

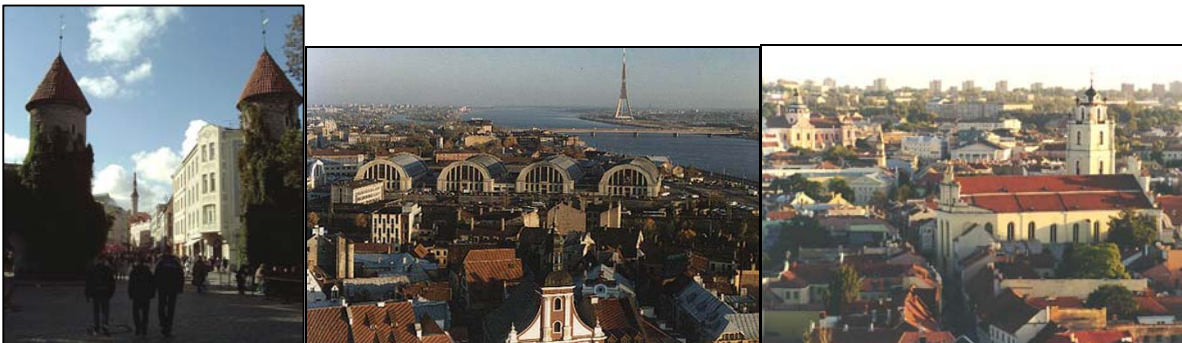


Scaling up treatment and care for
HIV/AIDS and TB and accelerating
prevention within the health system in
the Baltic States
(Estonia, Latvia, Lithuania)
Economic, health financing and
health system implications

Health Systems Financing Programme

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The views expressed by authors in this report do not necessarily represent the decisions or the stated policy of the World Health Organization.

Abbreviations

ARV	Anti-Retro Viral (medicine for HIV/AIDS)
BP	Best Practice (Evidence based, often Global Guidelines)
CSW	Commercial Sex Worker
DOT	Directly Observed Treatment
DRG	Diagnosis Related Group
EHIF	Estonian Health Insurance Fund
GDP	Gross Domestic Product
GFATM	Global Fund of AIDS, Tuberculosis and Malaria
GP	General Practitioner
HAART	Highly Anti-Retroviral Treatment (ARV and clinical monitoring)
IDU	Injecting Drug Users
IDU-HR	Injecting Drug User – Harm Reduction (programme)
IDU-OS	Injecting Drug User – Oral substitution (programme)
IEC	Information Education Communication (programme)
INGO	International Non-Government Organization
IVF	In-Vitro Fertilization
LAC	Lithuanian AIDS Centre
LLC	Limited Liability Company
MoJ	Ministry of Justice
MoH	Ministry of Health
MoSA	Ministry of Social Affairs (Estonia)
MSM	Men who have Sex with Men
NGO	Non-Government Organization
NIHD	National Institute of Health Development (Estonia)
OOP	Out Of Pocket (payments)
PHC	Primary Health Care
SCHIA	State Compulsory Health Insurance Agency (Latvia)
SHIF	Statuary Health Insurance Fund (Lithuania)
TB-MDR	Tuberculosis Multi-Drug Resistance
UNAIDS	UN Programme to fight HIV/AIDS
VCT	Voluntary Counselling and Testing
WHO	World Health Organization

HIV/AIDS and TB interventions in Estonia, Latvia and Lithuania Economic, health financing and health system implications

Executive Summary

The three Baltic States: Estonia, Latvia and Lithuania are all having concentrated HIV epidemics among injecting drug users – Estonia with the highest numbers infected (7800) – one of the fastest growing HIV epidemics in the world – and Lithuania with the lowest number infected (1300). At the same time TB is still constituting a considerable public health problem in the three countries: Lithuania has 2527 Tuberculosis (TB) cases/year, Latvia 1835/year, and Estonia 717/year. TB-HIV co-infection rates are increasing. In 2004 Latvia had 40 people co-infected with TB-HIV and Lithuania had 8 people. The TB multi-drug-resistance, TB-MDR, is high from 13.1% in Latvia, 19.5 in Estonia and as high as 21.8% in Lithuania.

The majority, 81–90%, of HIV infected people are young male injecting drug users (IDUs). The IDUs get infected through sharing needles and are not easily reached with prevention measures such as effective harm reduction interventions: needle exchange, oral substitution and care interventions such as HAART, Highly Active Anti-Retroviral Treatment. This has great implications for the control of the disease. The people infected with TB are often also socially and financial marginalized groups. The public health challenge is to reach these groups with effective interventions, make them comply with the treatment offered and prevent them from infecting other people.

The services provided to people with HIV/AIDS in the three countries have so far failed to reach a level that will effectively control the spread of HIV. There are many providers of HIV services in Estonia and Latvia while HIV service provision is more concentrated around the AIDS Centre in Lithuania. The providers include the health services for insured people (90–100% of the population), NGOs, municipalities and the prisons. The financing parties are first of all government (through special budget lines) and the national health insurance funds in one form or other. NGOs or in Estonia LLCs (limited-liability companies) are often the implementers of out-reach HIV services such as needle exchange and oral substitution (methadone treatment) interventions financed either by government (at present GFATM in Estonia) or some municipalities – in a rare case a private foreign fund.

The services provided to people with TB including multi-drug resistance TB, TB-MDR, in all three countries are provided through the public health TB programme that has a long history. The countries have special TB units in hospitals and prisons and the TB programme has a vertical organization within health care. The TB programmes in all three countries have their own governmental budget line.

This study shows that the collaboration between HIV/AIDS and TB programmes in the Baltic States is not yet implemented as recommended by WHO. As a consequence no joint TB and HIV activity planning is in place.

Since many of the HIV infected people are IDUs with a high proportion being criminal to finance their expensive drug needs. A significant number of IDUs end up in prisons. Actually, the proportion of HIV infected IDUs is higher in the prisons than outside. Further, many prisoners are poor and some have TB when they are admitted and some get infected with TB inside the often crowded prisons. The prisons thus have become important providers of both HIV

and TB services. Overall, today the TB programme in prisons are more up to (outside) health care standard than the HIV harm reduction programmes. For example, Estonian prisons do not provide needle exchange programmes; instead they offer a limited methadone programme and detoxication of IDUs at admission. All prison health care is financed by the Ministry of Justice budget and all prisons have their own health care staff.

The three Baltic States spend 5.4% (Estonia); 5.2% (Lithuania) and 3.5% (Latvia) of GDP on health care. Latvia with the lowest proportion of health care spending has the highest proportion of private share – as high as 47% while 25% of total health expenditures are financed by private contributions in Estonia and 38% in Lithuania. But for all countries special governmental budget lines exist for HIV prevention and care including drugs and TB programmes including drugs. While prevention campaigns seems to have a high priority for both HIV and TB programmes, scale-up of harm reduction programmes are generally under-funded. The countries spend a significant share of resources on HIV and TB prevention and control in the range of US\$ 3–6 million/year as of 2005 and are facing significant increasing expenditures for HIV/AIDS in the coming years when more people are becoming eligible for HAART – not least Estonia, expecting to reach a level six times higher in 2008 than today.

Access to HIV/AIDS and TB prevention and care services for vulnerable groups is a problem in the three Baltic countries in spite of special budget line, and exemptions from co-payments of health services. Some of the barriers are overcoming the first entry point: the PHC/GP services or VCT not being free of charge or they come at a transport cost. Another access problem is facing the IDUs who want to change from injections to methadone treatment. In all three countries both TB drugs and ARV treatment are provided free of charge while methadone has a high co-payment from the client and the financial barrier prohibits many from giving up injecting drugs. Today NGO/LLC driven projects and projects financed at the discretion of some municipalities provide methadone free of charge but the coverage is far from meeting the need.

The cost of not providing sufficient amount of effective harm reduction programmes has been calculated in Estonia: It costs EEK 2970/US\$ 233 per year per IDU for an effective needle exchange programme and EEK 23 053/US\$ 1811 per year per IDU for a methadone treatment programme. The alternative to these HIV preventive interventions are that more IDUs get infected through unclean needles who will have to be treated at the cost of HAART per year per person in the range of EEK 84 000/US\$ 6601 – 28 to 3.6 times higher comparatively to needle exchange and oral substitution programmes. Prevention is indeed better than cure – also from a cost-effectiveness perspective. One of the most challenging tasks for the national TB-HIV coordinating mechanism is to assist government in winning the support for HIV prevention interventions in countries where harm reduction programmes are being challenged on “moral” grounds.

The organization and financing of TB and HIV – and related services have two common features: vertical integration and horizontal fragmentation. Three issues of *strengthened coordination* are necessary to increase efficiency in the delivery of services that will assist in accelerating prevention of TB and HIV and scaling up treatment and care of TB and HIV/AIDS. 1) The increasing number of co-infected individuals calls for a more structured collaboration between the providers of TB and HIV services: specialized health care facilities including prisons; municipalities including representatives from GPs, NGOs and human right organizations. 2) The financial arrangement that the MoJ finances health care and oversees HIV prevention inside the prisons and the MoH/MoSA finances HIV prevention and TB and HIV/AIDS treatment outside prisons is not optimal from a public health perspective. 3) The

municipalities are weak financial institutions (weak tax base) but they hold the key to ensure access to services since they can priorities IDU interventions in their communities (and many do) and they can pay the GPs for providing HIV prevention and HIV/AIDS/TB services. Further, the municipalities can offer social support to TB infected persons and thereby indirectly assist increasing their compliance to treatment.

Background

WHO/EURO is carrying out a project on scaling up treatment and care for HIV/AIDS and TB and accelerating prevention within the health system in the three Baltic states: Estonia, Latvia and Lithuania. The rationale of the project is the relatively high prevalence of multi-drug resistant tuberculosis coupled with a concentrated HIV/AIDS epidemic mainly among the injecting drug users. A high proportion of the clients in the TB programme and the HIV programme are shared – among them many IDUs (injecting drug users) from socially marginalised segments of the populations.

Table 1. TB and HIV cases in the three Baltic States

	HIV infected, 2003¹	TB cases, 2003²	Total Population (million), 2004³
Estonia	7800	717	1.3
Latvia	7600	1835	2.3
Lithuania	1300	2527	3.4

Sources: ¹UNAIDS 2004, ²WHO 2005, ³UNFPA 2004

The incidence of both TB and HIV has been increasing in Estonia, Latvia and Lithuania from the early 1990s. The increase in TB with a prevalence of approximately 50–80 per 100.000 is partly due to a substantial problem of TB among inmates in prisons. Since the implementation of DOTS to prevent further increases in the incidence of TB in the late 1990s the number of TB cases has declined. However, at the same time an increasing percentage of the TB cases are multi-drug resistant (MDR-TB). Especially Lithuania has relatively many cases of MDR-TB, and is actually among one of the most severely affected countries in the world, with approximately 22% of all TB cases being MDR-TB.

As for HIV/AIDS, all three countries, but especially Estonia, have experienced substantial increases in the number of HIV infected. Estonia has today an estimated prevalence of 1.1, which is one of the highest prevalence rates in Europe. Risk groups in all three countries are still confined to primary IDUs, accounting for 75–90% of all HIV infected, but also in prisons the percentage of HIV infected is increasing. Problems of HIV/TB co-infection is also increasing in all three countries, especially in Estonia and Latvia, where the highest prevalence rates of HIV are reported.

On this background the analysis focuses on the real and potential economic and financial implications arising in the up-scaling of care for HIV/AIDS and TB infected persons and the accelerating of HIV/AIDS and TB prevention efforts within the health care system and beyond in Estonia, Latvia and Lithuania. The analysis builds on a description of the individual countries within systematic framework. The information present includes a literature search, specific country reports and data collected during short missions to the countries.

The analysis will be disseminated to the TB and HIV programmes in the three Baltic States including the collaborative TB-HIV groups to further discussions on the improvements of the health care system to benefit people living with HIV/AIDS and TB and the population at large in Estonia, Latvia and Lithuania.

Objectives

The main objective is to analyse economic, health financing and health systems implications of HIV/AIDS and TB interventions in the three Baltic States: Estonia, Latvia and Lithuania. The work includes:

- to review the national TB and HIV/AIDS policies in light of best practices, and identify potential contradictions as well as opportunities to improve coordination and effectiveness; and
- to develop policy options for cost-effective TB and HIV/AIDS interventions.

The report will be part of the continuous discussions among the TB/HIV collaborative networks in the three Baltic countries.

Analytical framework

The analysis provides an overview of HIV/TB services and their financial arrangements in the three Baltic countries. Initially, the TB and HIV services included in the analysis are identified. The relationship between *patients – providers – 3rd party payers* is then described. The simple equation with a patient needing a specific health service that the doctor and the patient agree on (a drug or an operation) with one financier paying for the services such as a national Health Insurance Company does not always work for TB and never for HIV services. The market for TB and HIV is a complex one with many players at the provider side and many third parties for the paying of the services. The analysis focuses on the health financing arrangements following the recommendations for country-level arrangements that are described in as comprehensive a manner as the material available allows (Kutzin 2001). The financing framework includes a description of the financial flow processes for each country:

Collection: combining the sources of funds, contribution mechanisms, and collection agencies

Pooling: the arrangements for accumulating funds for populations and services

Purchasing: the allocation of funds to service providers, including the structure and the content (role of purchaser)

An analysis of the organization of the health financing system in relation to HIV and TB services is provided for all three countries in the discussion.

The financing framework is used as a guide rather than applied rigorously due to the complexities of the TB and HIV/AIDS programmes' financial arrangements that include health system financing and financing from other ministries, e.g. Ministry of Justice, external financing from donors, and resources and services provided by NGOs. The emphasis is on collection, pooling and purchasing processes – and an assessment of how the delivery of HIV and TB services is affected by the financing arrangements in the three Baltic countries and vice versa.

Field visits

This report is based on short missions (two days) to Lithuania and Latvia in May 2005 (persons met with in Annex 1). At the missions to Lithuania and Latvia the HIV/AIDS focal point in WHO/EURO participated one day included the meeting with the TB and HIV/AIDS collaborating groups. The four-day mission to Estonia in June 2005 included a meeting with the collaborating TB programme and HIV/AIDS programme group and this time the consultant was accompanied by the TB focal point in WHO/EURO. The missions provided the opportunity to meet with the stakeholders including government officials, National Health Insurance schemes, clinical experts in the fields of HIV/AIDS/TB; NGOs and experts working with IDUs, and representatives from municipalities in the capitals. The missions also offered an opportunity to visit TB and AIDS clinics including the WHO Collaborating Centre for Research and Training in Management of MDR TB outside Riga, and NGOs. However, no prisons were visited during the missions.

Country specific materials were collected before and during the missions including financial data and these were supplemented with a literature search in PubMed and other databases.

The national WHO offices assisted in organizing meetings with key personnel and organizations and provided advice and insights throughout the preparation, during the missions, and at follow-up as appropriate. The authors wish to thank the three national WHO offices and all officials and individuals generously contributing time and resources during the missions and follow-up. Special thanks to Dr. Kristi Ruttel, the National Institute for Health Development, Estonia, whom the consultant worked closely with during the whole mission.

Literature search

Additional literature to the country specific literature collected during the missions was obtained through literature search conducted in the PubMed database. Also literature searches in the internet databases of WHO (www.who.int), UNAIDS (www.unaids.org), Baltic Health (www.baltichealth.org) and euroTB (www.eurotb.org) were performed along with searches on www.google.com.

Searches were carried out on both TB and HIV/AIDS in the three individual countries and for the region as a whole, but also searches on specific risk groups of HIV and TB in the region, such as IDUs and prisoners, were performed. The main search words included *HIV/AIDS, TB, MDR-TB, Estonia, Latvia, Lithuania, Baltic Countries, co-infection, financing, IDU, prison*.

The searches provided additional relevant material on both TB and HIV/AIDS in the three countries. The searches did, however, reveal that literature available on HIV/AIDS and TB in Lithuania was limited. Of main findings from the literature search was especially the identification of additional material on MDR-TB, both country specific and more general material. Literature on HIV/AIDS and TB among IDUs and in prisons was also identified.

Organization of the report

The report findings provide a brief overview of the TB-HIV field in each of the three Baltic States: services; patients; providers; and financial arrangements before the countries are presented and analysed within this framework. Estonia is used as a case for costing of individual services since such work was already available. It has not been possible to enter into such details for Latvia and Lithuania. The cost data from Estonia thus serves as inspiration for similar work

in the other two Baltic countries – and perhaps later on for a joint comparison across the countries to improve efficiency of individual services and share insights into the different approaches taken. Based on the costing study of HIV interventions in Estonia it was possible during the mission to sound national officials and experts on the financial flows in more details – in fact it was possible to identify the financing parties for each cost component that formed the individual HIV services.

Findings

All Baltic countries provided a range of best practice HIV and TB services recommended for a situation with a concentrated HIV epidemic and a TB epidemic with relatively high prevalence of MDR-TB. The services are listed in Table 2.

Table 2. TB and HIV services in the Baltic countries

HIV-TB service
IDU (CSW, MSM) Harm reduction
IDU - OS (Oral Substitution)
VCT
HIV prevention (condoms)
Treatment of OI (Opportunistic Infections), excl. TB
HAART (highly Active Anti-Retroviral Treatment)
TB/HIV interventions
TB preventive therapy (drugs)
TB infection control (health care and prisons)

Note: Services from WHO TB-HIV guide to M&E (2004)

Table 2 shows the most important HIV and TB services from a financial aspect. The services excluded are mass media campaigns – instead information material of co-infection of HIV and TB is part of the TB and HIV interventions; safe blood is excluded since blood is screened for many other reasons as well; youth awareness and life skills are excluded as these services are regarded as the responsibility of the Ministry of Education; and MTCT, Mother-To-Child-Transmission that currently has little financial significance in a concentrated epidemic driven by mainly young male IDUs. Although TB prevention therapy is included in the services recommended by WHO (2004), it is not supplied in any of the Baltic States due to the high incidence of MDR-TB.

The relationship between the consumer/patients, providers and 3rd party payers and regulatory body in health care is shown in Figure 1 (Reinhardt 1990). However, this picture is much more complex in the market of TB and HIV services. The *receivers of TB and/or HIV services* and those who need the services from a clinical and societal perspective are not necessarily identical. People with TB and HIV do not always come forward for testing and when identified in the health services they are not all keen to receive the services being offered to them. There are many reasons for this. People with TB and HIV are often stigmatized in the general population and not willing to undergo treatment that will identify them as TB infected and/or HIV positive. Many are already socially marginalized with few social and financial resources – some TB and/or HIV infected people are alcoholics and/or homeless and/or IDU. Although society and doctors can agree that people need treatment or to be introduced to harm reduction interventions

the target groups for these interventions might not agree – and compliance and adherence to prevention/treatment are key to the control of the two diseases.

Figure 1. The relationship between patients, providers and 3rd party payers

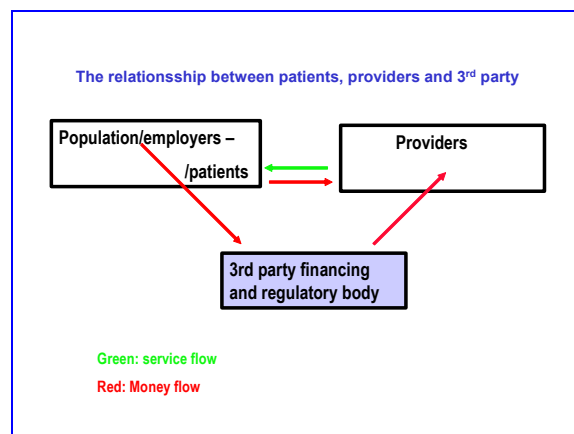


Figure 1 is adapted from Reinhardt (1990)

The framework of “effective coverage” (Shengelia et al. 2005) provides a useful approach to the challenge faced by each country: reducing the gap between the need for services and the utilization of services, ensuring that the most cost-effective interventions are used, and improving the quality of these services. Extending this approach involves further work to identify the systemic changes needed to ensure that the right services can be delivered to the right clients with the right quality.

The *providers* of services are many, and although the health system regulated by Ministries of Health plays a major role, the prison system houses many TB patients and IDUs (many of those with HIV). In 2005, 12–3% of all prisoners in Estonia were HIV-positive; in 2002 in Latvia a sample survey showed that 4.4% of the prisoners were HIV positive; and in Lithuania 1.5% of the prisoners were HIV infected¹ (this does not include the outbreak of HIV in the Alytus prison in 2002 where more than 250 people were infected from sharing unclean needles). The HIV prevalence in prisons is estimated higher than the prevalence among the IDU population outside prisons, that is 11% in Estonia.² Sporadic testing of the prison population in Latvia and Lithuania also indicates that HIV prevalence among IDUs is higher inside prison¹. The prisons in the three countries provide TB screening/diagnostics and treatment services (DOTS) as well as HIV testing (only Estonia provides VCT to all prisoners) as well as ARV treatment. The harm reduction programmes for IDUs, involving needle exchange and provision of disinfectants, are limited or non-existent in the prisons in the Baltic States, and condom promotion is weak or left to the NGOs.

The NGOs are important providers of IDU services that can effectively prevent the spread of HIV. In Estonia a number of NGOs/LLCs (Limited Liability Companies) are financed from GFATM, but some NGOs are also active in this field in Latvia and Lithuania. There are no NGOs providing social services for TB patients per se, but some humanitarian and church based organizations provide services for the homeless and very poor segments of the population.

¹ Much higher HIV prevalence, 58%, is registered among IDUs who are visiting needle exchange programmes in Estonia (Uusküla, 2004)

² Source: Lithuanian AIDS Centre 2004

Social support services (food, shelter) are important to TB treatment to ensure adherence to treatment and improve the general health status of disadvantaged groups (homeless, impoverished, alcoholics). Many IDUs are HIV infected and harm reduction programmes including methadone are effective measures to control the epidemic. However, municipalities have no legal obligations to make available either harm reduction or rehabilitation programmes for IDUs with HIV or social support services for people with TB. Apart from the capital cities, very few municipalities offer these important programmes, and the health services (and Ministry of Justice) do not see it as their area of responsibility. Outside the capitals, Tallinn, Riga and Vilnius, social programmes to support TB treatment and harm reduction programmes are exceptions – and in the capitals the need far exceeds the resources made available.

The *financing* of the TB and HIV services presents an even more complex picture since many players are contributing to the financing. As described for the individual countries – this is most true for Estonia receiving significant external funding to HIV/AIDS activities from the GFATM (e.g. GFATM provides funding for Estonian NGOs that provide rather comprehensive Harm Reduction programmes for the IDU populations including methadone). The financing of the TB services in all three Baltic countries is mainly provided by the MOH or MOSA in Estonia. The second most important financing source is the MOJ since TB programmes are an important part of health services in prisons with special wards.

A number of donors have been active in the TB area for some time. These include the Nordic Council, France, United States of America (CDC), Finland, Norway and EU. The financing often covers specific services such as drugs including MDR-TB medicines and food. Financial aid to improve infra-structure and supply of expertise is also being provided.

The benefit packages of all three Baltic countries include patient co-payments fee for health services. The arrangements for this vary, but for all three countries there is co-payment at first entrance into the health system (GP or specialist) and for medicines including methadone. However, most TB and HIV/AIDS treatment services are treated as fully covered “special cases” with no co-payments and with their own financial arrangements – for example a budget line in the State budget for ARVs. But some preventive interventions and supportive complementary interventions are not always fully covered and require clients to pay.

TB treatment carries externalities beyond the patient by reducing the risk of TB disease in the population at large. In all three countries the government provides TB treatment free of charge through the health service (or the prisons) at a vertical organizational and financial basis. However, transport cost and nutritious food remains the responsibility of the infected persons who are not always able to provide for themselves. If municipalities or donors via NGOs do not supply these extra services there is a risk that the infected persons will not comply with the treatment.

Effective harm reduction programmes to control the HIV/AIDS epidemic being fuelled by HIV positive IDUs are not available everywhere, and methadone comes at a price: the IDU will have to pay out of pocket for the medicine if it is not provided by municipalities or NGO programmes. Given the nature of the risk group, these costs are a barrier to service use: in Lithuania one year’s consumption of methadone costs US\$ 250, and in Estonia the figure is US\$ 317. The financial situation becomes paradoxical when the IDU infected with HIV becomes eligible for ARV – then these drugs are provided free of charge in all three Baltic States, since the treatment is paid for by the government (special budget line).

Estonia

TB cases per 100.000 (2002)¹	38
TB cases (2003)²	717
MDR-TB (% of total TB cases) (2000)³	19.5
Percentage of TB cases who are prisoners (2004)⁷	7.6
HIV infected (end 2003)⁴	7800
TB/HIV co-infected (2004)⁵	22
Number of IDUs (2004)⁵	10–15 000
Percentage of IDU among HIV+ (2002)⁴ (%)	90
HIV prevalence among prisoners (2004)⁵	13
Total population in mill (2004)⁶	1.3

Sources: ¹Ministry of Social Affairs 2004, ²WHO 2005, ³WHO 2004, ⁴UNAIDS 2004, ⁵Ministry of Social Affairs 2005, ⁶UNFPA 2004, ⁷Estonia TB Registry

HIV/AIDS

Infection patterns and risk groups

It is estimated by UNAIDS that 7800 people by the end of 2003 were living with HIV in Estonia, equal to a prevalence of 1.1% (UNAIDS 2004). The highest prevalence rate is among IDUs and prisoners. Thus, 90% of the HIV positive are IDUs (UNAIDS 2004). Of new HIV cases 20–30% are detected in prisons, especially among young men (15–24 years old), and it is estimated that 12–13% of all prisoners in Estonian prisons are HIV positive (Ministry of Justice 2005). Co-infection of HIV and TB was in 2004 detected in 22 cases where the number of co-infected has doubled in 2005 (National TB Registry 2005).

Interventions, service delivery settings, and clients

The HIV *services* recommended by WHO (table 1) are all provided in Estonia, although not everywhere. For example, the prisons do not have a needle exchange programme, and the use of methadone is presently dormant, though by the end of 2005 it is planned to re-introduce this treatment for prisoners who had received methadone before. For other IDUs in prisons there will only be detoxication treatment available (personal communication with MoJ 25 August 2005). In prisons the GFATM programme finances support groups for PLWHA: dissemination of condoms and some VCT services. In particular, in 2005 VCT was financed by GFATM resources in Tartu Prison and by MoJ resources in all other prisons; all verification tests were financed by the National HIV Prevention Programme (managed by NIHD). A recent cost analysis of HIV/AIDS interventions in Estonia (Alban 2005) revealed that the National HIV/AIDS Strategy 2005–2008 would need approx. EUR 54 million mobilized – the yearly figure increasing rapidly over the years as the number of HIV infected persons become eligible for Highly Active Anti-Retroviral Treatment (HAART).

The main group of *recipients/patients* of HIV services is injecting drug users (IDUs), who are mainly young males – a high proportion from the Russian-speaking enclaves at the North West border to the Russian Federation – many of whom do not have health insurance. There are other high-risk groups such as commercial sex workers (CSWs) and men who have sex with men (MSM), but they constitute a relatively smaller group (although the harm reduction programmes supplied by the NGOs also incorporate these groups).

Service providers and their financing

Financing sources for HIV in 2005 services include (1) the Estonian Health Insurance Fund (EHIF); (2) the central government budget via the MOSA (drugs for HIV/AIDS); (3) the central government budget via the MOJ for HIV services provided in prisons; (4) GFATM for the HIV/AIDS programme (a substantial financial contribution of total US\$ 10 million over four years from October 2003 – September 2007 for health care services, harm reduction services, youth programmes, and media campaigns where all GFATM funding is through the National Institute of Health Development), (5) National HIV Prevention Programme managed by NIHD (funding for NGOs/LLCs); (6) minor small private funding to NGOs; (7) and municipalities (financing for some primary care services (GP visits), social care and support including some limited IDU interventions from a few municipalities (rehabilitation, methadone treatment). Tallinn municipality houses half of the IDU population in Estonia and funds/provides IDU prevention projects including harm reduction interventions and disseminate IEC material for TB and HIV groups where people are encouraged to be tested.

The resource flows were mapped for HIV/AIDS interventions during the mission and the result from key interventions are lined up in table 3A-E.

Table 3A. The cost of VCT and the financing body

VCT Cost component	2005 EEK	3rd party payment
Number of centres	6	
Fixed costs	1 350 000	EHIF
Variable costs	150 000	EHIF/State budget
TOTAL EEK	1 500 000	
UNIT COST EEK	300	
Unit cost of variable	30	
UNIT cost US\$	26	

Source: Alban 2005 (The costs are from EHIF)

The cost for VCT is estimated on the basis of the two years GFATM programme funding (2003–2004) that was EEK 1 691 600. All anonymous VCT services and all verification tests are paid by the State Budget through NIHD. VCT in hospitals and out-patient clinics are covered from EHIF (in prisons from the MoJ budget). In 2004 the budget of six AIDS Counselling Cabinets was EEK 1.23 million including tests.

Table 3B. The cost of HAART and the financing body

HAART Cost component	2005 EEK	3rd party payment
Total drug cost	16 441 197	EHIF/State budget
Monitoring	340 050	EHIF/GFATM
Doctor's appointment	54 150	EHIF/GFATM
Nurse's appointment	93 600	EHIF
CD4 AND CD8	169 200	EHIF/GFATM
X-ray	23 300	EHIF/GFATM
General blood test	10 800	EHIF/GFATM
Total EEK, HAART	16 781 247	
UNIT cost EEK	83 906	
UNIT cost US\$	7233	

Source: Alban 2005 (covers 100 "old" patients and 100 new – entering 2005)

In the next two years (October 2005–September 2007) the GFATM contributes with EEK 8 million to cover health services for uninsured people (doctors' appointments and the analyses/diagnostics made).

Table 3C. The cost of HR interventions and the financing body

IDU-HR Cost component	2005, EEK	3rd party payment
Behaviour change		
Staff	902 000	LLC (GFATM)
Training	20 000	LLC (GFATM)
Running cost	204 260	LLC (GFATM)
IEC	10 000	LLC (GFATM)
Commodities and services		
Syringes	144 540	LLC (GFATM)
Condoms	29 580	LLC (GFATM)
STI	15 768	EHIF
Other	13 480	
Enabling environment	10 000	LLC (GFATM)
Investments	65 660	LLC (GFATM)
M+E	69 764	LLC (GFATM)
Total EEK, IDU-HR	1 485 052	
UNIT cost EEK	2970	
UNIT cost US\$	256	

Source: Alban 2005 (the cost covers 1 centre serving 500 clients)

The harm reduction interventions are provided by NGOs/LLCs contracted by the National Institute for Health Development and at present funded from the GFATM. The GFATM contributes to harm reduction programmes – needle exchange and methadone treatment – approx. EEK 12.5 million/year (2005 and 2006). The cost of one harm reduction centre serving 500 clients at full capacity is approx. EEK 1.5 million. Today two hospitals in Tallinn, one LLC in Tallinn and two LLCs in Eastern Estonia provide oral substitution treatment for IDUs.

Table 3D. The cost of IDU-OS interventions and the financing body

IDU-OS Cost component	2005, EEK	3rd party payment
Behaviour change		
Staff	1 105 000	NGO (GFATM)
Training	20 000	NGO (GFATM)
Running cost	162 290	NGO (GFATM)
IEC	10 000	NGO (GFATM)
Commodities and services		
Drugs	294 538	NGO (GFATM)
Useables	129 412	NGO (GFATM)
Condoms	9504	NGO (GFATM)
Enabling environment	10 000	NGO (GFATM)
Investments	15 660	NGO (GFATM)
M+E	87 820	NGO (GFATM)
Total EEK, IDU-HR	1 844 224	
UNIT cost EEK	23 053	
UNIT cost US\$	1987	

Source: Alban 2005 (The cost covers 1 centre serving 80 clients)

Methadone treatment is relatively expensive, EEK 294 500 per year for 80 clients = EEK 3 675 per person/year (US\$ 317) and the GFATM contributes EEK 6.6 million/year for methadone and urine test materials. At present (September 2005) 340 IDUs are provided methadone treatment under the GFATM programme. The target by the end of September 2007 is 840 IDUs under methadone treatment.

Table 3E. The total cost of prison interventions and the financing body

Prison Cost components	2005, EEK	3rd party payment
VCT/year (80%)	1 650 000	MOJ/GFATM
100 000 condoms/year	66 000	MOJ/GFATM
Disinfectants	1 000 000	MOJ
STI treatment, 500/year	315 360	MOJ
IDU/OS 33% of IDU pop.	1 358 871	MOJ/GFATM
Medical check-up	22 913	MOJ
TB X-ray (1 per year)	738 000	MOJ
HepB (1500/year)	1 035 000	MOJ
Psycho-social services	1 000 000	MOJ
Training of prison staff	500 000	MOJ
Training of prisoners	500 000	MOJ/GFATM
S, M&E (5%)	403 000	MOJ
TOTAL COSTS	8 589 144	

Source: Alban 2005 (yearly costs)

The major 3rd party payer for HIV and TB interventions in prisons is the Ministry of Justice. The cost figures in table 3E builds on the planned programmes in March 2005 that have later been changed and as a consequence the budget has decreased. VCT is provided in all prisons at a

regular basis. In 2005 GFATM resources are financing the costs of VCT services in Tartu Prison – all other prisons are financed by MoJ. However, all verification tests are financed from the National HIV

Prevention programme (MoSA). Starting from 2006 all VCT services in prisons will be paid from the MoJ budget – except for verification tests that will still be funded by MoSA. In case a prisoner is tested HIV positive, the MoJ will finance all needed diagnostics and treatment. GFATM resources funds support groups for PLWHA that are not included in table 3E.

TB

Infection patterns and risk groups

The incidence of TB started to increase in Estonia in the 1990s and doubled in only 5 years to 51 per 100.000 in 1997 (Ministry of Social Affairs 2004). The latest estimate from 2002 by the Ministry of Social Affairs is an incidence of 38 per 100 000 (Ministry of Social Affairs 2004), compared to an estimate of 50 in 2003 by the WHO (WHO 2005). Multi-drug resistance is a serious problem in Estonia, estimating that 19.5% of the cases in 2000 were MDR-TB (WHO 2004). The *patients/recipients* of TB services are often socially marginalised groups such as homeless people, alcoholics, and an increasing number of young men co-infected with HIV (often IDUs).

Interventions, service providers and their financing

The *providers* of TB services are public health institutions (17 facilities) – often specialized units at both secondary and tertiary level of provision (hospitals, TB clinics) such as Kivimae Hospital and Tartu University Lung Hospital. There are no NGOs providing services for TB patients. The prisons have their own TB hospitals/beds and facilities for TB patients including diagnostics. Tallinn municipality also pay GPs to provide TB services for the uninsured. The TB health services supplied by the TB programme in Estonia are included in table 4.

Table 4. The total public health cost of TB interventions and financing body

TB cost components	2003	2004	2005	3rd party payment
DOT	4 800 000	4 940 000	4 825 000	MoSA
TB register	471 000	450 000	470 000	MoSA
Laboratory services	375 000	225 000	220 000	MoSA
Drugs	4 000 000	4 000 000	4 000 000	MoSA
Training and supervision	260 000	125 000	175 000	MoSA
Administration	754 000	360 000	260 000	MoSA
Total cost EEK	10 660 000	10 100 000	9 950 000	

Source: TB programme 2005

Both hospital treatment and ambulatory treatment cost of TB patients is covered by MoSA. Different donors also provide financing to the TB programme (Scandinavia, Finland, Open Estonia Foundation). The extra support services for TB patients with little or no financial resources come from special projects and some social services (transport, food) paid by municipalities.

Health system financing and service delivery arrangements relevant to HIV and TB

The description of the financing arrangements in Estonia builds mainly on the recently published “Health System Financing in Estonia” (WHO 2005). Aspects of the system with relevance to the financing of HIV and TB interventions are described briefly below.

Macroeconomic and Fiscal Context

With some minor fluctuations, the wider fiscal context has remained stable: total government spending is about 36% of GDP, and there is strong pressure to control spending and minimize potential budget deficits. The current economic policy aims at cutting individual income taxes which may in turn affect the state budget and perhaps cause a decrease in the level of public funding contributed to the health system. However, external funding from the EU (Estonia and the other Baltic States became EU members in 2004) is expected to increase (EU structural funds) the state budget. External flows are currently important in the health sector: Estonia receives a substantial contribution to fight its HIV/AIDS epidemic from GFATM – US\$ 10 million from 2003–2007. Funding for the health sector also comes from bilateral assistance.

Total health spending in Estonia is estimated at 5.4% of its GDP in 2003. Most health expenditures come from *public* sources, but the public share has been declining over recent years – from 85% in 1998 to 75% in 2003 – leaving an increased share to be paid by the patients themselves. One reason for this has been a steady reduction in the priority given to the health sector during this period: the share of health in total government spending fell from about 13% in 1998 to 11% in 2003.

Collection and pooling of health revenues

The main source of public revenues for health is a 13% payroll tax earmarked for compulsory health insurance paid by formal sector employers/employees and to a much lesser extent the self-employed. The revenues are collected by the general Tax Office and transferred to the Estonian Health Insurance Fund (EHIF). In 2003, the revenues pooled and managed by the EHIF accounted for 87% of public health expenditures and 65% of total health expenditures, and provided coverage for approximately 94% of the population.³ The second major public financing source is general tax revenues (also collected by the Tax Office) that are accumulated in the State Budget; these account for 12% of public sector health expenditures. Most of this (about 85% in 2003) is managed by the Ministry of Social Affairs (MoSA), though some health spending is managed by other ministries. In particular, the prison health services managed by the Ministry of Justice accounted for 10% and the health services of the Ministry of Defence another 3%. About 15% of MOSA spending is transferred from MOSA to EHIF to finance emergency health care for the uninsured. Local governments (municipalities) only funded 2% of government health expenditure and 1% of total health expenditures in 2003 from their own budgets.

Most private health spending is in the form of out-of-pocket (OOP) payments. The OOP payments consist of statutory cost sharing for Estonian Health Insurance Fund (EHIF) benefits, direct payment to the providers for services outside the EHIF benefit package, payments to non-EHIF contracted providers, and informal payments (though these are regarded to be low). The main shares of OOP go to pharmaceuticals (56%) and dental care at 27% of total OOP followed by out-patient care at 7%.

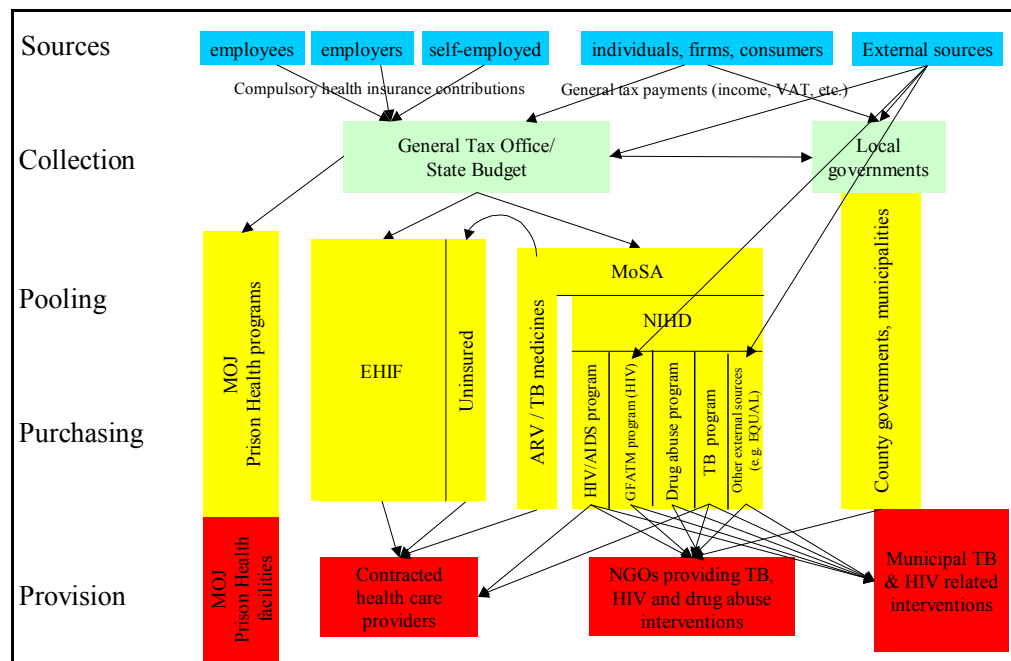
³ The uninsured are comprised predominantly of low-income male adults who are either long term unemployed or who work in the informal sector.

Pooling and purchasing of HIV and TB interventions

As reflected in Figure 3, services and interventions related to HIV and TB are delivered by a number of providers and financed through a variety of mechanisms. Although probably constituting only a small percentage of the target population, services for insured persons are funded through the “normal” EHIF mechanisms supplemented by medicines (ARVs and TB drugs) procured and supplied centrally by the MOSA. The Ministry of Justice manages a vertically integrated health system (i.e. prison health facilities are part of the MOJ and budgeted directly by MOJ) to deliver the interventions described previously. The MoSA’s public health budget mainly funds large scale health prevention/promotion activities including the National HIV/AIDS Prevention Programme, the National Tuberculosis Prevention Programme, the Drug Abuse Programme, and the National Children and Adolescent Health Prevention Programme. The management of these national prevention programmes is delegated to the National Institute for Health Development (NIHD). While these are all under the NIHD, each programme has a defined budget line, and there is no scope for pooling funds (and hence no incentive for joint planning) among these programmes, even those that are trying to reach the same target population. Hence, each programme contracts with providers (e.g. NGOs that provide services to IDUs, local governments for some primary prevention projects, etc.) separately. Donor funding appears to have increased this fragmentation. Indeed, even the GFATM-funded HIV/AIDS programme is managed separately from the national HIV/AIDS programme (both under NIHD). Finally, municipalities (there are around 250 in Estonia) allocate an average of 1% of their tax-based funds to health – mainly to cover capital costs and administration since they own most hospitals and are responsible for their maintenance. As described previously, however, some also provide services to high-risk populations for both diseases.

Although the purchasing methods of the EHIF for most personal health care services are highly developed and sophisticated, the practice of contracting for “public health services” (more accurately, the personal and population-based services funded through the NIHD programmes) is variable. The National Institute for Health Development acts as the implementing body responsible for carrying out the tasks either by its own structures or by outsourcing the services. This also includes health care providers in such areas as TB and HIV/AIDS. Especially for HIV/AIDS the prevention services such as harm reduction services are increasingly being outsourced to NGOs. But also within the health institutions the National Institute for Health Development to implement health services for the affected populations is contracting primary care and hospitals.

Figure 2. Organization of provision and public finance for HIV-TB interventions and related services, Estonia



Out-of-pocket spending

The insured as well as the uninsured patients are subjected to co-payments for certain health services. For uninsured (6% of the population) this is remarkable, as only emergency care is provided by State. For insured this is relatively moderate where out-of-pocket spending constituting 21% of overall health expenditure. The health care service list that holds all service prices sets a maximum ceiling for cost sharing, for example 30% cost sharing for IVF and 20% for abortion without medical indication. For services not included in the benefit package all costs must be carried by the patients. Such services include for example medicines not included in the positive list. While ARVs and TB treatment are provided free of charge, private spending is an important concern with regard to the total range of interventions, particularly for IDUs. The needle exchange programme and methadone therapy provided by providers contracted by National Institute for Health Development do not need co-payment. Clean needles are not always covered and these have to be purchased to enable some needle exchange programmes to function.

Summary assessment of financing arrangements for HIV and TB interventions

Several aspects of the current financing arrangements impede the effective and efficient delivery of appropriate HIV and TB prevention and treatment interventions to the target populations. The principal problems are:

- fragmentation of financing between the NIHD “public health programmes”, which creates dis-incentives to joint planning and especially pooling of resources to increase effectiveness. An alternative would be to develop a “client-oriented” approach, e.g. starting with the objective of reaching IDUs to both reduce drug abuse and HIV transmission. Combining efforts and funds from the HIV and Drug Abuse programmes could enable a more efficient and effective approach, e.g. blending needle exchange or methadone substitution with condom promotion and other safe sex health promotion strategies.

- financial and managerial separation of the prison health system from the rest of the health system. This requires the development of “parallel expertise” on HIV and TB in the prison health system and the NIHD programmes, and, as noted previously, the lack of coordination probably compromises the effectiveness of efforts within the prison system in particular (on the assumption that the health experts working in the NIHD programmes have greater capacity).
- low level of funding for municipal health services, which limits their ability to reach populations living on society’s margins. As noted previously, municipalities and NGOs seem much better able to reach out to IDUs, alcoholics, etc., than do the formal health system, but to improve the coverage of their interventions may require changes in the inter-governmental budgetary process to increase funding available to the localities in greatest need.
- the need to make out-of-pocket payments for many of the preventive interventions targeted at IDUs is clearly a threat to their coverage and effectiveness.

Latvia

TB cases per 100.000 (2003)¹	80
TB cases (2002)¹	1835
MDR-TB (% of total TB cases) (2000)²	13.1
Percentage of TB cases in prisons (2003)³	7
HIV infected (end 2003)⁴	7600
TB/HIV co-infected (2004)⁵	40
Number of IDUs (2004)	NA
Percentage of IDU among HIV+ (2002) (%)⁴	17.3
HIV prevalence among prisoners (2004)⁷	4.4
Total population in mill (2004)⁶	2,3

Sources: ¹WHO 2005, ²WHO 2004, ³HO/Europe, ⁴UNAIDS 2004 ⁵Latvia Ministry of Health 2005, ⁶NFPA 2004, ⁷LAC 2004

HIV/AIDS

Infection patterns and risk groups

Although the country has about as many persons infected with HIV as Estonia, the prevalence rate is less because the population of Latvia is about 1 million larger than Estonia. It is estimated that 7600 people by the end of 2003 were living with HIV in Latvia, equal to a prevalence of 0.6% (UNAIDS 2004). The main risk groups are IDUs, among whom HIV prevalence was estimated at 17.3% in 2002 (UNAIDS 2004). 81% of all new HIV cases in 2001 were among IDUs (Cabinet of Ministers 2003). There are also HIV infected individuals among other high-risk groups such as commercial sex workers (CSWs) and men who have sex with men (MSM), but they constitute less than 20% of all HIV infected in Latvia.

Co-infection with HIV and TB is an increasing problem in Latvia; it is estimated that 1.4% of TB cases in 2001 were co-infected with HIV (Morozova et al. 2003). In 2004 the Latvian Ministry of Health reported 40 new cases of co-infection with HIV and TB (Latvia Ministry of Health 2005).

Interventions, service delivery settings, and clients

Latvia provides the range of *TB and HIV services* listed in table 1. In prisons, however, there are no HIV prevention measures, such as Harm Reduction interventions (see sub-section below on prison health services). As in Estonia the main group of *recipients/patients* of HIV services is injecting drug users (IDUs).

Service providers and their financing

The *providers* of health services including HIV services in Latvia are based mainly in the public sector health care system, either at the tertiary level that is owned by the central government or the primary (polyclinics and family doctors) and secondary system that is owned by the local governments. Private health care is increasingly available for the general population, but most HIV patients are from the poorer segments of society and are not able to pay extra fees.

Ten municipalities provide needle exchange and rehabilitation programmes for IDUs and Riga City provide financing for the NGO Dialogue that provide services for IDUs including training.

The *sources of funds* for HIV/AIDS services are today mainly tax revenues accumulated in the state budget and some external funding. HIV/AIDS prevention measures and epidemiological monitoring implemented by the primary care institutions in Latvia are funded from the national budget resources in the MOH sub-programme of HIV infection spread control. The HIV infected persons and AIDS patient health care including ARV treatment are paid from a special budget line in the MOH sub-programme of infectious, sexually transmitted and contagious skin disease diagnostics, treatment and spread control and from special health care budget programme of centralized measures (centralized purchases of medication for HIV/AIDS ambulatory patients). The UN Theme Group (UNDP, UNAIDS, WHO and UNICEF) is currently implementing two major projects in cooperation with the Government of Latvia: Coordinated support for young people's health and development in Latvia and uniform secondary prevention network building for controlling the spread of HIV/AIDS, e.g. harm reduction programme for IDU.

It has not been possible to get budget data for 2005 from Latvia, but account data from 2003 is available for HIV/AIDS drugs = US\$ 1.2 million, and tertiary and medical services (including laboratory services, diagnostics, out-patient and in-patient services) = US\$ 2.2 million. In total the State Compulsory Health Insurance Agency (SCHIA) has paid US\$ 3.4 million. This figure will increase dramatically over the coming years when more people become eligible for HAART – according to the mission findings, the figure for HIV/AIDS drugs in 2005 is budgeted at LVL 1.5 million (US\$ 2.6 million). The expenditures for PHC services, and the expenditures for preventive harm reduction services and other preventive methods like condoms, training of staff and peers, prison interventions are not included in these figures.

TB

Infection patterns and risk groups

The incidence of TB has increased steadily in Latvia from the early 1990s to the present and it is estimated in 2002 to be 80 per 100 000 in 2003 compared to a level of 27 per 100 000 in 1990 (WHO 2005 and State Centre for Tuberculosis and Lungs diseases 1999). The highest prevalence rate is among prisoners, accounting for 15% of all TB-cases (State Centre for Tuberculosis and Lungs diseases 1999). Outside of prison, a high proportion of the *patients/recipients* of TB services are socially marginalised groups such as homeless people, alcoholics, IDUs – some of them with HIV as well. A survey from 1998 analysed the social

groups of tuberculosis patients. The survey showed that in addition to prisoners, 38% of TB patients were unemployed and 39% were ill-intentioned users of alcohol.

Multi-drug resistance is a serious problem in Latvia. WHO estimate that up to 13% of the cases in 2000 was MDR-TB (WHO 2004). A study by Morozova et al. (2003) confirms in increasing problem of MDR-TB in Latvia, but estimates showed only 5.6% in 2001.

Interventions, service providers, and their financing

Because MDR-TB was recognized to be a very serious problem in Latvia, the WHO Collaborative Centre for Research and Training in Management of MDR-TB was established as a centre of excellence. The centre provides training to countries outside Latvia and receives funding from WHO, Finnish Lung Health Association, MSF, USAID (CDC), Project HOPE and the Netherlands Tuberculosis Association.

The *providers* of TB services are public health institutions –specialized units at both secondary and tertiary level of provision (hospitals, TB clinics) such as the State Center for TB and Lung Diseases. Although Latvia only receives a small amount of external funding for TB services, some specific projects for TB patients and MDR-TB patients are being coordinated from the State Center with funding from the Nordic countries.

Information provided from MOH indicates that the TB programme (government, insurance funds, co-payments from patients sums up to LVL 6.8 million for 2005 (US\$ 11.9 million).

Prison health services

The prisons are important providers of TB services as well as HIV services. In 2004 the prisons treated 230 TB patients – 30 of those were co-infected with HIV. The prisons receive DOTS from the TB Centre but finance and deliver all other health care services directly including ARV. 20 prisoners were providing ARV in 2004. However, the MOJ budget for prison health services is very low, and VCT and harm reduction services are not provided. The MoH and MoJ are presently (May 2005) having negotiations on standards of care in prisons since the prison hospitals do not meet minimum requirements. Riga municipality provides support for TB patients in the form of transport and food. The NGO Dialogue runs two prison projects (funded by Norway). The projects train peers on health promotion and provide counselling and condoms.

Health system financing and service delivery arrangements relevant to HIV and TB

The public health services cover all population within a Basic Care Programme. The programme includes emergency care, a state guarantee minimum primary and secondary care and several sub-programmes, for example payments for medicines necessary for treatment according to the patient's diagnosis and type of illness. However, the system is today imperfect with inequity problems. There are in some regions of the country shortage of some health care services and the quality level in different places is not always the same. The providers (public as well as some of the private ones) are contracted by the sickness funds (3rd party payers).

The description of the financing arrangements in Latvia builds mainly on Health care financing in Latvia. Report prepared for WHO Regional Office in Europe (Foubister, Thomson and Mossialos 2004); Health Care Financing System in Latvia. Case study for the WHO workshop in Tallinn, (August 2004); the HIV/AIDS strategy Programme for Limiting the Spread of HIV/AIDS in Latvia 2003–2007; and the review of the National Programme for Struggle against

Tuberculosis (1999–2003) with focus on the collection- pooling- and purchasing arrangements. Aspects of the system with relevance to the financing of HIV and TB interventions are described briefly below.

Macroeconomic and fiscal context

The health expenditures in Latvia are largely financed by tax revenue (central taxes and local taxes) supplemented by out-of-pocket payments (OOP). Total government spending has been in the range of 34% to 37% of GDP between 2000 and 2004 (WHO estimates), and government spending on health as a share of GDP has been stable at about 3.3%. The OOP primarily take the form of formal user charges within the public system but also includes direct payments to private providers and widespread informal payment. The *public share* of total health expenditures was the second lowest in EU region with 52.5% (WHO estimate for 2001) of total health expenditures. The public share is believed to have been declining over recent years, as private health spending has grown rapidly. Total health expenditures constitute 5.4% of GDP (2001 estimate). The external resources to health care are mainly from the EU, other external donors (United States, EFTA) and INGOs. The share from EU is estimated to increase significantly for infrastructure building (structural reconstruction) over the coming years. In health care this will include hospitals and clinics.

Collection and pooling of health revenues

Most public revenue for health comes from central taxes (79%). A fixed portion of the national income tax – 28.4% – is earmarked for health care, and a further transfer to the MoH from the central budget tops up this earmarked portion of money. Further, local income taxes are transferred into the system at the discretion of local governments. These two public revenue streams from the state level as well as from the local governments are pooled at level of the Ministry of Finance (Treasury) and then distributed in a separate quasi governmental agency: the State Compulsory Health Insurance Agency (SCHIA), which distributes funds to five regional sickness funds based on age-adjusted capitation. The regional sickness funds use the money allocated to purchase primary and secondary care for their respective populations on the basis of contractual agreements. Since 1994 the government has defined a Basic Care programme available to all citizens. The health services include emergency care, treatment for acute and chronic illnesses, prevention and treatment of sexually transmitted and other communicable diseases (includes HIV/AIDS and TB), maternity care, immunization programmes and free drugs according to the Medicine Reimbursement list (includes TB and ARV).

In addition to the Basic Care Package, the SCHIA also finances specific health services recognized as warranting stable and earmarked funding. These health services are provided through state programmes and cover diabetes, treatment of drug and alcohol addiction, care of patients with burns, tertiary care requiring specialized centres and equipment (the WHO Collaborative Centre for Research and Training in Management of MDR-TB falls under this).

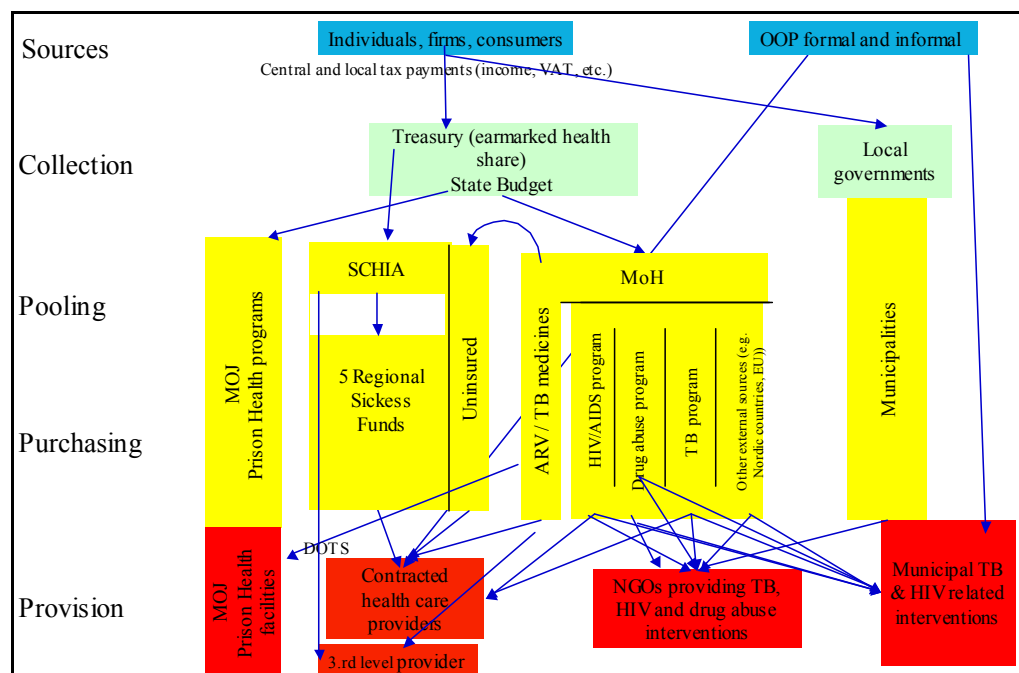
As noted previously, there are also special MOH programmes for HIV prevention and HIV and TB treatment that are budgeted directly, and these are not managed through SCHIA.

Latvia has 586 municipalities operating at two levels: at the highest level there are 26 districts and seven city authorities. At the lower level, there are smaller town, small rural districts and two larger rural districts. The funds at disposal in each municipality differ depending on tax income. There are no state regulations, which indicate how much the municipality should spend for health. The municipalities run the local hospitals.

Pooling and purchasing for HIV and TB interventions

The organization of provision of TB and HIV interventions and their related services are reflected in figure 3. The main source of financing is from taxation and OOP. The resources from taxation are collected in Treasury and become part of the State Budget. The State Budget allocates resources for HIV and TB interventions and related services to four main receivers: SCHIA, the MoH, the MoJ, and the local governments. SCHIA receiving the most of the funds for health provision allocates approx. 90% of its funds to its five Regional Sickness Funds. The regional sickness funds purchase primary and secondary health services included in the Basic Care package based on contractual agreements with providers, while SCHIA pays tertiary providers directly. Since 2002 the family doctors are paid per capitation basis as well as fee-for service basis (a treatment's episode payment system in primary care is being considered), but the sickness funds pay separately for a number of expensive services. Specialists who treat specific groups of patients including TB specialists, psychiatrists, endocrinologists, gynaecologists are directly accessible to the patients. For visiting the remaining group of specialists the patient will need a referral from the GP or will have to pay for the visit on their own. SCHIA does not contract the hospitals anymore but provide the hospitals with a negotiated budget – 50% of the budget is for staff and capital cost (mission finding). The hospitals are now made more autonomous and the director is responsible for the allocation of resources except for state purchasing of special drugs and medical goods (ARVs and DOTs). The MoJ receives funding for its health services from the State Budget, but TB drugs are received from MoH that holds a special budget line and is bulk purchasing DOTs. The MoH also holds a specific budget line for ARV medicines and provide this by need to health service providers. The MoH also holds a budget for HIV/AIDS programme and the TB programme. NGOs involved in providing HIV and TB interventions or related services such as harm reduction programmes are sometimes contracted by the MoH or other external funding (not significant). Finally the municipalities provide HIV and TB interventions and related social services at their discretion and have a small insignificant budget for these services. The capital, Riga, that has an estimated 50% of the IDU population within its borders provide a number of programmes including rehabilitation for IDUs but the interventions do far from reach the need for HIV and TB related social services.

Figure 3. Organization of provision and public finance for HIV-TB interventions and related services, Latvia



Out of pocket spending

The *private share* of total health expenditures was 47.5% in 2001 and the main source of financing is out-of-pocket (OOP) payments. The official system of co-payments includes charges for outpatient care, home visits, and inpatient care. For children up to the age of 18, all in- and outpatient services are free of charge. There is an OOP maximum of LVL 80 per case for Basic Package Services. Emergency care, care for children up to the age of 18, pregnant women, and TB and HIV/AIDS patients is exempt from user charges. When the level of care exceeds the annual OOP maximum the shortfall is met with public money. Prior to receiving inpatient treatment the patients sign an agreement with the facility to pay prospectively. However, there is no mechanism to ensure compliance with the requirements to pay – and patients do underpay. In high unemployment areas there are evidence that the OOP does not match the required co-payment levels. According to the rules, poor people are eligible to apply to their municipality for financial assistance in case of illness to be able to cover their health bills. Often they do not use this opportunity for various reasons: they are not properly informed, they are afraid of bureaucracy etc. Consequently the hospitals are discouraged in admission of poor patients (personal communication, August 2005). Informal payments constitute a special problem in Latvia but no reliable data is available on the magnitude.

Summary assessment of financing arrangements for HIV and TB interventions

The current organization of financing arrangements around HIV and TB interventions in Latvia hamper the effective and efficient delivery of appropriate HIV and TB prevention and treatment interventions to the target populations. The principal problems are:

- The financing of HIV and TB interventions and related services shows a fragmented picture of financing between the MoH programmes on HIV, TB and drug and alcohol addiction, which creates dis-incentives to joint planning and especially pooling of resources to increase effectiveness. An alternative would be to develop a “client-oriented” approach, e.g. starting with the objective of reaching IDUs to both reduce drug abuse and

HIV transmission. Combining efforts and funds from the HIV and Drug Addiction programmes could enable a more efficient and effective approach.

- Financial and managerial separation of the prison health system from the rest of the health system – except for the delivery of DOTs (from the special budget line in MoH). This might create inequities of quality of services or the development of “parallel expertise” on HIV and TB in the prison health system and the MOH programmes. Lack of coordination and requirements for common standards probably compromises the effectiveness of efforts within the prison system in particular with fewer related health services at disposal.
- Low level of funding for municipal health services, which limits their ability to reach populations living on society’s margins. Municipalities and NGOs seem much better able to reach out to IDUs, alcoholics, etc., than do the formal health system, but to improve the coverage of their interventions may require changes in the inter-governmental budgetary process to increase funding available to the localities in greatest need.
- The out-of-pocket payments for first entry point – primary care, GP – to health services is preventing impoverished people with HIV/TB or suspected HIV/TB to seek needed services. The OOP price tag on methadone treatment might keep many IDUs away from effective harm reduction programmes if these are not reimbursed in full – like the ARV treatment.

Lithuania

TB cases per 100.000 (2003)¹	73
TB cases (2003)¹	2,527
MDR-TB (as % of total TB cases)²	21.8
Percentage of TB cases who are prisoners	4
Estimated HIV infected (end 2003)⁴	1,300
Registered HIV cases (end 2004)⁴	980
TB/HIV co-infected⁴ in 2004	8
Number of IDUs (2004)⁴	7–11,000
Percentage of IDU among HIV+ (2004)⁵	81%
HIV prevalence among prisoners (2004)	1.5%
Total population in mill (2004)⁶	3.4

Sources: ¹WHO 2005, ²WHO 2004, ³UNAIDS 2004, ⁴WHO Europe 2003, ⁵Lithuanian AIDS Centre 2005, ⁶UNFPA 2004

HIV/AIDS

Infection patterns and risk groups

It is estimated that 1300 people by the end of 2003 were living with HIV in Lithuania, equal to a prevalence of less than 0.1% (UNAIDS 2004). There are 980 HIV positive patients registered in Lithuania up to the end of 2004 and 64 for whom AIDS was diagnosed (1 JAN 2004). 29 persons have died already from AIDS in the country since 1988.

The main high-risk group is IDUs who are estimated to account for 81% of all HIV cases (Lithuania AIDS Centre 2004). They are mainly young males 20–39 years old and many from the area of Klaipeda, a harbour city in the East. Other high-risk groups are commercial sex

workers (CSWs, 2.2%) and men who have sex with men (MSM, 8%), but like for the other Baltic States they constitute a relatively smaller group. Co-infection of TB and HIV has been increasing. In total 26 cases of co-infection has been identified, 8 of which were identified in 2004 (Lithuania AIDS Centre 2005).

Interventions, service delivery settings, and clients

Voluntary and anonymous testing on HIV is assured for everyone in Lithuania by the legislative act. HIV testing of individuals according to epidemiological and clinical criteria is provided free of charge. Free testing services are offered to the vulnerable populations, e.g. men having sex with men, injecting drug users, sex workers, youth, and pregnant women. The HIV services listed in table 2 are all provided in Lithuania; some of them introduced only after 2002 when the Alytus prison outbreak led to intensification of HIV prevention programmes in prisons.

HIV/AIDS services are in principal covered for all people infected with HIV/AIDS through the obligatory Health Insurance Fund (diagnostics and treatment). All people with HIV disease or virus carriers are insured by the state (special budget line). PMTCT is also provided free of charge for both mother and child. The HIV/AIDS activities 2003–2008 are estimated to cost US\$ 9.9 million, approximately US\$ 2 million per year. This is based on a decreased number of new HIV cases over the years and a relatively small demand for HAART in the programme period.

Service providers and their financing

The *providers* of HIV services include the Lithuanian AIDS Centre (LAC) paid by Government. The LAC also undertakes training of health care staff, specialized public health facilities, and as entry point the family doctor. In addition to the LAC, four more centres provide ARV in Lithuania. The prisons (Prison Department under Ministry of Justice) provide both preventive (information, education, motivation to change behaviour) and health care activities (including the provision of HAART). Municipalities and a number of NGOs provide harm reduction programmes (there are six needle exchange centres including one mobile in the country – May 2005) and rehabilitation programmes for IDUs. The methadone programmes are very weak in Lithuania, and political challenges have been raised in Parliament with provision of this form of harm reduction. At the present time 450 IDUs are receiving methadone treatment – 200 of them in Vilnius.

The *third party payers* include the SHIF for covering HIV infected people with free of charge services within the AIDS Prevention and Control Programme (funded from the state budget). In addition, the municipalities' health programmes are regarded as very important to stimulate health promotion and local participation, and HIV prevention activities have intensified since 1997, when a concrete budgeting mechanism of the preventive municipal programmes was settled: The Parliament has approved standard regulations of the Municipal Health Funds. Municipal doctors are appointed to coordinate preparation and implementation of the target programmes, and the success of the district level initiatives depends on the family doctors' competence and understanding of HIV/AIDS. Some municipalities have formed qualified expert groups to support the development and five (of 60) municipalities are developing district HIV/AIDS plans (supported by CIDA).

TB

Infection patterns and risk groups

The incidence of TB has increased steadily in Lithuania from a level of 40 per 100 000 in 1990 to an estimated 73 per 100 000 in 2003. However, most of the increase was experienced in the

early 1990s, and the numbers have been decreasing in recent years (WHO 2005 and Lithuania Ministry of Health 1998). TB-infected persons are often socially marginalised groups such as homeless people, long-term unemployed, alcoholics, and IDUs – some of them with HIV as well (the number co-infected is growing, although still small in absolute terms and not considered a serious problem as yet). The average age of a TB patient is 45 years and most of them are males (73%). The number of MDR-TB cases is increasing, and Lithuania has one of the world's highest prevalence of MDR-TB being as high as 22% of total TB cases (WHO 2004).

Interventions, service providers, and their financing

The National TB programme in Lithuania was centralized in 2003 (coordinating centre in Vilnius). Lithuania has 11 centres for TB diagnostics. All TB patients are tested free of charge and the health system and the prisons have only one TB register. 50% of territory of Lithuania was covered by DOTS in 2002.

The *providers* of TB services are public health institutions (overall seven TB hospitals, five departments of tuberculosis and 44 TB offices (outpatient) and also the National TB and Communicable Disease University Hospital in Vilnius. Average length of stay in the departments of TB and nursing increased in 2003. In 2003 tuberculosis beds were 5.7% of total beds in public hospitals in Lithuania.

Social assistance for TB outpatients in the form of transport and food supplements (in kind and vouchers, food and hygienic packets) is undertaken by a range of donors (Nordic Council and Norway) through municipalities. These include special projects to provide TB patients with MDR-TB at the National TB and Communicable Disease University Hospital in Vilnius with food supplements financed from municipality of Vilnius.

The *3rd party payer* is the State Programme for Tuberculosis Prevention and Control that is financed via a budget line in the MOH with supplementary funding provided from a range of donors and municipalities (mainly social services). The state programme is by far the most important one, especially in the field of health education and public relations. The Ministry of Justice funds and provides TB services in prisons. However, some problems of TB programme implementation still remain to be solved in these institutions.

Health system financing and service delivery arrangements relevant to HIV and TB

The description of the financing arrangements in Lithuania builds mainly on the recently published Lithuanian response to HIV/AIDS – first 15 years (Lithuanian AIDS Centre 2004) and Lithuanian Health System Financing (Murauskiene 2005) with focus on the collection- pooling- and purchasing arrangement as proposed by Kutzin (2002).

Macroeconomic and fiscal context

Health expenditures in Lithuania are financed by three main sources: the national budget revenue (consolidated state and municipal budget revenues (mostly comprised of earmarked taxes for health care of personal income tax), social insurance contributions (3% payroll tax paid by employers), and out-of-pocket spending (estimated to account for about 27% of total health spending in 2002). Total government spending has been in the range of 30% to 34% of GDP between 2000 and 2004 (WHO estimates), and government spending on health as a share of GDP has fluctuated in a range of 4.3% to 5.1%. Apart from 2002, the government has maintained a high priority for health in this period, with allocations ranging from 14.5% to

15.2% of total government spending. A dip to 12.6% in 2002 explains the relatively low share of government health spending as a percent of GDP (4.3%) in that year. Private spending is mostly out-of-pocket, and is directed towards privately provided services, formal user charges within the public system, and informal payments within the public system. Most private health spending is for medicines.

The *public share* of total health expenditures has ranged from 70–75% since 2000. Total health spending was 5.9% of GDP in 2002, but this was an unusually low figure for recent years. In 2003 for example, WHO estimates total health spending to have been 6.8% of GDP. This fluctuation was due to the low share that government allocated to health in 2002, as mentioned previously. External resources for health are not significant as yet, though the share from the EU is expected to increase significantly for infrastructure building (structural reconstruction) over the coming years.

Collection and pooling of health revenues

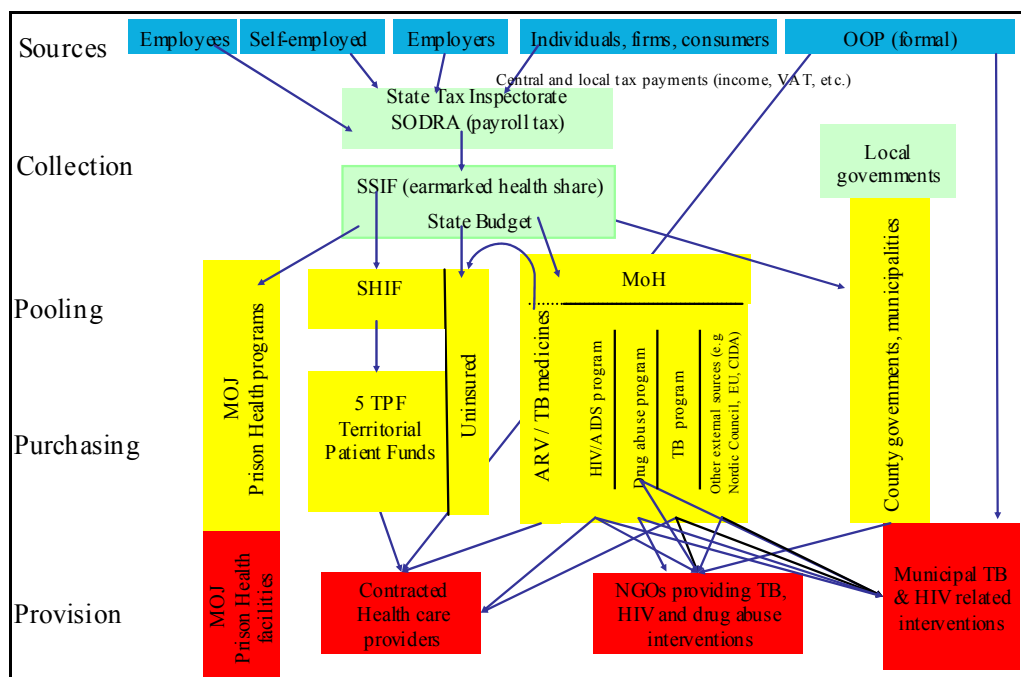
Most public money for health comes through earmarked taxation through the consolidated national budget, and is accumulated by the State Social Insurance Fund (SSIF) and the Statutory Health Insurance Fund (SHIF). The earmarked income tax is approx. 30% of total income tax paid by employed population including self-employed and farmers. The employers also pay an extra 3% payroll tax that is administrated by the State Social Insurance Agency (SODRA) and transferred to the SHIF. Additional state budget revenues are transferred to the SHIF and pooled with the earmarked income tax revenues to cover the pensioners, children and registered unemployed and other listed groups of Lithuanian population. These other groups and related services include HIV infected people and other specialized public care such as the State Programme for TB Prevention and Control (22%). The SHIF is responsible for about 90% of total government health expenditures.

The collection and pooling arrangements for health care in Lithuania are rather sophisticated and some surveys has shown that people are not well aware of their participation in the statutory health insurance scheme. These groups include employees, civil servants and retired people who are all covered for basic health services by the SHIF.

Pooling and purchasing for HIV and TB interventions

The organization of provision of TB and HIV interventions and their related services are reflected in figure 4. The main source of financing is from a range of taxation forms: employees, self-employed, employers and individuals and consumers, and OOP. The State Tax Inspectorate collects the taxation except for the payroll tax that is collected by SODRA. The earmarked health share is transferred from the collecting institutions to SSIF and the State Budget. The SSIF allocate funding to SHIF through the SPF (Territorial Patient Funds, TPF) while the State Budget allocates funding for the uninsured and MoH.

Figure 4. Organization of provision and public finance for HIV-TB interventions and related services, Lithuania



Note: This is a draft figure and it needs confirmation by the TB-HIV Coordinating body

The central Agency State Patient Fund (SPF) and its territorial branches administrate the SHIF. Each of the five TPFs covers approximately 700 000 people. They are funded according to an age- and sex-adjusted capitation formula from the SHIF. The TPFs contract public and private providers to render health care for the local population. In this capacity they reimburse medical care, rehabilitation services and medicines for prescribed drugs within the positive list.

SHIF budget allocations for primary health, nursing and treatment services and for urgent medical care are distributed according to a formula that incorporates the number of inhabitants, taking into consideration their age and their place of dwelling (rural or urban). The implementation of the formula was started in 2003. Each year the difference between territory based and actual resource allocation decreases by one third and the allocation formula will be fully implemented in 2006.

Resource allocation for the territorial patient funds is implemented following Minister's of health decree No V-182 of 16 November 2004 "On the confirmation of order for distribution of budget resources of the Statutory Health Insurance Fund among territorial hospitals according the number of inhabitants". No clear approach to the needs assessment to substantiate local allocations for reimbursement of pharmaceuticals is developed.

Seventy percent of the SHIF resources are spent for purchasing personal health care services: 73% of this financing is spent on in-patient care and 27% on out-patient care. This structure was almost the same in the period 2001–2003. During recent years the share of pharmaceuticals of total health expenditures being financed by SHIF has increased from 21 to 24%. In 2002, 41% of the SHIF financing of health care was spent on in-patient care; 25% was spent on medicines; 14% on PHC; and 8% was spent on out-patient specialist care.

Lithuania has 60 municipalities that provide little health care services but play a role as cooperating partners of HIV and TB preventive services. At the primary care level the family doctors have been given special training to oversee the care of HIV/AIDS patients. This is an initiative of LAC in Lithuania and the municipalities.

Out of pocket spending

The *private share* of total health expenditures has the form of user charges or financing is out-of-pocket (OOP) payments. According to household surveys in Lithuania 70–80% of household spending relates to paying for pharmaceuticals. At hospitals and clinics the patients co-pay for a range of services: out-patient care (medical aid and medicines) and for in-hospital care the patients pay for medical aid, pharmaceuticals and 50% pay for additional meals. In 1997 every citizen of Lithuania spent 11.8 Litas per month for health care, and in 2002 this figure was 19.8 Litas per month or 67.8% more.

Informal payments should be added to the official user-charges. Population survey data from 1995 and 2001 showed a shift away from outpatient payments to in-patient payments, with an estimated range of 17–35% of the patients paying under-the table fees. However, it is not likely that PLWHA and TB patients in the HIV/AIDS and TB Prevention and Control Programmes pay large sums of money for services that are supposed to be free of charge. Most HIV and TB infected will not be able to pay anything and it might prevent some from seeking the assistance they need since they might be under the impression that they have to pay, and the State Budget pay for especially for services before the reach the referral centre(s).

Summary assessment of financing arrangements for HIV and TB interventions

The current organization of financing arrangements around HIV and TB interventions in Lithuania hinder the effective and efficient delivery of appropriate HIV and TB prevention and treatment interventions to the target populations. The principal problems are:

- The financing of HIV and TB interventions and related services shows a fragmented picture of financing between the MoH programmes on HIV, TB and drug abuse programme, which creates dis-incentives to joint planning and especially pooling of resources to increase effectiveness. An alternative would be to develop a “client-oriented” approach, e.g. starting with the objective of reaching IDUs to both reduce drug abuse and HIV transmission. Combining efforts and funds from the HIV and drug abuse programme could enable a more efficient and effective approach.
- Financial and managerial separation of the prison health system from the rest of the health system. This might create inequities of quality of services or the development of “parallel expertise” on HIV and TB in the prison health system and the MOH programmes. Lack of coordination and requirements for common standards probably compromises the effectiveness of efforts within the prison system in particular having fewer related health services at disposal.
- Low level of funding for municipal health services, which limits their ability to reach populations living on society’s margins. Municipalities and NGOs seem much better able to reach out to IDUs, alcoholics, etc., than do the formal health system, but to improve the coverage of their interventions may require changes in the inter-governmental budgetary process to increase funding available to the localities in greatest need.
- The out-of-pocket payments for first entry point – primary care, GP – to health services is preventing impoverished people with HIV/TB or suspected HIV/TB to seek needed services. Lithuania’s attempt to include the GPs as local coordinators of HIV services at

municipality level might become a strong tool in the prevention of HIV – provided sufficient resources are allocated.

Discussion

There are a number of issues affecting the organization of financing and delivery of HIV/AIDS and TB services shared in the three Baltic States. These include efficiency in the organization of funding flows and allocation of resources to priority interventions; affordability for the target groups of HIV and TB prevention and control and the priorities of the country to ensure access for all that need HIV and TB services; equity in the form of real access to HIV and TB services; and the ability and will of the countries to provide the financing of effective HIV/AIDS and TB programmes without making other patient groups suffer: the pressure for more resources to especially HIV/AIDS services in the coming years when many more HIV infected people are eligible for HAART. The economic, financing and health system implications (and beyond) are many and those which feature in all the three countries are emphasized here.

The countries already spend a significant share of money on HIV and TB prevention and control. Estonia is expected to utilize at least US\$ 5 million for HIV/AIDS services in 2005 and at least US\$ 1 million for the TB programme. Latvia expects to spend approximately the same amount of money on HIV/AIDS in 2005 with increasing costs for HAART. However, not all expenditures to run the programmes are included, for example the expenditures for health and social programmes financed by the municipalities. These sums are expected to increase dramatically over the coming years when thousands of HIV infected people become eligible for HAART. In the future the budget approach building on historical data will have to be replaced by modelling of the future need for HAART. In Estonia approx. 70% of the resources for HIV/AIDS in the next five years will be consumed by HAART. The plans for using more sophisticated tools based on epidemiological planning need support. The work includes effective coverage: reducing the gap between actual need for a TB and/or HIV intervention and actual reaching those in need with the intervention (coverage), as well as the quality of that intervention (please see Shangelia et al. 2005).

Table 5 Spending on HIV/AIDS services in the Baltic States (most recent figures)

Country	Budget		Comments
	US\$	Year	
Estonia	4 942 436	2005	Based on economic costing of up-scaled services (Alban 2005)
Latvia	3 430 164	2003	Account figures – Sickness Funds, only hospitals and drugs
Lithuania	2 000 000	2003–2008	Figures from HIV/AIDS Strategy (average/year)

Note that the conversion rate to US\$ is from 2005 for all currencies irrespective of year

All the Baltic countries have special government budget lines for both HIV/AIDS and TB programmes, and a substantial increase will have to be allocated to these service areas in the coming years. Relative to the other Baltic countries, Latvia has relatively low public expenditures on health (WHO estimates for 2003 are 3.3% of GDP in Latvia, 4.7% in Estonia, and 5.1% in Lithuania) and a relatively high share of out-of-pocket spending (estimated at 52.5% of total health spending in Latvia, as compared to 27% in Lithuania and 21% in Estonia). The

increase of AIDS cases that will occur in the coming years will present a challenge to the financing systems of each country, requiring not only additional allocations for health but also the need for improved efficiencies in the health care services, particularly in Latvia and Lithuania, to address the overcapacity of institutions and human resources that has so far not been appropriately tackled.

The organization and financing of TB and HIV interventions and related services in the Baltic states have two common features that stand out: vertical integration and horizontal fragmentation. As a consequence examples of *streamlining* the financial arrangements for HIV/AIDS and TB services are rare. The only example of TB service is from Lithuania where attempts have been made to include the GPs in the chain of HIV/AIDS and TB service provision. Lithuania regards the municipal health programmes as important to stimulate health promotion and local participation in health policy. This is the only exception to the rule that TB is a vertical programme with its own specialized referral centres and own budget lines. The historical approach to financial arrangements was programme-oriented, and the need now is to shift to an approach driven by the need to reach defined clients with priority interventions. This requires a good understanding of who the clients are (e.g. IDUs in the case of HIV), the priority interventions to be purchased on their behalf (e.g. needle exchange and methadone substitution combined with condom promotion and other safe sex messages), and then a restructuring of financing and service delivery arrangements to enable these interventions to be delivered as efficiently as possible. It may make sense to maintain some aspects of the vertical programme approach in order to concentrate expertise for diagnosis and even treatment, for example with regard to MDR-TB. This does not necessarily require complete vertical integration for financing and delivery of all relevant interventions, however. In fact, as shown in the case of Estonia, “parallelism” is constraining the ability of the public health system to deliver interventions to clients.

Access to HIV/AIDS and TB services for vulnerable groups is a problem in the three Baltic countries in spite of a special budget line and exemptions from co-payments for treatment. Some of the barriers are overcoming the first entry point: the PHC/GP services or VCT not being free of charge or they come at a transport cost. From a survey in Latvia (Pranka et al. 2003 IN: Muller et al. 2004) we know that 65% of vulnerable people (persons with disabilities, young dropouts, ex-prisoners, young people with no job experience) did not seek medical treatment due to lack of money. The services included purchase of drugs (40%) and visit to a doctor (28%). People with TB and HIV/AIDS are often marginalised and belong to exactly this group of mainly young people who never entered the job market and elder men who are alcoholics and homeless which often dominate the group of people vulnerable to TB.

Another access problem is the thin supply of services that offer free or highly reimbursed methadone treatment. Methadone treatment is not always free of OOP and if it is not provided through NGO programmes (often funded by municipalities or external donors such as the GFATM in Estonia), it is outside reach for people without substantial income (delivery of methadone costs approx. US\$ 320 per person/year in Estonia). It seems paradoxical that HIV/AIDS infected individuals are provided HAART free of charge, but the methadone that could have prevented them from getting HIV infected in the first place comes sometimes with a co-payment for the user. Methadone programmes funded at the discretion of municipalities or external donor resources seem not sustainable, and some re-organization of the HIV prevention services or re-allocation of resources is called for to make this access barrier fall and increase cost-effectiveness of the delivery of services.

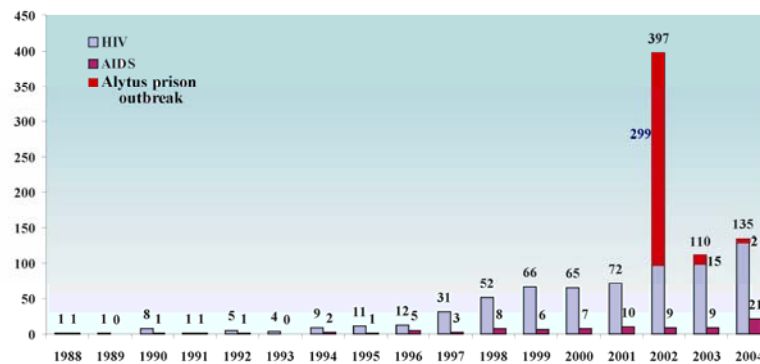
Overall, the *allocation of health resources* is mainly based on crude capitation in the countries, and even if this is age-adjusted, it does not really adjust for the number of marginalised groups. Moreover, given the role of municipalities in reaching these vulnerable groups, attention needs to be given to adjusting not only resource allocation within the health sector per se but also to ensuring that inter-governmental financial mechanisms incorporate adjusters for the needs of high-risk groups. The quality of provision of health services seems also to vary in different regions not serving all equally well. This is further accentuated if the patient's co-payment fee is part of the financial portfolio in health institutions. If patients do not pay because they cannot pay, the institutions are not compensated but will have to carry the loss themselves. If these administratively created inequities also apply for the provision of health promotion and preventive services, the fight against infectious diseases is bound to suffer and poor areas will have poorer services. The implications for HIV/AIDS and TB control and treatment are however unknown but it seems reasonable to argue that the most vulnerable will bear a disproportionate burden. A more strategic allocation of resources prioritizing specific regions or specific types of cases might be part of improving access to health promotion, preventive and treatment services for marginalised people and vulnerable segments of the population.

Untreated TB poses a threat to the public that has an interest in minimizing such health risks by pooling resources for treatment and cure of the disease. Public consensus seems to prevail that control of TB is a public health issue. HIV in the three Baltic States is mainly transmitted among IDUs through sharing needles. Since IDUs are part of society and can transmit the disease to non-IDUs via sexual contacts, the positive externalities to the public from preventing the spread of HIV among IDUs should be rather obvious. However, public policies of the three countries reflect less clear determination with regard to this.

Prevention of the spread of HIV among IDUs goes through harm reduction programmes in the form of needle exchange programmes and the provision of methadone to make the IDUs stop using injections. Needle exchange programmes have shown cost-effective and regarded as best practice for preventing spread of HIV/AIDS among IDUs (Kumaranayake et al. 2004). The up-scaling of these activities in the Baltic countries have not been able to keep up with the spread of HIV/AIDS – especially in Estonia and Latvia. This goes for society as well as prison institutions. Although harm reduction interventions are expensive – and one of the arguments for the slow up-scaling – ARV treatment is still much more expensive. And more importantly, the more HIV infected individuals the higher the risk that it spreads to the general population. The cost of inaction has been calculated in Estonia (Alban 2005): it costs EEK 2970/US\$ 233 per year per IDU for an effective needle exchange programme in Estonia and EEK 23 053/US\$ 1811 per year per IDU for a methadone treatment programme which has the potential for increasing *cost-effectiveness*. The alternative to these HIV preventive interventions are many more infected persons that will have to be treated at the cost of HAART per year per person in the range of EEK 84 000/US\$ 6601 – 28 to 3.6 times higher comparatively to needle exchange and oral substitution programmes.

Prisons constitute a specific problem for both the provision of TB services and HIV/AIDS services. And the prisons themselves are high risk areas. Prisoners get infected with TB inside the prisons, and the risk of getting infected with HIV in a prison is not ignorable – although not researched. The HIV outbreak in Alytus prison in Lithuania represents a worst case scenario. Within a very short period of time between 250 and 300 IDU prisoners got infected with HIV through sharing needles. The impact on the number of new cases in Lithuania in 2002 is shown below.

Figure 5. New cases of HIV in Lithuania since 1988



The outbreak of HIV in Alytus prison led to the intensification of HIV prevention programmes in Lithuanian prisons. Latvian prisons do not provide needle exchange programmes, and Estonia has recently discontinued its methadone programme in prisons because of financial constraints (but plans to continue the methadone programme at the end of 2005 but only for IDUs who have earlier received methadone).

Although TB patients by tradition have access to the same quality of TB care in prisons, access to effective and up-scaled harm reduction programmes to prevent IDUs from getting HIV infected comes rare. Further, there is no monitoring of how many prisoners who get infected by HIV during their prison sentence.

Prisons also provide an opportunity for highly cost-effective action against both TB and HIV, however, precisely because the interventions needed are well-known and the risk groups are relatively easy to target. The challenge is implementation, which often means strengthening coordination between the prison health system and the national programmes dealing with HIV, TB, and drug abuse. It also means building a political consensus for action to improve health in the prison population – and consequently allocating more resources to this area.

1. The increasing number of co-infected individuals calls for a more structured collaboration between the providers of TB, HIV, and drug abuse services: specialized health care facilities including prisons; municipalities including representatives from GPs, NGOs and human right organizations or organizations representing people living with TB and HIV/AIDS. The systems should re-orient their financial and service delivery arrangements to deliver the most cost-effective interventions to the clients that need them. Starting with interventions and clients rather than starting with programmes can support needed collaboration between different programmes and agencies.
2. The fragmented arrangements whereby the MoJ finances, delivers, and oversees HIV and TB prevention and treatment in the prisons and the MoH/MoSA and municipalities finance and oversee the delivery of HIV prevention and TB and HIV/AIDS treatment outside prisons is not optimal from a public health perspective. The financing of health care in prisons is not transparent, and the prison standards are not always up to the standards issued by the health authorities. In the case of communicable diseases such as highly infectious TB and HIV among IDUs not protected by effective harm reduction programmes, it is everybody's interest that the same standards prevail and the risk of being infected in prison from TB and HIV is at the same level as in the rest of society. The health

of the prisoners obviously does not have the same priority by the MoJ as it has by the public health authorities, and some shifts in financial arrangements or stronger supervision of both prevention and care seems warranted. This might involve re-organization of roles and responsibilities to ensure national coherence in policy and strategy, while taking advantage of each agency's particular strength in reaching clients.

3. The municipalities are weak financial institutions (weak tax base), but they hold the key to ensuring access to services, as they are best placed to priorities IDU interventions in their communities (and many do). Where they have the means, they can also pay the GPs for providing HIV prevention and HIV/AIDS/TB services. Further, the municipalities can offer social support to TB infected persons and thereby indirectly increase their compliance to treatment. The tax base will not be changed because HIV/AIDS and TB services are needed at the local level, but some re-allocation of tax funds could be provided for social and health services that would benefit people who are vulnerable to HIV and TB. This implies giving consideration to reform of intergovernmental resource allocation processes to incorporate needs for TB and HIV prevention and care.

Finally, there is great need for the Baltic countries to create transparency in costs and effectiveness of the HIV and TB services provided. The collaborating groups on HIV/AIDS and TB could consider initiating comparative studies both on cost and cost-effectiveness of HIV/AIDS and TB services across the centres and the countries.

Conclusions and recommendations for future work

The interface of the tuberculosis and HIV/AIDS epidemics in the three Baltic States should be carried out as part of the health sectors response to the intersecting tuberculosis and HIV epidemics as recommended by WHO (WHO Interim policies 2004) and listed in table 6.

Table 6. Recommended collaborative TB/HIV activities

A	Establish the mechanism for collaboration
A.1	Set up a coordinating body for TB/HIV activities effective at all levels
A.2	Conduct surveillance of HIV prevalence among tuberculosis patients
A.3	Carry out joint TB/HIV planning
A.4	Conduct monitoring and evaluation
B	Decrease the burden of tuberculosis in people living with HIV/AIDS
B.1	Establish intensified tuberculosis case-finding
B.2	Introduce isoniazid preventive therapy
B.3	Ensure tuberculosis infection control in health care and congregate settings
C	Decrease the burden of HIV in tuberculosis patients
C.1	Provide HIV testing and counselling
C.2	Introduce HIV prevention methods
C.3	Introduce co-trimoxazole preventive therapy
C.4	Ensure HIV/AIDS care and support
C.5	Introduce antiretroviral therapy

Source: WHO 2004: Interim policy on collaborative TB/HIV activities

This study shows that the WHO recommendations are not fully implemented in any of the Baltic States. The collaborative mechanism is at best a non formal one based on individual co-infected patient basis, and joint TB/HIV planning is not in place. The findings into the HIV/AIDS/TB economic, health financing and health system implications in the Baltic countries leave a list of future work to be undertaken by the TB-HIV coordinating bodies and others that include:

1. identification of the need for TB and HIV interventions and related services and the financial gap to reach an effective coverage that will control the epidemic(s)
2. demonstration of the relative cost-effectiveness of relevant TB and HIV interventions and related services including comparisons of costs of equal interventions/services similar to costing study carried out in Estonia
3. identification of the system reforms needed in order to implement effective treatment and prevention (e.g. empowering municipalities to scale up IDU outreach, coordination of MoJ/MoH to ensure implementation of effective interventions in prisons and managed transfer from prison to general population, coordination of the vertical programs (HIV, TB, Alcohol and Drugs) to ensure efficient implementation and common purpose
4. recommendation of approaches that will make the system of service delivery of TB and HIV interventions and related services more client oriented
5. re-definition of the roles and responsibilities of MoH, MoJ, municipalities and NGOs – in terms of stewardship, service delivery, pooling and purchasing – with regard to different interventions – not least IDU interventions.

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Annex 1

PEOPLE MET WITH

Estonia 13–16 June 2005

Date	Organization	Name and title
13 June 2005	WHO	Jarno Habicht, Head of Office
13 June 2005	National Institute for Health Development	Kristi Ruutel, Expert on HIV/AIDS
13 June 2005	MoSA, Public Health Department	Marge Reinap, Chief Specialist
13 June 2005	National Institute for Health Development	Aljona Kurbatova, Head of the Department of Development and Planning
13 June 2005	MoSA, Public Health Dpt.	Triinu Tikas, Chief Specialist
13 June 2005	National Institute for Health Development	Triin Torvand, Health economist
14 June 2005	Meeting in TB-HIV Collaborating Group, representing: National TB Programme North-Estonian Regional Hospital National Institute for Health Development MoSA, Public Health Department WHO Regional Office for Europe	Kai Kliiman, Manager of the National TB Programme Vahur Hollo, Head of the TB Registry Kristi Ruutel, Expert on HIV/AIDS Triinu Tikas, Chief Specialist Pierpaolo de Colombani
14 June 2005	Ministry of Justice, Social Welfare Division, Department of Prisons,	Ene Katkosilt, Advisor
14 June 2005	Tallinn Prison Hospital	Dr Tiiu Parmas, TB doctor
14 June 2005	Tallinn Prison Hospital	Dr Ulla Porgasaar, Chief Doctor
15 June 2005	Estonian Health Insurance Fund, Health Services Dpt.	Helvi Tarien, Head of Health Services Department
15 June 2005	Estonian Health Insurance Fund, Economics Dpt.	Merle Tamm, Specialist
15 June 2005	Estonian Health Insurance Fund, Health Services	Mari Matthisen, Drug expert
15 June 2005	CONVICTUS (NGO)	Julia Vinckler, Member of the board of NGO Convictus Eesti
16 June 2005	Tallinn Municipality, Health Care Department	Aare Raudsepp, Senior Expert
16 June 2005	Tallinn Municipality, Health Care Department	Küllike Kasuri, Senior Expert
16 June 2005	Tallinn Municipality, Health Care Department	Urmel Reinola, Senior Specialist
16 June 2005	MoSA and WHO MoSA, Health Care Department	Final meeting Heli Paluste, Chief Specialist

Latvia 25–26 May 2005

Date	Organization	Name and title
25 May 2005	WHO Latvia	Aiga Rurane, WHO Liaison Officer
25 May 2005	Meeting in enlarged TB-HIV Group, representing: State Agency of TB and Lung Diseases State Addiction Agency State Agency of STI and skin infections Latvian Prison Adm., Medical Services Latvian Infectology Centre State AIDS Centre Ministry of Health, Epi. Unit UN Interagency Coordinator, Young People's Health State AIDS Centre MoH, Foreign Technical Support MoH, Strategic Planning MoH, Public Health Dpt. State Agency of TB and Lung Diseases/WHO Collaborating Centre for R&T in Management of MDR-TB	Gunta Kirvelaite, Deputy director Astrida Stirna, Director Ilze Jakabsone, Director Regina Fedosejeva, Head of Unit Dina Lazdina, Deputy Director Inga Upmace, Deputy Director Gunta Grisle, deputy Head of Unit Ilze Jekabsone, Coordinator Andris Ferdats, Director Inga Baranova, Junior Prof. Officer Kristine Bruvere, Junior Prof. Officer Gita Rutina, Deputy Director Vaira Leimane, Director of WHO Vaira Leimane, Director
25 May 2005	State AIDS Centre	Andris Ferdats, Director
25 May 2005	State AIDS Centre	Inga Upmace, Deputy Director
25 May 2005	DIALOGUE, NGO	Ruta Kaupe
26 May 2005	MoH, Finance Dpt..	Laila Ruskule
26 May 2005	MoH, Public Health Dpt.	Gita Rutina, Deputy Director
26 May 2005	State Compulsory Health Insurance Agency	Renis Joksts, Deputy Director
26 May 2005	State Agency of TB and Lung Diseases	Janis Leimans, Director

Lithuania 23–24 May 2005

Date	Organization	Name and title
23 May 2005	WHO Lithuania	Robertas Petkevicius, WHO Liaison Officer
23 May 2005	Lithuania AIDS Centre	Algimantas Treciokas, Deputy Head
23 May 2005	Lithuania AIDS Centre	Algirdas Griskevicius, Head of laboratory
23 May 2005	Lithuania AIDS Centre	Vilma Uzdaviniene, Head of outpatient care
23 May 2005	Lithuania AIDS Centre	Oksana Strujeva, Epidemiologist
23 May 2005	Vilnius Center of Dependence Disorders	Emilis Subata, Director
23 May 2005	National TB and Communicable Disease University Hospital	Laima Daukiene, Deputy Director
24 May 2005	Meeting in TB-HIV Collaborating Group, representing: Lithuanian AIDS Centre National TB and Communicable Disease University Hospital MoH, Public Health Division MoH, Public Relations Division MoH, Personal Health Division UNDP/UNAIDS State Patient Fund NGO: Siauliai Mutual Assistance Vilnius Center of Dependence Disorders Vilnius Municipality National Public Health Service	Chair: Vilma Uzdaviniene, Head of outpatient care Deputy chair: Edita Davidaciene, Director Stase Jankuniene, Chief Specialist Natalja Keturkiene, Chief Specialist Alvyda Naujokaite, Chief Specialist Agne Bajoriniene, Project Coordinator, Youth Evaldas Stropus, Deputy Head, Health Arvydas Bareikis, Head Emilis Subata, Director Dainius Puras, Head of Health Care and environment Protection Committee Jurgita Surauciene, Head of Public Health
24 May 2005	MoH	Romalda Baranaskiene, Vice Minister
24 May 2005	State Patient Fund	Lina Puidokiene
24 May 2005	State Patient Fund	Evaldas Stropus, Deputy Head, Health
24 May 2005	MoH	Inga Baranova, financing consultant

Annex 2

COUNTRY-SPECIFIC LITERATURE LIST

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 4. Lithuania AIDS Centre. TB/HIV co-infection. 2005.
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 6. Ministry of Health. National HIV/AIDS Prevention and Control Programme 2003–2008. 2003. Vilnius, Lithuania, Lithuania AIDS Centre.
 7. Ministry of Health. The Strategy of MDR-TB Control in Lithuania. 2005.

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