-time detainees, paid for by the Ministry of Justice, and verification of positive tests is funded by the NIHD. The Ministry of Justice also finances all needed diagnostics and treatment, as it is responsible for health care and social support services in prisons. Education programmes and support groups for PLWHA in prisons are mainly organized by the NGO Convictus Eesti and financed by the GFATM, along with condoms, lubricants and information materials. The supervision of VCT in prisons is covered by the NIHD.

Table 11. Costs of TB and HIV interventions in Estonian prisons in 2005

	Costs (krooni)	**%**	**Purchasing Agent**
Staff	5 330 755	33	Ministry of Justice
Training	106 615	1	Ministry of Justice
Running cost	627 940	4	Ministry of Justice
Commodities and services			
drugs	4 873 000	30	Ministry of Justice
medical sundries	227 157	1	Ministry of Justice
condoms	40 480	0.2	Ministry of Justice, GFATM
lubricants	40 612	0.3	Ministry of Justice, GFATM
STI analyses and treatment	986 000	6	Ministry of Justice
laboratory services	1 851 534	11	Ministry of Justice
disinfectants	369 000	2	Ministry of Justice
VCT	942 275	6	GFATM, Ministry of Justice
support groups	704 013	4	GFATM
informational materials	83 960	0.5	GFATM, Ministry of Justice
M+E+S	50 664	0.3	NIHD
TOTAL (EEK)	**16 234 005**	**100**	
(euros)	**1 037 542**		

Source: please refer to annex 2.

5. Works in progress: scenarios and projections

The flow of funds presents an overview of different components of the health system and costs involved in the provision of HIV/AIDS and TB services. The information described in the previous section refers to 2005. It is an important contribution for developing joint planning and budgeting process among pooling agents, as it highlights relevant links and potential areas for pooling funds and coordinating strategic purchasing.

The flow of funds analysis could be developed for two major purposes: to describe alternative scenarios for organizing and financing health services and to project financial requirements for health services. Figures 7 and 8 present simplified versions of the flow of funds. In particular, figure 7 shows the flow of funds with 2005 cost estimates as a baseline. Figure 8 presents a hypothetical scenario, referring to the situation next year when the GFTAM has expired. For illustrative purposes, it is assumed that the new arrangements imply transfers of additional funds from the national budget to the Ministry of Social Affairs, NIHD, Ministry of Education and

Research and municipalities to carry out the activities previously financed by the GFTAM. Changes are highlighted in bold. In the hypothetical scenario the share of costs financed directly by the Ministry of Social Affairs increases from 17% to 25% and through the NIHD from 12% to 20%; the EHIF increases its expenditure from 39% to 42%, mainly due to the shift in HAART cost. The Ministry of Education and Research and the municipalities raise their contributions for training and harm reduction, respectively. Figure 9 is blank. The HIV/TB working group and policy-makers could use it to build alternative scenarios and assess financial and organizational implications.

The flow of funds can furthermore be useful by the Ministry of Health and programme managers to analyse future cost projections. However, this task is complex as it requires epidemiological projections and assessments of cost functions of health care providers, in other words, knowledge of how costs change in relation to the production scale. The development of epidemiological projections and detailed cost information is critical to providing relevant data and should continue. UNAIDS provides epidemiological software and tools to predict HIV/AIDS transmission that can be applied at the country level.[11] Furthermore, the World Health Organization's Stop TB department is finalizing a planning and budgeting tool to be used worldwide. The tool is flexible and could be adapted to the Estonian context.

[11] For further information, please see http://www.unaids.org/en/HIV_data/Epidemiology/episoftware.asp.

Figure 2a - Baseline scenario

	Ministry of Justice	Health Insurance Fund	Ministry of Social Affairs: Drugs and uninsured*	Ministry of Social Affairs: Public Health Programs**	Ministry of Social Affairs: GFATM**	Ministry of Education and Research	Local gov.t Municipalities
Pooling 100%	12%	38%	17%	12%	21%	0.7%	0.6%
Purchasing							
Staff	++++	++++++	++++	++	++++		+
Training	+	+	+	+	+		+
TB register				+			
Drugs	+++	+++	+++++	+	++++		+
DOTs			++++				
Syringes				+	++		
Condoms	+			+	+		
Others medical good & services	+++	++++		++++	++++	++	+
Other running costs	++	++++	++++	+++	++		+
Monitoring & Evaluation				+	+		
Provision							
Inpatient care		++++++	+++++				
Outpatient care		++++	+		++		
HAART		+++	++++		++++		
VCT				++			
IDU harm reduction				+++	+++++		+
MSM + CSW				+	++		
HIV-TB services in prisons	+++++			+	++		
TB interventions			+++	++++			
Mass media - Youth awareness		++++		++++	+++	++	

Legenda:

VCT = Voluntary Counseilling and Testing
IDU = Injecting drug user
MSM = Men w ho have sex w ith men
CSW = Commercial sex w orkers
HAART = Highly anti-retroviral treatment
PMTCT = Prevention mother to child transmission
* Selected drugs for TB and HIV/AIDS patients + coverage for uninsured
** Managed by the National Institute for Health Development

Levesl of financial resources in 2005 estimated as follow s:

+ less than 1 milion EEK
++ 1 - 3 million EEK
+++ 3 - 5 million EEK
++++ 5 - 10 million EEK
+++++ 10 - 15 million EEK
++++++ more than 15 million EEK

Figure 2b - Hypothetical scenario

Pooling	Ministry of Justice	Health Insurance Fund	Ministry of Social Affairs			Ministry of Education and Research	Local gov.t Municipalities
			Drugs and uninsured*	Public Health Programs**	GFATM**		
100%	12%	41%	25%	20%	0%	1.0%	1.0%
Purchasing							
Staff	++++	++++++	++++	++++			+
Training	+	+	+	+		+	+
TB register			+				
Drugs	++++	+++++	+++++	+			+
DOTs			++++				
Syringes				++			
Condoms	+			++			
Others medical good & services	+++	+++++		+++++		++	+
Other running costs	++	++++	++++	+++			++
Monitoring & Evaluation				++			
Provision							
Inpatient care		++++++	+++++				
Outpatient care		++++	+				
HAART		+++++	+++++				
VCT				+++			
IDU harm reduction				+++++			++
MSM + CSW				+++			
HIV-TB services in prisons	+++++		++				
TB interventions			+++	++++			
Mass media - Youth awareness		++++		++++		+++	

Legenda:

VCT = Voluntary Counseilling and Testing

IDU = Injecting drug user

MSM = Men who have sex with men

CSW = Commercial sex workers

HAART = Highly anti-retroviral treatment

PMTCT = Prevention mother to child transmission

* Selected drugs for TB and HIV/AIDS patients + coverage for uninsured

** Managed by the National Institute for Health Development

Levesl of financial resources in 2005 estimated as follows:

+ less than 1 milion EEK
++ 1 - 3 million EEK
+++ 3 - 5 million EEK
++++ 5 - 10 million EEK
+++++ 10 - 15 million EEK
++++++ more than 15 million EEK

Figure 2c - To prepare alternative scenarios

Pooling %	Ministry of Justice	Health Insurance Fund	Ministry of Social Affairs: Drugs and uninsured*	Ministry of Social Affairs: Public Health Programs**	Ministry of Social Affairs: …	Ministry of Education and Research	Local gov.t Municipalities
Purchasing	↓	↓	↓	↓	↓	↓	↓
Staff							
Training							
TB register							
Drugs							
DOTs							
Syringes							
Condoms							
Others medical good & services							
Other running costs							
Monitoring & Evaluation							
Provision	↓	↓	↓	↓	↓	↓	↓
Inpatient care							
Outpatient care							
HAART							
VCT							
IDU harm reduction							
MSM + CSW							
HIV-TB services in prisons							
TB interventions							
Mass media - Youth awareness							

Legenda:

VCT = Voluntary Counseilling and Testing
IDU = Injecting drug user
MSM = Men w ho have sex w ith men
CSW = Commercial sex w orkers
HAART = Highly anti-retroviral treatment
PMTCT = Prevention mother to child transmission
* Selected drugs for TB and HIV/AIDS patients + coverage for uninsured
** Managed by the National Institute for Health Development

Levesl of financial resources in 2005 estimated as follow s:

+ less than 1 milion EEK
++ 1 - 3 million EEK
+++ 3 - 5 million EEK
++++ 5 - 10 million EEK
+++++ 10 - 15 million EEK
++++++ more than 15 million EEK

6. Critical issues

Fragmentation of financing

Fragmentation of financing between national public health strategies and programmes implemented by the NIHD creates disincentives to joint planning and especially to resource pooling. It is important to have coordination in the cycle of planning, purchasing, contracting and monitoring to avoid duplication of efforts or missing services for target populations.

Financial and managerial separation of the prison health system from the rest of the health system might result in different levels and quality of care provided to prisoners. Health professionals working in prisons are employed by the Ministry of Justice under different contractual conditions and might also have different opportunities for continuous training with respect to colleagues working within the health system.

The low level of funding for municipal health services limits their ability to reach marginal populations. In principle, municipalities are well positioned to identify, contact and provide services to people at high risk. Further analysis of municipalities' experience would be relevant to identifying best practices of delivering HIV and TB services and to exploring the capacity to manage additional funds. Options for the geographical allocation of resources among counties and municipalities could be designed and tested as means of reducing funding disparities among municipalities.

A limited monitoring and evaluation system impedes accurate assessment of public health programmes' effectiveness, particularly at reaching target populations. It is important that there be a comprehensive monitoring and evaluation system for programmes, particularly those aimed at the same target populations in different settings or using different providers.

Currently there is no national-level quality management system for HIV/AIDS-related services. A quality management system to relay the monitoring and evaluation data between providers and purchasers would improve the quality of services and their sustainability.

Limited active purchasing

Active purchasing of health services for HIV/AIDS and TB is limited to the NIHD and EHIF. The NIHD planning-purchasing cycle seems to lack monitoring and evaluation to assess providers' performance.

Missing services

Before sentencing, prisoners are detained in police stations without opiate substitution therapy. Since police stations are under the Ministry of Internal Affairs, this represents a further fragmentation of financing and service delivery. Harm reduction services in prisons at present allow prisoners to continue methadone treatment already in progress at the time of incarceration, but do not allow them to start treatment under incarceration.

Upon release from prison, TB patients are requested to register in the region of residence, where GPs and social workers are informed. However, tracking and follow-up of those with no permanent address or a wish to avoid public authorities can be difficult.

Case-management services for PLWHA are not complete, which means that there are no links among areas of service (treatment, employment, etc).

Patients' perspectives

Patients at risk of or infected with HIV/AIDS or TB could have difficulty knowing which service to refer to because of the fragmentation of services. Patients are also concerned about confidentiality. A clear, patient-oriented referral system is needed, to facilitate access and ensure confidentiality.

Providers' perspectives

Providers are often contracted by different financing and pooling agents, effectively acting as de facto pooling agents. This practice might be useful for spreading their financial risks, but it weakens the financing agents' capacity for strategic purchasing.

Providers are concerned with the short-term perspective, with one-year contracts and renewal workloads. Longer durations for public health programmes are not feasible under the country's present budget cycle. Nonetheless, the GFTAM had multiple-year framework contracts with the same providers.

7. Ways forward: working group recommendations

In light of the critical issues and the working group's experience during the implementation of the HIV/AIDS and TB project in the Baltic States, some ways forward are proposed.

1. Introduce coordinated or joint planning and budgeting of public health programmes to limit the fragmentation of financing and service provision.
2. Continue the economic analysis, developing scenarios and projections of financial requirements to assist joint planning and budgeting. It will be useful also to expand the flow of fund analysis to other areas.
3. Develop a comprehensive monitoring and evaluation system to gauge the effectiveness and efficiency of public health programmes and improve strategic purchasing.
4. Develop a comprehensive quality management system to ensure the quality of services, with special emphasis on those financed from the national budget.
5. Introduce case management for HIV/AIDS and TB patients to promote continuity of care across the system and facilitate access.
6. Advocate for the introduction of services that are currently missing, such as methadone substitution therapy in detention and scaling up harm-reduction programmes in prisons.

Annex 1 – Detailed cost information

Table 1 - Costs for HIV/AIDS and TB interventions - Estonia, EEK 2005

	HIV targeted prevention								HIV untargeted prevention		HIV Treatment			TB prevention	TB treatment				
	VCT	IDU (needle exchange)	Low Threshold Service	IDU-OS	HIV+ support groups	Prisons	MSM	Commercial Sex Worker Intervention	Youth awareness	Massmedia+actions for youth	HAART	Out-patient care HIV/AIDS	In-patient care HIV/AIDS	TB interventions	Drugs and DOTs	Out-patient care TB	In-patient care TB	**TOTAL (EEK)**	**% of TOTAL COSTS**
Staff	694,560	3,238,091	1,565,755	1,881,792	509,732	5,330,755	294,368	281,143				1,618,449	4,344,698			1,496,901	19,421,794	**40,678,038**	**33.2%**
Training	13,891	64,762	22,020	37,636	7,794	106,615	5,887	5,623				58,853	157,989	121,424		54,433	706,247	**1,363,173**	**1.1%**
Running cost	324,000	586,479	386,290	388,530	189,403	627,940	417,606	151,759				1,088,775	2,922,797			1,007,006	13,065,570	**21,156,155**	**17.3%**
Utilities	288,000	62,133	105,000	100,515	71,845		36,000	20,400				147,132	394,973			136,082	1,765,618	**3,127,697**	**2.6%**
TB register														471,934				**471,934**	**0.4%**
TB/HIV collaboration														54,279				**54,279**	**0.0%**
Commodities&services																			
Drugs				1,995,492		4,873,000					16,684,078				3,065,230			**26,617,800**	**21.7%**
Usables	184,392		31,000	686,433		227,157												**1,128,982**	**0.9%**
Syringes		807,306	121,363															**928,669**	**0.8%**
Condoms	42,120	231,234	148,608			40,480	117,880	22,320										**602,642**	**0.5%**
Lubricants						40,612	139,080	31,346										**211,038**	**0.2%**
STI analyses&treatment						986,000		35,550										**1,021,550**	**0.8%**
DOTS															4,582,581			**4,582,581**	**3.7%**
Laboratory services	489,050					1,851,534								674,228				**3,014,812**	**2.5%**
Disinfectants		174,715				369,000												**543,715**	**0.4%**
VCT						942,275												**942,275**	**0.8%**
Medical check-up			26,800	260,223	5,650			224,613										**517,286**	**0.4%**
Support groups						704,013												**704,013**	**0.6%**
Information material	18,720	32,223	17,047		7,619	83,960	36,000	10,000										**205,569**	**0.2%**
M+E+S	108,144	310,806	127,573	281,612	84,476	50,664	55,096	76,691										**1,095,061**	**0.9%**
TOTAL (EEK)	**2,162,877**	**5,507,749**	**2,551,456**	**5,632,232**	**876,518**	**16,234,005**	**1,101,917**	**859,445**	**11,446,530**	**2,016,637**	**16,684,078**	**2,913,209**	**7,820,456**	**1,321,865**	**7,647,811**	**2,694,423**	**34,959,228**	**122,430,435**	
	2%	4%	2%	5%	1%	13%	1%	1%	9%	2%	14%	2%	6%	1%	6%	2%	29%		
% of TOTAL COSTS	**29%**								**11%**		**22%**			**1%**	**37%**				**100%**

Source: please refer to annex 2

Table 2 - Costs by input and purchasing agent for HIV/AIDS and TB interventions - Estonia, EEK 2005								
	MoSA							
		NIHD						
		GF	HIV/AIDS program, Drug abuse program	TB program	MoJ	EHIF	MoER	municipalities
VCT								
Staff								
nurses			565,672					
consultants			128,888					
Training			13,891					
Running cost			324,000					
Utilities			288,000					
Commodities&services								
Condoms			42,120					
Usables			184,392					
Laboratory services			489,050					
Information materials			18,720					
M+E+S			108,144					
IDU (needle exchange)								
Staff								
social workers		2,620,881						
nurses		278,988						
project manager		338,222						
Training		64,762						
Running costs		586,479						
Utilities		62,133						
Commodities&services								
Syringes		807,306						
Condoms		231,234						
Disinfectants		174,715						
Information materials		32,223						
M+E+S		273,523	37,283					
Low Threshold Service								
Staff								
Project manager			281,418					
Nurse			191,439					
Social workers			628,985					
Social workers (field work)			463,913					
Training			22,020					
Running costs			386,290					
Utilites								105,000
Commodities&services								
Syringes			121,363					
Condoms			148,608					
Usables			31,000					
Medical check-up			26,800					
Information materials			17,047					
M+E+S			127,573					
IDU - OS								
Staff								
Social workers		317,167						40,050
Doctor		142,922						19,825
Nurses		442,220						87,834
Psychologist		258,194						78,818
Psychiatrist		214,877						31,463
Project manager		248,422						
Training		32,476						5,160
Running costs		337,680						50,850
Utilities		91,515						9,000
Commodities&services								
Drugs		1,774,589						220,903
Usables		610,444						75,989
Medical check-up		251,223						9,000
M+E+S		248,512						33,100

	MoSA							
		NIHD						
		GF	HIV/AIDS program, Drug abuse program	TB program	MoJ	EHIF	MoER	municipalities
HIV+ support groups								
Staff		439,244	70,488					
Training		6,384	1,410					
Running costs		131,377	58,026					
Utilities		35,845	36,000					
Commodities&services								
Medical analyses		5,650						
Information materials		7,619						
M+E+S		32,954	51,522					
Prisons								
Staff					5,330,755			
Training					106,615			
Running costs					627,940			
Commodities&services								
Drugs					4,873,000			
Usables					227,157			
Condoms		20,480			20,000			
Lubricants		29,612			11,000			
Disinfectants					369,000			
STI analyses and tratment					986,000			
Laboratory services					314,000			
Additional HIV/AIDS, TB testing					1,537,534			
VCT		942,275						
Support groups		704,013						
Information materials		63,960			20,000			
M+E+S			50,664					
MSM								
Staff		294,368						
Training		5,887						
Running costs		417,606						
Utilities		36,000						
Commodities&services								
Condoms		117,880						
Lubricants		139,080						
Information materials		36,000						
M+E+S		55,096						
CSW								
Staff								
Social worker		72,386						
Doctor		22,204						
Nurse		7,626						
Project manager		178,927						
Training		5,623						
Running costs		151,759						
Utilities		20,400						
Commodities&services								
Medical check-up		224,613						
STI analyses&treatment		35,550						
Condoms		22,320						
Lubricants		31,346						
Information materials		10,000						
M+E+S		41,198	35,493					
HAART								
Commodities&services								
Drugs	7,000,000	6,375,078				3,309,000		
Medical check-up								

	MoSA							
		NIHD						
		GF	HIV/AIDS program, Drug abuse program	TB program	MoJ	EHIF	MoER	municipalities
Out-patient care HIV/AIDS								
Staff (55%)		602,555				1,015,894		
Training (2%)		21,911				36,942		
Running costs (37%)		405,355				683,420		
Utilities (5%)		54,778				92,354		
Out-patient care TB								
Staff (55%)	208,780					1,288,121		
Training (2%)	7,592					46,841		
Running costs (37%)	140,452					866,554		
Utilities (5%)	18,980					117,102		
In-patient care HIV/AIDS								
Staff (55%)	1,199,962					3,144,736		
Training (2%)	43,635					114,354		
Running costs (37%)	807,247					2,115,549		
Utilities (5%)	109,087					285,885		
In-patient care TB								
Staff (55%)	4,607,224					14,814,570		
Training (2%)	167,535					538,712		
Running costs (37%)	3,099,405					9,966,165		
Utilities (5%)	418,839					1,346,779		
TB interventions								
Training				121,424				
TB register				471,934				
TB/HIV collaboration				54,279				
Commodities&services								
Drugs	2,985,000			80,230				
DOT				4,582,581				
Laboratory services				674,228				
Youth awareness								
Teachers training		593,580	239,124					
Working out materials for teachers			836,861					
Drug prevention in special schools			356,027					
Counselling centres for youth						6,300,289		
HIV prevention in special schools		110,187					900,000	
Training scholars		1,519,699						
Training vocational schools´ students		590,763						
Massmedia+actions for youth								
Media campaign		126,905	902,384					
Actions			476,192					
Homepages (internet)			402,384					
International cooperation			108,772					
TOTAL (EEK)	**20,813,739**	**25,186,800**	**8,271,963**	**5,984,676**	**14,423,001**	**46,083,266**	**900,000**	**766,991**
% of TOTAL COSTS	17%	21%	7%	5%	12%	38%	1%	1%

GF - Global Fund
MoSA - Ministry of Social Affairs
NIHD - National Institute for Health Development
MoJ - Ministry of Justice
EHIF - Estonian Health Insurance Fund
MoER - Ministry of Education and Research

Source: please refer to annex 2.

Annex 2 – Cost estimation methods

Inclusions

Running costs: travel, stationery, postal service, household goods, housecleaning, security, telephone, internet, bookkeeping, food.

Utilities: electricity, heating, water, rent.

Informational materials: only printing costs.

VCT

Staff, running costs and utilities: derived from budgets of AIDS counselling centres.

Training: estimated as 2% of staff costs.

Laboratory services (verification tests): reference laboratory accounting.

Medical materials, condoms and informational materials: the estimated amount of commodities per client was multiplied by the number of clients and by average unit price.

Monitoring, evaluation, supervision: estimated as 5% of total VCT costs.

IDUs (needle exchange and low-threshold services)

Staff, running costs, utilities, medical materials: derived from budgets of needle exchange centres (NEC) and low-threshold centres (LTC).

Training: derived from budgets of LTC; NEC estimated as 2% of staff costs.

Syringes, condoms, disinfectants, informational materials: numbers of distributed commodities were multiplied by average unit price.

Monitoring, evaluation, supervision: estimated as 5% of total costs, supervision costs were included from the NIHD annual report.

MST

Staff, running costs, utilities, medical check-ups: derived from budgets of MST centres.

Training: estimated as 2% of staff costs.

Drugs (methadone), medical materials (test strips): unit prices were multiplied by the number of doses provided or clients.

Monitoring, evaluation, supervision: estimated as 5% of total costs.

Psychosocial support for PLWHA

Staff, training, running costs, utilities, medical check-ups: derived from NGO budgets.

Informational materials: number of distributed materials was multiplied by unit prices.

Monitoring and evaluation: estimated as 5% of total costs.

Supervision: derived from NIHD Annual Report.

MSM

Staff, running costs, utilities: derived from NGO budgets.

Training: estimated as 2% of staff costs.

Condoms, lubricants, information materials: numbers of distributed commodities were multiplied by average unit price.

Monitoring, evaluation, supervision: estimated as 5% of total costs.

Commercial sex workers

Staff, running costs, utilities, STI analyses and treatment, medical check-ups: derived from NGO budgets.

Training: estimated as 2% of staff costs.

Condoms, lubricants: numbers of distributed commodities were multiplied by the average unit price.

Monitoring and evaluation: estimated as 5% of total costs.

Supervision: derived from the NIHD annual report.

Health care services for people with HIV and AIDS

Costs of inpatient and outpatient care: provided by the EHIF.

The service costs were allocated as follows: staff, 55% of the total; training, 2%; running costs, 37% and utilities, 5%.

The cost for ARV drugs: provided by Ministry of Social Affairs Health Care Department (Drug Policy Unit), and the EHIF.

Raising youth awareness

Data from NIHD Annual Report and National HIV/AIDS programme.

TB services

Data provided by the TB programme accounting section.

Costs of inpatient and outpatient care: the EHIF.

The service costs were allocated as follows: staff, 55%; training, 2%; running costs, 37% and utilities, 5%.

TB and HIV services in prisons

Data provided by the Tallinn Prison accounting section, budgets of NGOs offering VCT and support group services in prisons and the NIHD annual report.

It was estimated that dealing with patients with HIV or/and TB takes approximately 60% of medical staff's time (the staff costs presented by Tallinn Prison included costs for all medical staff).