

Responding to the challenge of financial sustainability in Estonia's health system

*Sarah Thomson, Andres Võrk,
Triin Habicht, Liis Rooväli, Tamás Evetovits
and Jarno Habicht*

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**From values to action:
implementing the Tallinn Charter:
Health Systems for Health and Wealth in Estonia**

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Members of the Working Group (in alphabetical order):

Hannes Danilov	Chair of the Management Board, EHIF
Tamás Evetovits	Senior Health Financing Specialist, WHO Regional Office for Europe
Jarno Habicht	Head, WHO Country Office, Estonia, WHO Regional Office for Europe
Triin Habicht	Head of the Health Economics Department, EHIF
Mari Mathiesen	Member of the Management Board, EHIF
Kersti Reinsalu	Member of the Management Board, EHIF
Liis Roováli	Head of the Health Information and Analysis Department, Ministry of Social Affairs and Research Fellow in Health Services, Department of Public Health, University of Tartu
Sarah Thomson	Senior Research Fellow, European Observatory on Health Systems and Policies and Deputy Director, LSE Health
Andres Võrk	Research Fellow, Praxis Centre for Policy Studies and Lecturer, Faculty of Economics and Business Administration, University of Tartu

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The views expressed in this report and by its authors and the working group do not necessarily represent the views of the World Health Organization, the Ministry of Social Affairs or EHIF.

Abbreviations

ACSC	ambulatory care sensitive conditions
CSG	general social contribution
DRG	diagnosis-related group
EC	European Commission
EHIF	Estonian Health Insurance Fund
EU	European Union
GDP	gross domestic product
GP	general practitioner
HNDP	Hospital Network Development Plan
HPM	Hospital Master Plan
HTA	health technology assessment
ILO	International Labour Organization
IMF	International Monetary Fund
MISSOC	Mutual Information System on Social Protection
MSA	medical savings account
NGO	nongovernmental organization
NHA	National Health Accounts
NIHD	National Institute for Health Development
OECD	Organisation for Economic Co-operation and Development
OOP	out-of-pocket payment
OTC	over-the-counter
PHI	private health insurance
SHA	System of Health Accounts
SHI	social health insurance
VAT	value-added tax
WHO	World Health Organization

Country abbreviations

AT	Austria	IT	Italy
BE	Belgium	LT	Lithuania
BG	Bulgaria	LU	Luxembourg
CH	Switzerland	LV	Latvia
CY	Cyprus	MT	Malta
CZ	Czech Republic	NL	Netherlands
DE	Germany	NO	Norway
DK	Denmark	PL	Poland
EE	Estonia	PT	Portugal
EL	Greece	RO	Romania
ES	Spain	SE	Sweden
FI	Finland	SI	Slovenia
FR	France	SK	Slovakia
HU	Hungary	UK	United Kingdom
IE	Ireland	US	United States
IS	Iceland		

Executive summary

Key messages

- The public revenue base for the health sector should be broadened to ensure that the health system is better able to achieve its objectives now and in the longer term.
- Health financing policy can be further strengthened to manage cost pressures better and improve performance.
- Action is needed on both fronts to generate sufficient revenue and manage expenditures.

Report aims and added value for decision-makers

Health system financial sustainability has always been a central health policy issue, but the recent financial crisis has forced it to the top of the policy agenda the world over. With the aim of supporting a financially sustainable, high-performing health system, this report assesses health financing policy in Estonia. It looks at how well-placed current financing policy is to enable goal attainment in the medium-to-long term (to 2030) and identifies ways to strengthen financing policy.

The report is the result of a year-long process of stakeholder consultations and expert analysis initiated by the Ministry of Social Affairs in 2009 in partnership with the Estonian Health Insurance Fund (EHIF) and the WHO Regional Office for Europe. It adds to previous analyses of the Estonian health system in three ways. First, it joins an assessment of current health financing policy in the context of broader macroeconomic concerns with projections

The report brings together the views and values of stakeholders, recent data on health financing and new revenue and expenditure projections from now to 2030.

The report's assessment of health financing in Estonia is based on the following objectives identified by WHO:

- *promoting universal protection against financial risk (financial protection)*
- *promoting a more equitable distribution of the financing burden (equity in financing)*
- *promoting equitable provision and use of services relative to need (equity of access)*
- *improving the transparency and accountability of the system to the public*
- *promoting quality and efficiency in service delivery*
- *improving administrative efficiency*

The strengths of health financing policy in Estonia are internationally recognized, but avoiding further fragmentation and strengthening purchasing will deliver better results.

of health sector revenue and expenditure trends. Second, the projections go beyond existing work by drawing on the most recent data and accounting for changes in utilization patterns. Third, the report's analysis and recommendations are not based on technical assessment alone but also on the views and values of health system actors and political representatives as expressed in interviews and workshops in Estonia.

Strengths and weaknesses of Estonian health financing policy

Estonia's health system is largely publicly financed through an earmarked tax on wages (the social tax). Around two thirds of total health financing comes from the social tax, around a tenth from the central government budget and just under a quarter from private sources.

Most public funds for health care are pooled by EHIF, an independent and autonomous agency responsible for purchasing a broad range of health services on behalf of its members. The proportion of the population entitled to EHIF benefits is high (over 95%) and has recently been extended to cover the long-term unemployed – a good example of an effective policy response to changing macroeconomic circumstances. The stated objectives of the health insurance system are solidarity, limits on cost sharing and equal access to care for all those covered. The central government finances services available to the whole population such as emergency care, public health programmes and immunization.

The single payer system has served well since it was established in the early 1990s. Central revenue collection, national pooling and centrally set prices contribute to efficiency in resource use, while the breadth, scope and depth of coverage result in generally equitable access to primary care and most specialist services. In addition, EHIF is internationally recognized for its efforts to engage in strategic purchasing, its high levels of transparency and accountability to the public and its low administrative costs. Stakeholders were unanimous in considering the earmarked social tax and EHIF's prudent management of resources to be major causes of stability.

The separation of health insurance from other forms of social insurance (e.g., pensions and unemployment benefits) is a further advantage, which should be preserved to ensure clear lines of accountability and transparency in the social sector as a whole.

Alongside these strengths, the report highlights some areas of concern. Public spending on health as a proportion of general government expenditure is low by European Union (EU) standards and fell between 2000 and 2007. This suggests that health spending is not being given priority within public spending as a whole. Public spending on health is also low as a proportion of gross domestic product (GDP), reflecting the relatively small size of government in Estonia. There was broad acknowledgement among stakeholders of the constraints posed by inadequate public spending on health. Many recognize that future reliance on the social tax may present challenges. However, while stakeholders favour more reliance on central government financing, they are concerned about its potential instability.

Low levels of public investment in health mean that the private share has grown significantly, mainly from rising out-of-pocket payments (OOPs). The growing demand for health care is thus being met privately, rather than collectively. The changing balance between public and private financing, particularly the rise in OOPs, can undermine health system objectives in four ways. First, it compromises the efficiency gains of health insurance pooling. Second, financial protection for households has fallen as OOPs have increased, particularly among older and poorer people, mainly for outpatient prescription drugs.¹ Third, although health financing policy is mildly progressive overall, echoing stakeholder views about the extent of solidarity in the health system, the degree of progressivity (and thus equity in financing) has decreased significantly since 2000, mainly due to the rising share of OOPs. Fourth, coverage rules and user charges undermine the principle of access based on need rather than ability to pay. Evidence shows that poorer households forego seeking needed health care due to the out-of-pocket costs involved, which distorts equity in the use of health services.

Public spending on health is relatively low and could be increased to reach EU levels.

Rising levels of out-of-pocket spending have eroded financial protection and equity in financing.

¹ The share of outpatient prescription drug costs borne by households in Estonia is very high in comparison to other EU countries, reflecting heavy user charges, poorly enforced policy on rational drug use and perverse incentives for doctors and pharmacists. The absence of dental care coverage for adults also generates concerns for financial protection, while the fragmented and therefore potentially patchy coverage of long-term care is likely to become a key issue in future.

Weak government control over capital investment and the lack of incentives to balance and coordinate care across levels promote inefficiency.

Developments in health technology and patterns of health care utilization will have a much larger impact on future health care spending than population ageing.

The current system of raising revenue will not be sufficient to bridge the projected gap between health sector revenue and expenditure.

Other aspects of health financing policy also give cause for concern. In spite of EHIF's progress in developing cost-effective strategies for resource allocation, purchasing and provider payment, there are areas that require greater policy attention. For example, Estonia's poor performance in extending life expectancy, particularly for men, underscores the need for greater investment in public health and prevention. At present there is limited central steering to ensure that capital investment reflects long-term objectives, as reflected in weak central control of infrastructure development or the location of expensive equipment. Failure to link capital investment to population health needs wastes resources. Further weaknesses include insufficient support for moving from inpatient to outpatient care, a lack of incentives to coordinate care across providers and promote rational drug use and lack of a comprehensive long-term care strategy.

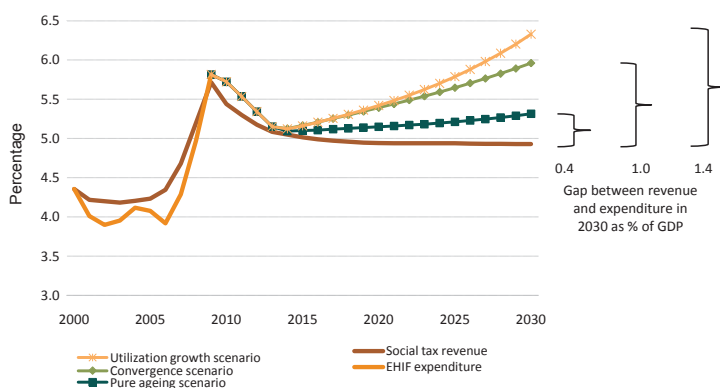
Projected revenue and expenditure trends from now to 2030

Many of the weaknesses of health financing policy are underlined by the report's projections, which examine the impact of a range of demographic, labour market, macroeconomic and health system factors under different scenarios. All scenarios show that health expenditure will consume a greater share of national wealth. However, health system factors – technological development and utilization patterns – have a much larger impact on expenditure than demographic factors such as population ageing. If health care utilization continues to grow at the rate of the last five to ten years, the effect on public spending will be great. In addition, private spending could more than double as a share of GDP by 2030, mainly due to greater use of prescription drugs, with serious implications for financial protection and equity.

Population ageing means that people aged 15 to 74 will comprise a slightly smaller proportion of the population. As a result, EHIF's ratio of contributors to non-contributors will decline and, even with increases in average wages, its revenue will not grow sufficiently to

match even the most conservative projections of health expenditure in 2030 (Figure 1). Thus, there will be a significant gap between public revenue and public expenditure. Figure 1 shows that the gap may be between 0.4% and 1.4% of GDP, but it could be twice as large depending on when and how quickly health care prices start to rise and whether utilization patterns will reflect trends seen in the last five to ten years. EHIF's current financial reserves could be depleted by as early as 2012 or 2013.

Figure 1. Projected trends in EHIF revenue and expenditure, 2000–2030



Note: Includes temporary sick leave benefits.

Projected gaps between health sector revenue and expenditure are particularly sensitive to assumptions about how expenditure develops. A key assumption underlying the projections is that health care unit costs will fall slightly during the current financial crisis and will not start to rise again until 2014, after which there will be a continuous increase in expenditure to 2030. However, sensitivity analysis shows that if unit costs start to rise in 2010, spending levels will be even higher in the short, medium and long terms. This suggests that pricing decisions made in the near future will have a key impact on expenditure.

Additionally, the projections do not account for changes in health status or changes in age-related expenditure, both of which could have a significant impact on spending. Other projections have shown how even modest improvements in healthy life expectancy – healthy ageing – can lower the rate of expenditure growth.

The rapid growth of private spending on health should be controlled.

Decisions about managing expenditure in the short term will determine expenditure growth rates and spending levels in the coming decades.

Investing now in healthy ageing can lower the rate of health expenditure growth.

Challenges for health financing policy

The projections show how trends in publicly generated health sector revenue and expenditure will diverge. The challenge this gap presents stems from two main factors. On the revenue side, heavy reliance on the labour market to finance health care and reluctance to transfer greater amounts from the central government budget mean that the public revenue base will shrink due to the impact of population ageing on employment. On the expenditure side, weaknesses in resource allocation, purchasing and provider payment lead to inefficiency now, and if unchecked will contribute to rapid spending growth.

There are three potential responses to bridging the projected revenue–expenditure gap: cutting public entitlements to health care, broadening the public revenue base and increasing health system efficiency. If financial sustainability is seen purely as an accounting problem, then any of these responses would be appropriate as long as they succeeded in preventing deficits. The easiest option would be to cut entitlements to match expected revenue. However, the concept of financial sustainability is essentially meaningless unless it is linked to the objectives of the health system. Thus, while part of the purpose of the report is to quantify the challenge facing health financing policy – by estimating the size of the financing gap in 2030 – its ultimate aim is to identify ways in which health financing policy can be strengthened so that the system is better able to meet its objectives.

The report considers a wide range of options in four areas: broadening the public revenue base and generating additional revenue; changing coverage breadth (universality), scope (benefits) and depth (user charges); improving resource allocation; and strengthening governance. Many of the options were identified by stakeholders during the interviews and workshops; some emerge from the report's technical assessment of financing policy and reflect the concerns identified by the projections. Among the options considered, several were discounted on the grounds that they would not contribute to greater achievement of health system objectives, e.g., the option of blanket reductions in coverage breadth, scope and depth. The report therefore does not recommend an

There are many options for change, but only some will help the health system to achieve its objectives.

The report rejects the option of blanket reductions in coverage breadth, scope and depth. It does not recommend an expanded role for private health insurance in Estonia.

expanded role for private health insurance (the corollary of cuts in coverage), since this would not improve financial protection for the poor or older or less healthy people. It would also add to regulatory complexity and administrative costs without enhancing efficiency or relieving financial pressure on EHIF.

Recommendations for strengthening financing policy to meet health system objectives

The report makes the following recommendations on the grounds that they have significant stakeholder support, reflect the health system's values, are politically feasible and likely to enhance the system's ability to meet its objectives.

1. Broaden the public revenue base

Health financing policy in Estonia has provided a stable source of revenue. The report therefore recommends leaving the key elements of the current system in place: the earmarked tax for health, national pooling of public funds and the single payer. However, there is nearly unanimous agreement among stakeholders on the need to broaden the public revenue base through greater reliance on non-employment-based taxes on capital and consumption. Some stakeholders also feel that ensuring that those who benefit from EHIF coverage contribute to its costs – particularly older people – would enhance public perceptions of the system's fairness. To address both concerns – while recognizing that many older people have either already contributed to EHIF while working or would not be financially able to contribute due to the country's low pensions – the report recommends that the central government make contributions to EHIF on behalf of pensioners.

In the interests of fairness, the report also recommends that the government apply the social tax to dividends from capital investment, since investors can avoid paying some of the social tax if they choose to be paid mainly in dividends, but they still

Keep in place key elements of the current system: the earmarked tax for health, national pooling of public funds and the single payer.

Broaden the revenue base by increasing allocations from the central government.

benefit from EHIF coverage. While the numbers affected by such a move would be small, it does not seem appropriate to single out pensioners as a source of unfairness in the health system when other, possibly better-off groups contribute little or nothing to EHIF. Applying the social tax to dividends would also address the current imbalance between labour and capital as sources of health financing.

The mechanisms used to allocate revenue from the central government budget to EHIF need to be stable and transparent. If there is no new earmarking of specific tax funds for health, the government should establish a clear formula for allocating resources to avoid yearly fluctuations.

2. Improve financial protection by curbing OOPs

Health financing policy in Estonia ensures a degree of solidarity and equitable access to primary care (free at the point of use) and specialist care (subject to limited cost sharing). Nevertheless, the extent of financial protection and equity in financing has declined in recent years for all income groups, but especially among poorer and older households, largely due to the rapid growth of OOPs. In addition to evidence of financial barriers to accessing outpatient prescription drugs, dental care and specialist visits, there is evidence that user charges and pharmaceutical policies not only fail to contain costs but actually lead to inefficient use of private and public resources.

The report therefore recommends that the Ministry of Social Affairs and EHIF take urgent action to bolster their policy on the rational use of drugs. The report specifically recommends introducing clear incentives for enforcing the compulsory generic prescription policy and establishing a policy of generic substitution for pharmacists.

At the same time the Ministry of Social Affairs and EHIF should review user charge policies for all health services – starting with outpatient prescription drugs – with a view to simplifying, improving targeting and strengthening direct and indirect protection mechanisms. These agencies should set a timetable for exempting the poor and heavy health care users from charges. The savings resulting from a more efficient use of drugs would offset the cost of exemptions (and even abolition of charges), making this a revenue-neutral option.

The allocation mechanism to broaden the revenue base has to be stable and transparent.

Financial protection and equity in financing have declined in recent years.

User-charges policy needs to be simplified, better targeted and more effective at protecting the poor and heavy users of health care.

The government should also review the benefits package and set a timetable for increasing the coverage of effective services such as adult dental care. The government's decision to extend EHIF coverage to the long-term unemployed in 2009 demonstrates its ability to respond effectively to changing circumstances.

3. Continue to improve health system performance through better resource allocation and purchasing

The Estonian health system already performs well in many areas and EHIF is internationally recognized for its achievements. Nevertheless, there is scope for realizing further efficiency gains by improving investment and resource allocation processes. Although efficiency gains alone will not be sufficient to bridge the projected revenue-expenditure gap, they will improve outcomes. If accompanied by clear communication, efforts to enhance efficiency can also reassure patients, the wider public and politicians that resources for health are being put to good use.

On these grounds the report recommends action in the following areas. First, continued effort to tackle excess hospital capacity and implement the Hospital Master Plan. The Ministry of Social Affairs should develop a stronger strategy for guiding investment in and the design of hospital infrastructure. A better strategy would adjust the balance of power in favour of the health system rather than hospital management. The Ministry of Social Affairs and EHIF should also establish a policy to control investment in expensive hospital equipment.

Second, in light of Estonia's relatively poor gains in life expectancy (especially for men) and evidence of the importance of ensuring healthy ageing and the positive economic effects of investing in health, the Ministry of Social Affairs should work closely with other ministries to generate sufficient investment in public health programmes and prevention.

Third, the Ministry of Social Affairs should work with EHIF to boost the primary care focus of the health system. Measures to support primary care include strengthening family doctors' gate-keeping and coordination functions, equipping them with the means to steer patients through the health system, improving their

Efficiency gains alone will not be sufficient to bridge the projected revenue-expenditure gap.

Stronger oversight of capital investment in infrastructure and equipment will enhance efficiency and help to control expenditure growth.

More and better investment in public health can contribute to healthy ageing and economic development.

Strong, accountable and free primary care at the centre of the health system is cost-effective and encourages responsiveness throughout the health system.

Aligning incentives across the health system and greater use of technology assessment will help to reduce inefficiencies.

governance and accountability and keeping primary care free at the point of use for the whole population (not just those entitled to EHIF benefits).

Fourth, EHIF should align incentives across the health system, making better use of provider payment methods to sustain the shift from inpatient to outpatient care and day case surgery. It should also strengthen efforts to base reimbursement decisions on evidence of the comparative effectiveness of interventions and cost-effectiveness, including greater use of tools such as health technology assessment.

4. Maintain strong governance of the health system

EHIF already has relatively strong (transparent and accountable) governance arrangements in place. The report recommends that these be reinforced by better investment in monitoring and evaluating provider activity across the health system, with particular emphasis on clinical outcome indicators. Investment in e-health may contribute to clinical quality through better exchange of information and less frequent duplication of tests and investigations.

Alongside EHIF, the Ministry of Social Affairs should take the lead in providing policy direction for the whole health system, ensuring a sufficient flow of resources, supporting other institutions and promoting health in all policies. Recognizing the landmark approach adopted by the Tallinn Charter: Health Systems for Health and Wealth, the Ministry of Social Affairs should work more closely with the Ministry of Finance to highlight the positive economic effects of investing in health.

Estonia's single-payer system is effective and should not be dismantled and replaced by a competitive model. The central government should make every effort to avoid any further fragmentation in the flow of resources, which results in inefficiency and can create conflicting incentives. Where a degree of fragmentation exists – for example, in the financing of public health and emergency care – the Ministry of Social Affairs should take the lead in ensuring effective coordination.

Good governance of the single-payer system and efforts to avoid fragmentation are central to strengthening health financing policy.

Conclusions

Health financing policy in Estonia faces several challenges. Population ageing poses a moderate challenge to long-term financial sustainability. The major challenges come from factors directly related to financing, notably, relatively low public investment in health, public contribution mechanisms linked to the labour market and weaknesses in resource allocation, purchasing and provider payment. The good news for policy-makers is that these challenges are amenable to multiple policy levers. Strengthening health financing policy can address many of the inefficiencies in resource allocation and health care utilization that exacerbate cost pressures.

Nevertheless, the projected gap between revenue and expenditure is too large to be closed through efficiency savings alone. One way of narrowing the gap is to cut entitlements to publicly financed health care, but this would be counter-productive since it would undermine the system's objectives and values. Depending on the severity and timing of the cuts, they might also undermine economic recovery and growth. In addition, radical cuts in health care prices and benefits may not be easily reversed when the economic outlook improves if they have provoked an exodus of health professionals.

An alternative is to broaden the public revenue base. Heavy reliance on a wage tax alone is not a sustainable option in light of declining employment, rising old age dependency ratios and payroll tax sensitivity to economic fluctuation. Increased transfers from the central government budget to the health sector, in tandem with other efforts to strengthen health financing policy, can tackle the revenue-expenditure gap, bring public spending up to EU levels and most importantly, improve the system's ability to meet its objectives. Greater central government allocations should be based on a clear formula to ensure transparency and stability.

The health system's financial sustainability rests on political decisions about how, and how much, to invest in health and how resources should be allocated. These decisions need to be made sooner rather than later since the projections and evidence of existing inefficiencies suggest that the costs of inaction will be high.

1. Introduction

Report aims

Health system financial sustainability has always been a central health policy issue; but the recent financial crisis has forced it to the top of the policy agenda the world over. With the aim of supporting a financially sustainable, high-performing health system, this report provides an assessment of health financing policy in Estonia. It looks at how suited current arrangements are to enable goal attainment in the medium-to-long term (to 2030) and identifies ways to strengthen financing policy.

The report is the result of a year-long process of stakeholder consultations and expert analysis initiated by the Ministry of Social Affairs in 2009 in partnership with EHIF and the WHO Regional Office for Europe. Other reports on the Estonian health system have focused on health financing or made projections of future revenue and expenditure trends (1–4). This report adds to previous analyses in three ways. First, it brings together an assessment of financing policy and projections of future revenue and expenditure trends. Second, the projections draw on the most recent data and account for changes in patterns of health care utilization. Third, the analysis and recommendations are not based on technical assessment alone but also on the views of health system actors and political representatives obtained through interviews and workshops.

In preparing the report we were guided by three objectives:

1. to assess the long-term ability of health financing policy to achieve its goals by:
 - comparing the performance of Estonian health financing policy to objectives identified by WHO;
 - assessing its ability to attain these goals in the face of cost pressures; and
 - identifying options for strengthening policy in light of the health system's underlying values;
2. to assess revenue and expenditure trends by projecting:
 - health expenditure from now to 2030 based on a range of assumptions; and
 - publicly generated revenue for the health sector from now to 2030, based on current financing policy; and
3. to obtain stakeholders' ² views on:
 - the values underlying health financing policy;
 - the strengths and weaknesses of current arrangements;
 - challenges to the system's ability to meet its goals in the medium and long term; and
 - options for strengthening policy.

² The range of stakeholders involved in the study is not intended to be representative. See below for details of how they were selected.

Methods

The descriptive parts of the report are based on a review of the literature and information provided by members of the report's working group. The assessment of health financing policy in Estonia and its ability to meet its goals in the face of cost pressures is based on the literature review, the projections and discussion with the working group. Stakeholder views were obtained through two workshops and a series of interviews held in Estonia in 2009. These data sources are described in more detail below.

The review drew on statistical and non-statistical data. Sources of statistical data included: WHO World Health Statistics, Eurostat and national health data. Relevant non-statistical data were identified using the following databases and sources: International Bibliography of the Social Sciences, PubMed, Health Policy Monitor,³ and the Mutual Information System on Social Protection in the Member States of the European Union (MISSOC).

We also undertook Internet searches for published and grey literature, including reports prepared by governments, non-governmental organizations, regulatory bodies, trade associations and research institutes.

The first workshop took place in Tallinn on 3 April 2009 and was attended by the people listed in Table 1. Participants were asked for their views on the main challenges facing health financing policy in Estonia and possible options. See Annex 1 for a summary of the workshop's proceedings.

Table 1. Participants in the 3 April 2009 workshop

Name	Affiliation
Ain Aaviksoo	Chair of the Board, Centre for Policy Studies PRAXIS
Toomas Asser	Dean of the Medical Faculty, University of Tartu
Hannes Danilov	Chair of the Management Board, EHIF
Tamás Evetovits	Senior Health Financing Specialist, Division of Country Health Systems, WHO Regional Office for Europe
Jarno Habicht	Head, WHO Country Office, Estonia, WHO Regional Office for Europe
Triin Habicht	Head of the Department of Health Economics, EHIF
Pille Ilves	Chair, Estonian Patient Advocacy Association
Maris Jesse	Director, National Institute for Health Development
Katrin Kaarma	Director General, Labour Inspectorate of Estonia
Raul Kiiwet	Head of the Department of Public Health, University of Tartu

³ The international network for health policy and reform, a 20-country project initiated and sponsored by the Bertelsmann Stiftung since 2002, associated with the European Observatory on Health Systems and Policies.

Table 1. (cont.)

Name	Affiliation
Ago Kõrgvee	Chairman of the Management Board, Union of Estonian Emergency Medical Services
Andrus Mäesalu	President, Estonian Medical Association
Mari Mathiesen	Member of the Management Board, EHIF
Erki Must	Director, Association of Pharmaceutical Manufacturers in Estonia
Hanno Pevkur	Minister of Social Affairs, Ministry of Social Affairs
Indrek Oro	Member of the Board, Estonian Medical Association
Katrin Martinson	Member of the Board, Family Doctors' Association
Ulla Raid	Activity Coordinator (International Affairs), Estonian Nurse Union
Kersti Reinsalu	Member of the Management Board, EHIF
Liis Rooväli	Head of the Health Information and Analysis Department, Ministry of Social Affairs
Urmas Siigur	Chairman of the Executive Board, Tartu University Hospital
Sarah Thomson	Senior Research Fellow, European Observatory on Health Systems and Policies and Deputy Director, LSE Health
Timo Vaarmann	Adviser to the Minister, Ministry of Social Affairs

The second workshop took place in Tallinn on 20 October 2009 and was attended by the people listed in Table 2. The aims of the workshop were to present the draft report to stakeholders, particularly those who had attended the first workshop and been interviewed, and to obtain their feedback on the draft report. See Annex 2 for a summary of proceedings.

Table 2. Participants in the 20 October 2009 workshop

Name	Affiliation
Ain Aaviksoo	Chair of the Board, Centre for Policy Studies PRAXIS
Tõnis Allik	Chair, North Estonia Medical Centre; Vice-President, Estonian Hospital Association; Member of Supervisory Board, EHIF
Hannes Danilov	Chair of Management Board, EHIF
Tamás Evetovits	Senior Health Financing Specialist, Division of Country Health Systems, WHO Regional Office for Europe
Jarno Habicht	Head, WHO Country Office, Estonia, WHO Regional Office for Europe
Triin Habicht	Head of the Department of Health Economics, EHIF
Diana Ingerainen	Member of the Board, Family Doctors Association
Maris Jesse	Director, National Institute for Health Development

Table 2. (cont.)

Name	Affiliation
Kaido Kepp	CEO in Estonia, Codan Forsikring A/S in Estonia
Raul Kiivet	Head of the Department of Public Health, University of Tartu
Aare Kitsing	Estonian Association of Pensioners' Societies, Member of Supervisory Board, EHIF
Eneken Koka	Adviser, National Budget Coordination and Monitoring Department, Ministry of Finance
Andres Kork	Former President, Estonian Medical Association
Tarmo Kriis	Head of Estonian Employers' Confederation, Member of Supervisory Board, EHIF
Ago Kõrgvee	Chairman of the Management Board, Union of Estonian Emergency Medical Services
Margus Lember	Head of the Department of Internal Medicine, University of Tartu
Maret Maripuu	Member of Parliament, Estonian Reform Party
Mari Mathiesen	Member of Management Board, EHIF
Erki Must	Director, Association of Pharmaceutical Manufacturers in Estonia
Andrus Mäesalu	President, Estonian Medical Association
Hanno Pevkur	Minister of Social Affairs, Ministry of Social Affairs of Estonia
Jaan Pillesaar	Chairman of the Advisory Board, Helmes Ltd, Member of Supervisory Board, EHIF
Ulla Raid	Activity Coordinator (International Affairs), Estonian Nurse Union
Liis Rooväli	Head of the Health Information and Analysis Department, Ministry of Social Affairs of Estonia
Andres Saarniit	Adviser, Economics Department, Bank of Estonia
Urmas Siigur	Chairman of the Executive Board, Tartu University Hospital
Merle Smutov	Estonian Employees' Unions' Confederation, Member of Supervisory Board, EHIF
Urmas Sule	President, Estonian Hospital Association
Lagle Suurorg	Estonian Union of Child Welfare, Member of Supervisory Board, EHIF
Veiko Tali	Deputy Secretary General, Ministry of Finance
Sarah Thomson	Senior Research Fellow in Health Policy, European Observatory on Health Systems and Policies and Deputy Director, LSE Health
Andres Vörk	Research Fellow, Centre for Policy Studies PRAXIS and Lecturer, University of Tartu

The interviews were carried out by three members of the Working Group (Sarah Thomson, Tamás Evetovits and Jarno Habicht) in early April 2009. They were mainly conducted face-to-face and in English. One interview was conducted by telephone and four involved an interpreter. Interviews used open-ended questions and a semi-structured guide (see Annex 3), lasted between 45 and 75 minutes and were recorded and transcribed verbatim.

Interview transcripts were coded according to themes identified in advance, including: the values underpinning the Estonian health system; the strengths and weaknesses of health financing policy; the mix of contribution mechanisms used to finance health; the balance between public and private spending on health; health care coverage breadth, scope and depth; access, fairness and efficiency in the health system; the main challenges facing health financing in the medium-to-long term; and options for change.

There were 17 interviews in total (Table 3). Two interviews (Ministry of Finance, Bank of Estonia) were attended by two people. Interviewees were selected by national members of the working group to capture the views of politicians from the major political parties with current or former involvement in national health policy, leading civil servants in the Ministry of Social Affairs and the Ministry of Finance, key health system actors such as the Estonian Medical Association and the Employers' Association and academics from relevant disciplines.

Table 3. Interviewees, 5–8 April 2009

Name	Affiliation
Politicians	
Jaak Aab	Member of Parliament, Estonian Centre Party; former Minister of Social Affairs, 2005–2007
Jürgen Ligi	Member of Parliament, Reform Party; Chair, Finance Committee, Parliament of Estonia (Minister of Finance since June 2009)
Maret Maripuu	Member of Parliament, Estonian Reform Party; former Minister of Social Affairs, 2007–2009
Eiki Nestor	Member of Parliament, Founder and Chair, Social Democratic Party; member, Finance Committee, Parliament of Estonia; former Minister of Social Affairs, 1999–2002
Macroeconomists	
Veiko Tali	Deputy Secretary General responsible for tax and fiscal policy, Ministry of Finance
Tõnu Lillelaid	Chief specialist, Department of Insurance Policy, Ministry of Finance
Üllo Kaasik	Director, Economic Department, Bank of Estonia
Andres Saarniit	Adviser, Economic Department, Bank of Estonia
Health system actors	
Tõnis Allik	Chair, North Estonia Medical Centre; Vice-President, Estonian Hospital Association; Member of Supervisory Board, EHIF
Ruth Kalda	Chair, Family Doctors' Association; Professor, Department of Family Medicine, University of Tartu
Andres Kork	Formerly President, Estonian Medical Association, 2003–2008; former Minister of Health Care, 1992

Table 3. (cont.)

Name	Affiliation
Vaike Näripea	Head of Legal Department, Estonian Health Insurance Fund
Ivi Normet	Deputy Secretary General for Health, Ministry of Social Affairs; Member of Supervisory Board, EHIF
Health financing stakeholders	
Kaido Kepp	CEO, Royal & Sun Alliance
Tarmo Kriis	Head of Estonian Employers' Confederation; Member of Supervisory Board, EHIF
Harri Taliga	President, Confederation of Trade Unions; Member of Supervisory Board, EHIF
Social science researchers	
Raul Eamets	Professor of Macroeconomics and Head, Institute of Economics, University of Tartu
Marju Lauristin	Professor of Social Communication, Tartu University; formerly Member of Parliament, Social Democratic Party; former Minister of Social Affairs, 1992–1994
Lauri Leppik	Professor of Social Policy and Director, Institute of Social Work, Tallinn University

The report makes projections of health expenditure from 2007 to 2030 based on the actuarial social budget model of the International Labour Organization (ILO) (5), adjusted for use on the Estonian health system during the AHEAD project (6). The social budget model was complemented by projections of future developments in out-of-pocket expenditure in addition to public expenditure. The report also projects EHIF revenue derived from the social tax from 2007 to 2030 and estimates the revenue–expenditure gap. Where possible, the projections use the same population and macroeconomic assumptions used in the latest European Commission (EC) projections (3), adjusted to reflect recent macroeconomic forecasts published by the Estonian Ministry of Finance. Four different scenarios were modelled to capture the effect on expenditure of population ageing, developments in the labour force and technology and potential changes in health care utilization.

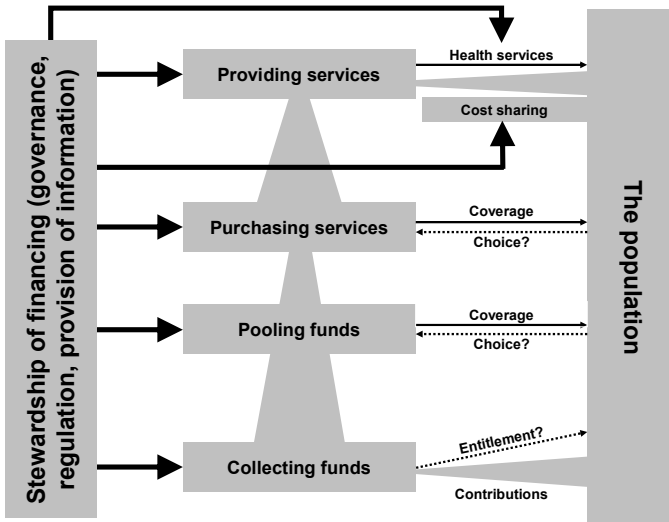
Framework for analysis

The report's overview is based on a descriptive framework (Figure 2) highlighting three distinct financing functions: revenue collection, pooling of funds and purchasing of health services (7). The framework also highlights different aspects of coverage policy, for example, breadth (who is eligible for cover), scope (the range of benefits covered) and depth (whether benefits are subject to user charges).

The report's assessment is based on the following WHO-identified policy objectives (8, 9):

- promoting universal protection against financial risk
- promoting a more equitable distribution of the financing burden
- promoting equitable provision and use of services relative to need
- improving the transparency and accountability of the system to the public
- promoting quality and efficiency in service delivery
- improving administrative efficiency.

Figure 2. Framework for descriptive analysis of health financing functions



Source: Based on Kutzin (8).

Outline of the report

Section 2 of the report analyses health financing and tax policies in Estonia. Section 3 assesses health financing policy according to the WHO-identified objectives. Section 4 discusses some of the factors likely to affect health sector expenditure and revenue, presents the expenditure and revenue projections to 2030 and outlines the projected revenue-expenditure gap in 2030. Section 5 presents the views of stakeholders based on workshops and interviews. Section 6 considers policy challenges and summarizes the advantages and disadvantages of different financing options. Section 7 contains the report's recommendations.

2. Health financing and tax policies

This section first provides an overview of health system financing, covering expenditure, revenue collection, pooling, purchasing and provider payment. It then describes current tax policy, including the fiscal context, before briefly discussing the impact of health financing on the economy and potential tax structure developments.

Health financing policy

Health expenditure

The level of health expenditure has been stable with small variations due to changes in the economic environment. However, in the late 1990s it was somewhat higher (6.1% of GDP in 1999) and in recent years has been decreasing, reaching 5.4% in 2007, in spite of rapidly increasing health expenditure in absolute terms (Table 4). Expenditure rose in line with economic growth until 1998. The 1999 peak as a proportion of GDP arose due to the global economic downturn. Despite shortfalls in social tax revenues in 1999, the health insurance fund was able to use its reserves to pay providers, which meant that health expenditure increased as a proportion of GDP, then fell to 5.5% of GDP in 2000. The subsequent fall as a share of GDP and moderate increase in nominal terms was mainly caused by two factors: EHIF having to use some of its revenue to create new reserves (equal to 0.2% of GDP), and government budget allocations for health not keeping pace with general tax revenue increases.

Table 4. Trends in health expenditure, 1995–2007

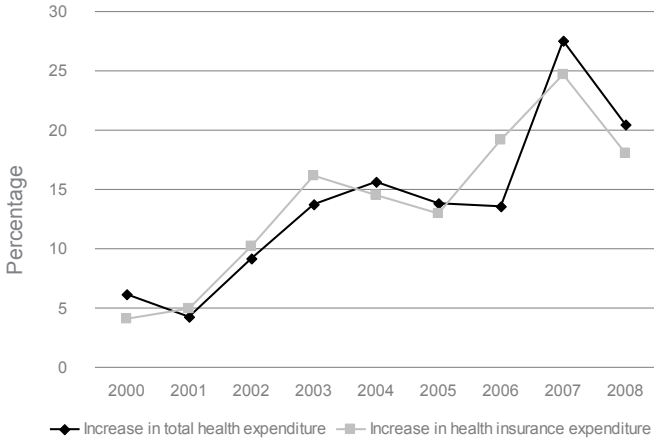
Trends	1995	2000	2005	2007
Total expenditure on health				
Per capita (international \$)	240	533	835	1159
Share of GDP (%)	6.4	5.4	5.0	5.4
Public share (% of GDP)	5.7	4.1	3.8	4.1
Private share (% of GDP)	0.7	1.3	1.2	1.3
Government expenditure on health				
Share of total government expenditure (%)	-	11.4	10.9	10.8

Source: Based on WHO (10).

Early in this century the annual nominal growth of health expenditures was moderate (e.g. about 4% in 2000). The annual nominal growth rate rose from 11% in 2002 to 25% in 2007 (Figure 3), but this did not result in an increase in health expenditure as a percentage of GDP, as GDP has risen faster on average due to growing private consumption and investments. Health insurance spending has followed a similar trend, with very high annual nominal growth (28% in 2007) in the past two years. In 2008, when the financial

crisis limited GDP growth to less than 4%, health insurance expenditure still increased by 20%, resulting in a significant increase as a share of GDP for the year.

Figure 3. Increase in total health and health insurance expenditure, 2000–2008

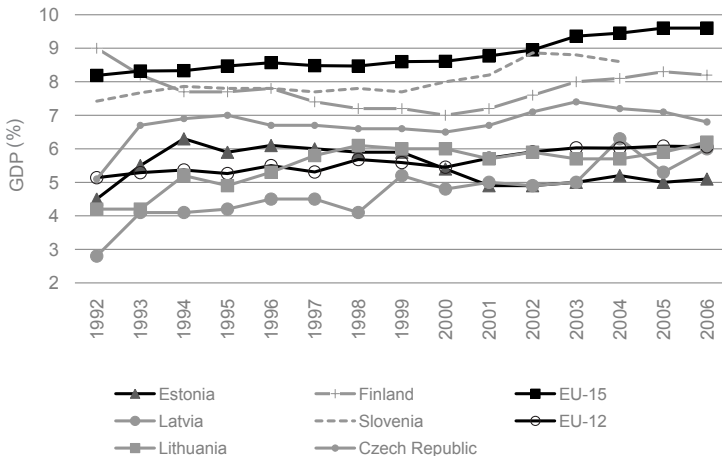


Source: Based on WHO (10); EHIF (11).

Note: Health insurance expenditure includes temporary sick leave benefits.

Estonia's health expenditure as a share of GDP is lower than that of other EU Member States (Figure 4).

Figure 4. Total health expenditure, selected countries and the EU, 1992–2006



Source: Based on WHO (12).

Note: EU-12 = countries joining the EU in May 2004 and January 2007; EU-15 = countries belonging to the EU before May 2004.

The Estonian health system is mainly publicly financed (Table 5). Since 1992, earmarked payroll taxes pooled by EHIF have been the main source, accounting for approximately two-thirds of total expenditure over the last eight years. Adding temporary incapacity benefits to national health accounts data makes EHIF's share even larger.⁴ Other public sources include state and municipal budgets, which respectively accounted for 9.7% and 1.7% of total health expenditure in 2007. The public share decreased during the 1990s but has been stable since 2000, at about 75% of the total.

In 2007 private sources accounted for 23.3% of total health expenditure. OOPs account for more than 90% of private health spending; the role of private health insurance (PHI) is very limited. As there have been no recent changes in benefits, growing OOPs have been driven by increasing real incomes and willingness to spend on health care.

Table 5. Main sources of health financing, 1995–2007^a

Source of financing	1995	1999	2000	2005	2007	2007 ^b
Public	89.8	76.9	76.4	76.7	75.6	78.7
Social health insurance (social tax pooled by EHIF)	77.4	66.0	66.0	66.2	64.2	68.8
State budget ^c	12.4	8.7	8.4	9.4	9.7	8.5
Municipal budgets ^d	n/a	2.2	2.0	1.1	1.7	1.5
Private	7.5	19.6	23.3	23.0	23.3	20.3
Out-of-pocket	7.5	14.0	19.7	20.4	21.9	19.1
Private health insurance	0.0	0.8	1.0	0.3	0.3	0.3
Other	0.0	4.8	2.6	2.3	1.1	0.9
External sources	2.7	3.5	0.3	0.3	1.1	1.0

Source: Based on WHO (10); EHIF (11); NIHD (13).

^a The Ministry of Social Affairs began systematically collecting health expenditure data based on the OECD national health accounts methodology in 1999. The new methodology is slightly different from the old, so pre-1999 data should be interpreted with caution as they may under-represent private spending.

^b Includes national health accounts data plus temporary incapacity benefits.

^c VAT, personal and corporate income tax, excise tax and other revenues.

^d Personal income tax, land tax, other local taxes and other revenues.

⁴ Note that until June 2009 temporary incapacity benefits were received starting from the second day (except the maternity benefit), and since July 2009 from the fourth day for sickness benefits. Incapacity benefits cover only 80% and sickness benefits 70% of previous earnings (with a few exceptions). This 'coinsurance' is omitted from OOPs. In principle, this could be calculated using a revenue foregone approach. The employer's copayment, introduced in July 2009, could likewise be taken into account.

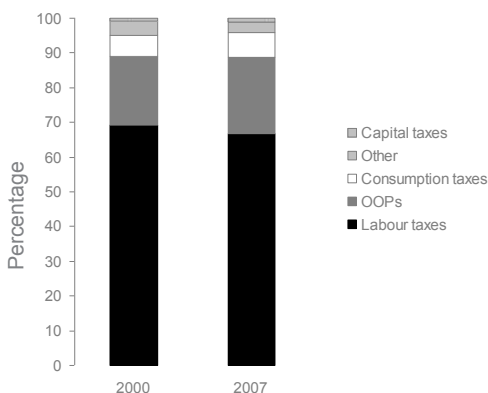
Table 6. Main sources of health financing, by tax categories, 2000–2007

	2000	2001	2002	2003	2004	2005	2006	2007
Social tax	66.0	67.0	65.6	65.4	65.7	66.2	61.6	64.2
OOPs	19.7	18.8	19.9	20.8	21.3	20.4	25.1	21.9
Value-added tax	4.6	4.4	4.3	5.2	4.1	5.0	5.2	5.4
Others (other taxes, foreign sector, other private sector)	4.6	4.1	4.7	3.5	4.3	4.1	2.9	3.9
Personal income tax	3.5	3.9	3.8	3.2	2.6	2.1	2.8	2.7
Excise taxes	1.6	1.7	1.7	1.9	1.9	2.2	2.0	2.0
Environmental	0.7	0.9	0.9	1.0	1.0	1.1	1.0	1.0
Alcohol	0.6	0.5	0.5	0.6	0.6	0.7	0.6	0.6
Tobacco	0.3	0.3	0.3	0.4	0.3	0.4	0.3	0.4
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Based on data from Ministry of Social Affairs National Health Accounts and Statistics Estonia.

Looking at health financing sources by tax category (Table 6 and Figure 5) shows that in 2007 labour taxes (social tax and income tax on labour earnings) accounted for about 67% of total health expenditure, followed by out-of-pocket payments (about 22%), consumption taxes (about 7.5%) and capital taxes (about 1.2%). Remaining unclassified items (other minor taxes and charges, other expenditures by private enterprises) were about 3%. This emphasizes how much health financing relies on labour taxation and direct payments by households, with capital taxes having a minor role.

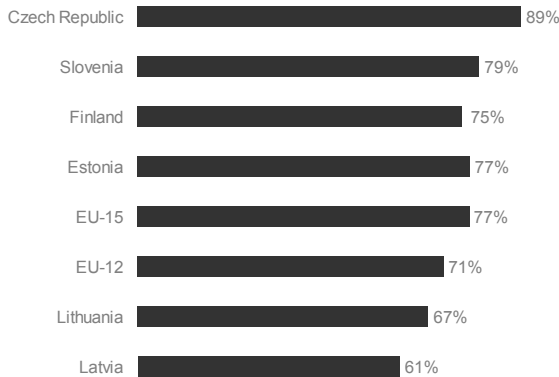
Figure 5. Health financing by tax categories, 2000 and 2007



Source: Based on data from Ministry of Social Affairs National Health Accounts and Statistics Estonia.

Estonia's public expenditure as a proportion of total health spending is equal to the EU-15 average in 2005 (Figure 6).

Figure 6. The public share of total expenditure on health, selected countries, 2005



Source: Based on WHO (12).

Public revenue collection and pooling

EHIF pools the health part of the social paid by salaried workers (13% of wages) and the self-employed (13% of earnings) and covers about 95% of the population. Contributors account for about half of all EHIF-insured people (Table 7). The health expenses of non-contributing individuals (45% of the insured population in 2008) are implicitly subsidized by the other categories, reflecting significant solidarity within the health system. These non-contributing groups, including children, pensioners, disability pensioners and students are eligible for the same benefit package as everyone else in the insurance pool without any social tax contribution from either themselves or the state. The state officially makes contributions for only a small proportion of the covered population (about 3%), including individuals on parental leave with children under three years of age, individuals registered as unemployed and carers of disabled people.

Table 7. Breakdown of EHIF-insured people, June 2008

Category	Number	% of total
Total insured	1 284 195	100.0
Paying contributions	676 427	52.7
Employees, board members	625 177	48.7
Self-employed	45 759	3.6
Voluntarily insured	5 491	0.4

Table 7. (cont.)

Category	Number	% of total
Covered by state or unemployment fund contributions	32 731	2.5
Recipients of parental benefits	6 969	0.5
Others on parental leave	7 753	0.6
Recipients of unemployment insurance benefits	2 000	0.2
Other registered unemployed	10 223	0.8
Carers of disabled people	3 537	0.3
Men participating in compulsory military service	1 032	0.1
Other	1 217	0.1
Non-contributing insured	575 037	44.8
Non-working dependent spouses	325	0.0
Children	250 915	19.5
Students	44 031	3.4
Old-age pensioners	228 110	17.8
Incapacity to work pensioners	42 052	3.3
Survivor pensioners	8 771	0.7
Pregnant women	833	0.1
International agreements	3 380	0.3

Source: Based on EHIF (11).

EHIF purchases most of the care for the insured, except ambulance services, which are financed directly from the state budget and administered by the Health Board⁵, an agency of the Ministry of Social Affairs. Emergency care costs for the uninsured are covered from the state budget, but the administrative tasks are delegated to EHIF for efficiency reasons. Although the same payment methods and tariffs are used for uninsured and insured people, uninsured people are not part of EHIF's capped cost and volume contracts.

The social tax is collected by the Estonian Tax and Customs Board and the health part is pooled by EHIF to balance regional income disparities. EHIF's budget has always been determined by the amount of revenue generated by the part of the social tax earmarked for health. Before 2001, EHIF's budget was approved by parliament at the same time as the state health budget. In order to allow flexibility, the budget allocation was not detailed, so while parliament approved the overall budget, allocations to different sectors were made at the discretion of EHIF. Since 2001, when EHIF achieved autonomous status, its budget has been approved by its supervisory board based on four-year revenue and expenditure planning principles.

EHIF's budget must balance revenues and expenditures each financial year, as per common fiscal policy in Estonia. Because EHIF's budget depends on the state budget, it cannot be approved by the supervisory board before the latter has been passed; until then, monthly

⁵ Formerly the Health Care Board (prior to 2010).

expenditures may be up to a twelfth of that of the preceding fiscal year. EHIF has cash, legal and risk reserves to ensure solvency. The cash reserve (liquidity portfolio), administered by the State Fund and consisting of instruments such as local deposits and commercial paper, ensures smooth daily cash flow management. The legal reserve, 6% of EHIF's budget (created by transferring at least 2% of the budget every year since EHIF's inception), decreases risk from macroeconomic changes. It was 8% of the budget until 2004, when it was decreased to cover increased tariffs from the new health professionals' wage agreement. It may be used only after a government order upon recommendation of the Minister of Social Affairs and consultation of the supervisory board. The Minister of Finance ensures the preservation, liquidity and returns of the funds, which are invested mostly in bonds from highly rated European issuers. The risk reserve, 2% of the budget, minimizes risks arising from health insurance obligations and can be used only after a decision of the supervisory board. In addition to the reserves, EHIF had retained about 3 billion kroon (almost a quarter of the annual budget) as of the end of 2008, mostly the result of previous years' high actual revenues compared to those anticipated.

Table 8 shows how EHIF's budget is allocated by different types of benefits and their increase since 2001. Some of the budget is allocated on the basis of open-ended legislative obligations, for example, reimbursement of outpatient prescription drugs, payment for sick leave and maternity benefits. The rest is allocated according to priorities determined by the supervisory board.

Table 8. Breakdown of EHIF's budget by category, 2001 and 2009

Category	2001 (million kroon)	2009 (million kroon)	Increase 2009/2001 (%)	% of total in 2009
Health services in total	2 824	8 223	191	67.2
Prevention	45	129	190	1.1
Primary care	336	1 092	225	8.9
Specialist care	2 170	6 457	198	52.8
Long-term care	48	243	407	2.0
Dental care	225	301	34	2.5
Health promotion	13	15	16	0.1
Pharmaceuticals	666	1 383	108	11.3
Temporary sickness benefits	754	2 153	186	17.6
Other health insurance benefits	7	334	4 943	2.7
Total health insurance benefits	4 263	12 108	184	99.0
Administrative costs	79	121	53	1.0
Total expenditure	4 343	12 229	182	100.0
Assignments to the reserves	221	-211		

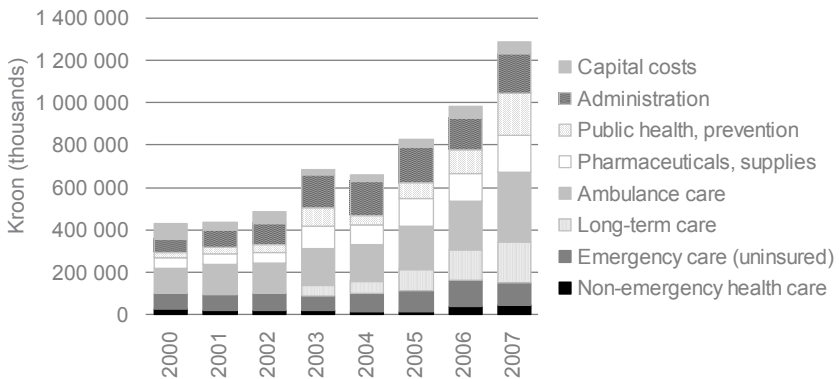
Source: Based on EHIF (11).

Most funds to purchase health services are allocated to the four regional branches on a per capita basis according to the number of insured people in each region. However, some expensive procedures (such as bone marrow transplants, peritoneal dialysis and some oncology and haematological treatment) are funded centrally. Regional branch budgets are approved by EHIF's management board. The capitated allocations for primary and long-term care are adjusted for regional differences in population age structure. The capitated allocations for other health services are not adjusted. The regional branches have some flexibility in allocating funds among specialist care, long-term care and dental care. They also plan provider contracts. Pharmaceutical and temporary sick leave benefits (open-ended EHIF obligations) are administered centrally.

Other agencies pool public revenue, in particular the Ministry of Social Affairs and municipalities. The share of state and municipal budget financing for health has been relatively stable in recent years (10.9% in 1999 and 11.4% in 2007). Budgetary ceilings for each ministry are set by the Ministry of Finance based on legislative obligations and government priorities. The state budget for the health sector is prepared by the Ministry of Social Affairs (which administers more than 90% of the state budget allocation for health care), following budget proposals from organizations funded fully or partially by the budget. See Figure 7 for an overview of state budget expenditure on health by category.

For the uninsured (4.4% of the population in 2008), the state budget only funds emergency care. The administration of ambulance services is carried out by the Health Board,⁶ a specialized agency of the Ministry of Social Affairs dealing with health care providers. Its costing model is based on the number of nurses and physicians per ambulance team, but the final amounts are decided through budget negotiations.

Figure 7. State budget expenditure on health by category, 2000–2007



Source: Based on WHO (10).

⁶ Formerly the Health Care Board (prior to 2010).

The state budget funds some pharmaceuticals and health aids. Although EHIF reimburses most pharmaceuticals, some medicines and vaccines are bought centrally through public tenders, to keep the cost down and secure equal access. The state budget also funds large-scale health promotion and disease prevention activities. In recent years, its funding share of public health programmes has increased (from 6.6% in 1999 to 16% in 2007), in conjunction with the reform of public health programmes such as HIV and drug-abuse strategies and the launch of new ones such as a cardiovascular disease prevention strategy. Additional funds have been allocated to public health since 2001, collected through a tax on gambling. Other ministries fund some specific activities in their areas, e.g. the Ministry of Justice's HIV prevention programmes in prisons.

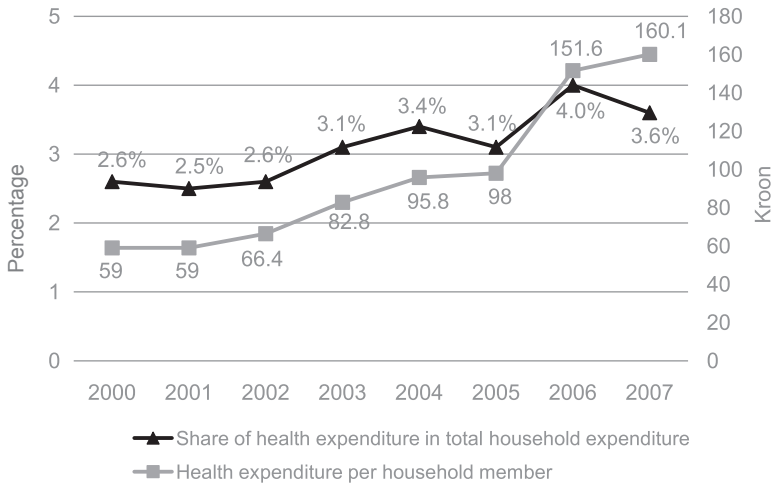
Finally, the state budget previously funded capital costs, but from 2003 they were included in health service prices and mainly paid by EHIF. The state budget retained some limited grants to fund investments in specific hospitals, but these were allocated unsystematically. In 2008 the capital costs financing scheme changed and they were financed from the state budget through the service price paid by EHIF. This decision was made to relieve financial pressure on EHIF, enabling it to improve access to care and pay providers higher service prices. However, in 2009 the state budget did not allocate any funds to cover capital costs and EHIF had to cover them from regular revenues. In addition to national funding, financing of hospital capital costs has been bolstered by grants from EU structural funds.

Municipalities have no clear responsibility for financing health care and their contribution therefore varies widely according to ability to pay and local priorities. They mainly cover the non-emergency health care costs of the uninsured and provide financial assistance to people facing high OOPs or health-service related travel expenses. They also finance selected health promotion activities.

Private revenue collection and pooling

Private sources of funding include formal and informal OOPs and private health insurance. The latter mainly consists of medical travel insurance and plays a very minor role. Prior to 2002, there was no market for PHI, largely due to the comprehensive range of benefits covered by EHIF, the short waiting times for treatment, people not being permitted to opt out of EHIF coverage and tax disincentives (PHI offered to employees by employers – with the exception of insurance related to international business travel – is subject to a 33% tax on benefits in kind). In addition to medical travel insurance, some foreign private insurance companies provide supplementary PHI to enable people to obtain faster access to specialist services. However, at the beginning of 2009 there was only one private insurance company still active, with approximately 600 customers. In 2002 EHIF began to offer voluntary coverage for some groups not otherwise eligible for statutory coverage (for example, non-working spouses of EHIF-insureds). At the end of 2008 EHIF covered only 261 people by voluntary agreement.

Figure 8. Health expenditure per household member, 2000–2007



Source: Based on data from the Estonian Household Budget Survey, Statistics Estonia.

OOPs consist of user charges for EHIF benefits (Table 9), direct payments to providers for services outside EHIF's benefit package or from non-EHIF providers, and informal payments. Since the mid-1990s, OOPs have increased steadily as a proportion of total health spending; OOPs per household member in absolute terms have nearly tripled, from 59 kroon to 160 kroon per month (Figure 8). Health costs' share of household expenditure rose from 2.6% in 2000 to 3.6% in 2007.

More than half (51% in 2007) of OOPs are for pharmaceuticals, of which 73% is for prescription drugs. The structure of OOP spending varies significantly across income quintiles. The poorest quintile's OOPs were almost exclusively for medicines (84% in 2007), while the rich spent more on outpatient services, including dental care (15). Coinsurance of 15% was introduced in 2010 for inpatient long-term care (nursing care).

External funding for health is not significant, but has increased in recent years, mainly due to investment in hospital infrastructure from EU structural funds and other sources.

Table 9. User charges by type of care, selected years

	1995	2001/2002	2009
Primary care	Copayment for visits (€0.32); retirees, disabled and children exempted	Copayment for visits (€0.32); retirees, disabled and children exempted	<ul style="list-style-type: none"> No copayment for GP office visits Home visit maximum fee (€3.20); children under 2 and pregnant women exempted
OP specialist care (HI contracted)	Copayment for visits (€0.32) to public hospital; retirees, disabled and children exempted; private hospitals charge own fees	In addition to formal copayment, some providers establish additional fees	Copayment of up to €3.20; children under 2 and pregnant women exempted
OP specialist care (not HI contracted)	Patient charged according to provider-established fees	Patient charged according to provider-established fees	Patient charged according to provider-established 'reasonable' fees
Dental care	Partially covered by HI; additional charges applied by private providers	Partially covered by HI; additional charges applied by private providers	<ul style="list-style-type: none"> No copayment for child dental care covered by EHIF Adult dental care not covered by EHIF except limited cash benefits for pregnant and pensioners
Inpatient care	<ul style="list-style-type: none"> No copayment for hospital stays Copayment established by providers for above-standard accommodation Coinurance for some specific services (e.g., voluntary termination of pregnancy) 	<ul style="list-style-type: none"> No copayment for hospital stays Copayment established by providers for above-standard accommodation Coinurance for specific services 	<ul style="list-style-type: none"> Copayment of up to €1.60 per day, for up to 10 days per stay; children, pregnant women, intensive care patients exempted Copayment established by providers for above-standard accommodation (patients cannot be charged if no standard accommodation available) Coinurance for specific services (e.g., inpatient rehabilitation in non-acute cases, voluntary termination of pregnancy) set by EHIF
OP prescription drugs	<ul style="list-style-type: none"> Prescription drugs for certain chronic and serious illnesses (and for retirees, disabled and children) – copayment of €0.32, plus coinsurance 0% or 10% (in May copayment increased to €0.64, and coinsurance rules remained) General prescription drugs – copayment of €1.91 per prescription, coinsurance of 50%, copayment of €2.56 after May; HI reimbursement limit of €12 per prescription 	<ul style="list-style-type: none"> Prescription drugs for certain chronic illnesses (and retirees, disabled and children) – copayment of €1.30, plus coinsurance 0% or 10% General prescription drugs – copayment of €3.20 per prescription, plus coinsurance of at least 50% of the drug price; EHIF reimbursement limit of €12 per prescription Annual spending on OP prescription drugs is eligible for additional reimbursement: 50% for yearly expenditure of €383–639; 75% for €639–1 278; 0% above €1 278 	<ul style="list-style-type: none"> Prescription drugs for chronic diseases – copayment of €1.30 plus coinsurance of 0% or 25% of the drug price (or 10% for those aged 4–16, disabled, pensioners, or over 63) Prescription drugs for those younger than 4, copayment of €1.30 per prescription General prescription drugs – copayment of €3.20 per prescription, plus coinsurance of at least 50% of the drug price; EHIF reimbursement limit of €12 per prescription Annual spending on OP prescription drugs is eligible for additional reimbursement: 50% for yearly expenditure of €383–639; 75% for €639–1 278; 0% above €1 278

Source: Adapted from (14).

Note: HI = health insurance; OP = outpatient

Table 10. Prescription drug expenditure, 2008

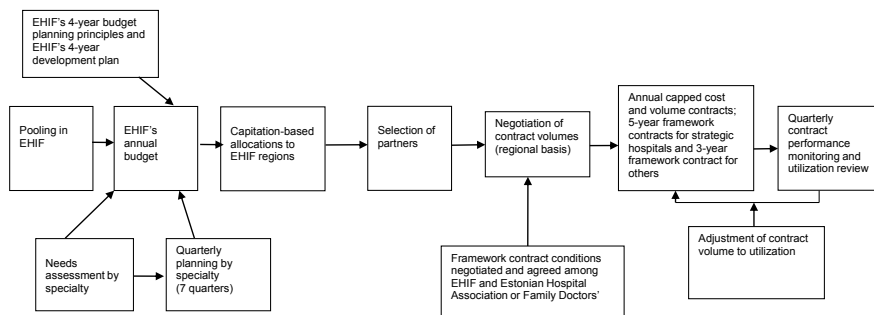
EHIF reimbursement rate for different prescription drugs	OOPs as % of total prescription drug expenditure
100%	4
90%	33
75%	42
50%	66
Total	38

Source: Based on EHIF (11).

Purchasing health services

The main purchaser of health services is EHIF, whose contracting process is depicted in Figure 9. EHIF negotiates five-year, capped cost and volume contracts with hospitals in the government-approved Hospital Master Plan and three-year contracts with others. Financial details are negotiated yearly. Since 2001, the contracting process has started with needs assessment. Currently, this is based mainly on analysis of health service utilization data (cases by specialty) and waiting times, but there are plans to use more sophisticated methods. Since 2005, EHIF has been negotiating with medical specialist associations to obtain detailed input to the planning process and broaden their involvement in purchasing decisions. The results of these negotiations are taken into account in EHIF budgeting, contracting and benefit package updates.

Figure 9. EHIF contracting process



Source: Adapted from (2).

The next step in the contracting process is the selection of providers. EHIF only contracts providers licensed by the Health Care Board and uses a certain amount of selective contracting (i.e. choosing not to contract with certain providers), partly to introduce competition and motivate service quality improvement, but mainly to improve access to care by encouraging

service delivery in areas providers perceive as less attractive. However, EHIF is required to contract with all Hospital Master Plan institutions (19 acute care hospitals), which has historically determined guaranteed contract volumes. The main exception is private dental care providers, who do not systematically contract with EHIF. About 20% of outpatient care (including dental care) is purchased through selective contracting under EHIF supervisory board-approved criteria such as the proximity of the service to patients, extent of services provided on a day care basis and previous experience.

Contracting rules are established by the Health Insurance Act and endorsed by EHIF's supervisory board. EHIF negotiates standard contract conditions with provider associations such as the Family Doctors' Association and the Hospital Association, ensuring that contract terms apply to all providers. In addition to the standard contract conditions, financial appendices are agreed with each provider annually. EHIF's contracts are comprehensive and strictly enforced. Conditions cover access to care, quality of care, maximum waiting times, reimbursement, reporting requirements and liabilities in case of breach of contract. Emergency care should be provided immediately, outpatient specialist care within six weeks and inpatient care within eight months. Waiting times are closely monitored by EHIF, which will take preventive action (for example, propose changes in financial appendices) to guarantee timely access to services.

Once providers are selected and standard conditions agreed with provider associations, further negotiations take place with selected specialist care providers regarding service volume and average prices by specialty. These negotiations do not determine the actual payment method but aim at containing costs for each case. Agreement on the number of cases is the more important issue, reflecting EHIF's objective of ensuring health care access, typically at the previous year's level. For primary care the contract volume is not subject to negotiation.

Providers can reallocate resources among specialties within a limit of 5%, and there is a financial reserve (usually 5% of the total amount) not allocated to specialties which can be used under EHIF's supervision. Until 2006, EHIF was not obliged to reimburse services in excess of the agreed contract volume, but a ministerial amendment now requires coverage of excess services at a price coefficient of 0.3, i.e. 30% of the contracted price. In the past there have been cases where hospitals reached their contract volumes several months before the end of the contract period, leading them to provide emergency care only. As a result, EHIF and providers now pay more attention to careful contract planning and there is quarterly monitoring through the Management Information System.

Emergency care for the uninsured is administered by EHIF but is not part of its contracting process and the number of cases and average cost per case are not capped. This may be an area where providers can shift costs when EHIF funds diminish. The Health Care Board purchases ambulance care based on the number of nurses and physicians per ambulance team, with final amounts decided through budget negotiations. These contracts include the rights and obligations of the parties, service standards and financial reporting requirements.

Provider payment

Provider payment methods, items in the benefit package and service prices are all included in a single government-approved price list that is updated once a year. As such they are not subject to contract negotiation. EHIF is responsible for managing the price list. All contracted providers are paid the same and there is no adjustment for hospital characteristics such as teaching status. Prior to 2001, the price list was approved by a decree from the Minister of Social Affairs. Since then, it has been approved by the government in order to increase public accountability and make it less vulnerable to provider influence.

The price list contains more than 2000 different items, including the whole range of payment methods. For specialist care this includes mainly fee-for-service, per diem and diagnosis-related group (DRG)-based payments. The main payment method in outpatient care is fee-for-service (laboratory tests, radiology etc.), whereas inpatient care involves a mix of fee-for-service, per diem and DRGs. Fee-for-service payment involves per diem and individual units. The per diem includes the costs of basic examination, diagnosis and treatment planning, nursing, meals, simple medical procedures, laboratory tests and drugs. It varies according to specialty and length of stay. If an admission lasts for more than the set length, additional days are reimbursed at a lower rate (the price of a follow-up bed day).

The DRG-based payment system was introduced in 2001. Due to the former use of fee-for-service in hospitals and well-developed electronic data transmission systems, Estonia already had a relatively transparent overview of hospital output. However, due to cost pressures following the economic crisis of 1999, which depleted EHIF's reserves, the DRG system was seen as a tool to increase productivity and efficiency and avoid the inflation associated with fee-for-service and per diem systems.⁷ EHIF adapted the Nordic DRG system (NordDRG), which has been in use since 2004. For reimbursement, the DRG system is used in combination with other payment methods, so the price of a case is calculated based on the price list and NordDRG groups and reimbursed proportionally. The proportion of DRG payment for each case was initially set at 10%, to minimize financial risk. In 2005 it was raised to 50% and since July 2009 it has been 70%.

In 2003 EHIF initiated the health services pricing project to make pricing more transparent and rational. The project involved representatives from all the major medical professions, specialties and hospitals and aimed to reach an agreement on shared pricing principles (activity-based costing), price components and costs. It was also expected that the new pricing methodology would enable transparent discussion in the case of different inputs. Another underlying goal was to provide an incentive for providers to make their cost accounting systems more efficient and increase their interest in internal cost management.

In principle, health service prices cover all service provision costs except those related to scientific and teaching activities. All prices are maximums and providers and EHIF can

⁷ Inflation had risen to 30% of the average case cost between January 2000 and September 2002, when the official price increase was only 13%.

agree on lower prices. Revision of prices and payment methods can be initiated by providers or specialist associations or EHIF. Each service is evaluated based on four criteria: medical efficacy (by the relevant medical specialist association), cost-effectiveness (by a health economist), appropriateness and compliance with national health policy (by the Ministry of Social Affairs) and availability of financial resources (by EHIF).

EHIF-contracted family doctors and nurses engaged in primary care are paid via a combination of capitation and other types of remuneration. The capitation payment is adjusted for patients' age in three groups (<2, 2–69 and ≥70 years). Family doctors with fewer than the minimum 1200 patients still receive capitation for 1200 people to cover their fixed costs. At the start, in 1998, capitation rates were equal for all age groups, but adjustments for age were introduced in 1999. In 2003 EHIF introduced a family doctor cost model, which increased the difference in capitation across age groups. The rate for children under two rose by more than 50%, reflecting the group's much higher consultation rate compared to the general population. Family doctors can also earn additional fee-for-service payments of up to 27% of the total capitated amount (32% for those doctors taking part in a quality bonus system).

In January 2006 EHIF launched a new performance-based payment policy for family doctors to increase the quality and effectiveness of preventive services and improve monitoring of chronic illnesses. Priority areas include vaccinations, measurement of blood lipids and glucose levels, mammography (45–59-year-old women), type II diabetes, high blood pressure, myocardial infarction and hypothyreosis. Family doctors also have to perform certain simple surgical procedures and monitor normal pregnancies. They must provide electronic reports on their achievement of performance indicators to EHIF annually. EHIF then checks the reports against its monthly generated database of reimbursement claims. Family doctors are expected to receive up to 48 000 kroon (€3067) annually on top of their usual per capita payment for meeting the performance indicators. The performance system is readjusted annually to broaden the scope of services covered.

Overall, the payment system for family doctors is designed to provide incentives for taking more responsibility for diagnostic services and treatment and continuity of care and to compensate them for the financial risks of caring for older people and working in more remote areas.

Tax policy

This section gives a brief introduction to the fiscal context in Estonia, the structure of the tax system, the social tax, the implications of health financing for the economy and potential developments in tax structure.

In recent years the size of the public sector in Estonia has remained stable, at around 34–36% of GDP (Table 11). Between 2002 and 2007 Estonia experienced rapid economic and employment growth (Figure 10). As a result, revenue exceeded expenditure and the

government-consolidated debt in 2007 (3.5% of GDP) was among the lowest in the European Union. Estonia has since been hit hard by the global economic downturn and forecasts predicted a 15% decline in GDP in 2009, with unemployment rates expected to increase by up to 15%.

The overall tax burden has fallen significantly, from 37.8% of GDP in 1995 to 32.2% in 2008 (Table 11), following cuts in direct taxes and social security contributions (see below). Since 2000, the tax burden has remained roughly stable, but is about 5 or 6 points below the EU-27 average. Government expenditure on social protection and health is very low, at 12.4% of GDP in 2006, compared to the EU average of 26.9%.⁸ Government expenditure on health and sickness is also low: 2.8% of GDP in 2006 compared to 7.5% for the EU-27 (Figure 11). However, government spending on health and sickness accounted for 31.2% of total social expenditure in Estonia in 2006, which is similar to the EU average of 29.2%. This means that the low level of public spending on health reflects the low level of spending on social protection rather than being due to the structure of social expenditure.

The current economic crisis has caused a deep decline in GDP in 2008-2010 and has also raised the relative size of the tax burden and the share of the public sector in GDP. The total share of general government revenue is predicted to rise to over 44% of GDP and the tax burden to 36% of GDP by 2010.

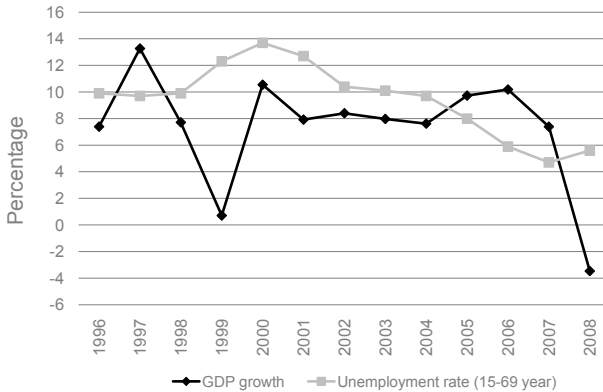
Table 11. General government revenue and expenditure, 2000–2008

	2000	2001	2002	2003	2004	2005	2006	2007	2008
General government expenditure	36.5	35.1	35.9	34.9	34.1	34.0	34.2	35.5	40.9
General government revenue	36.2	35	36.1	36.6	35.7	35.5	37.1	38.2	37.9
Surplus/deficit	-0.2	-0.1	0.3	1.7	1.7	1.5	2.9	2.7	-3.0
Tax burden	31.3	30.5	31.1	30.9	30.7	30.9	31.3	33.1	32.2
Government-consolidated gross debt	5.2	4.8	5.7	5.6	5.0	4.5	4.3	3.5	4.8
General government expenditure on social protection and health	15.1	14.3	14.2	14.0	14.4	14.0	13.9	14.3	
Social protection expenditure (ESSPROS)	14.0	13.1	12.7	12.6	13.0	12.7	12.4		

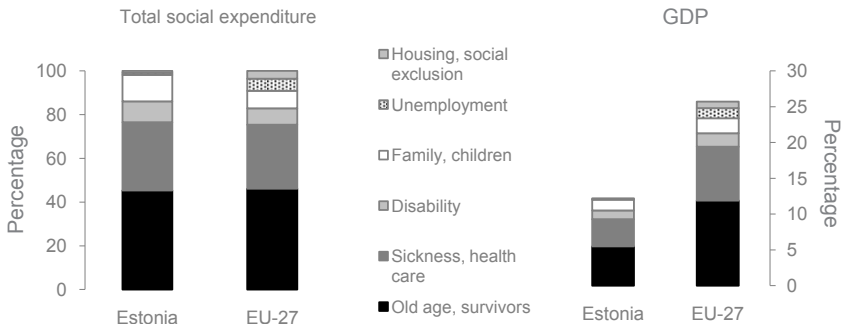
Source: Based on Eurostat (16).

Note: The surplus is not exactly the same as the difference between revenue and expenditure due to rounding.

⁸ These data on social protection are calculated using the European System of Integrated Social Protection Statistics (ESSPROS), and differ slightly from NHA data.

Figure 10. GDP growth and unemployment rate, 1996–2008

Source: Based on Statistics Estonia (17).

Figure 11. Structure of social expenditure, Estonia and the EU, 2006

Source: Eurostat (16).

Tax structure

The Estonian tax system consists of state taxes, local taxes and social security contributions (Table 12). The social tax is the largest source of government revenue, followed by VAT and personal income tax (Figure 12). The share of direct taxes (23.7% in 2007 and 24.1% in 2008) has fallen by five percentage points since 1995 (when it was 29%) due to tax reforms, which have significantly increased the basic allowance and decreased tax rates for both personal and corporate income. In 2007 about 70% of tax revenue was received by the central government, about 14% by local government (mainly from personal income tax and land tax) and about 15% by the social insurance funds. The only taxes without any earmarking for specific purposes are VAT, heavy goods vehicle tax, corporate income tax and electricity excise tax.

Table 12. Overview of taxes and earmarking, 2009

Item	Legal basis	Recipient	Earmarking	Contribution to total tax revenues (%), 2008
Direct taxes				
Personal income tax	State tax	State budget, municipal budgets	None	19.1
Corporate income tax	State tax	State budget	None	5.0
Land tax	State tax	Municipal budgets	None	0.9
Social security contributions				
Social tax				
Social tax (pensions 20%)	State tax	Estonian National Social Insurance Board	Pensions; part goes to the funded scheme	22.8
Social tax (health 13%)	State tax	EHIF	Health	14.5
Unemployment insurance contributions (employees and employers)	Compulsory insurance scheme	Unemployment Insurance Fund	Unemployment insurance benefits	0.9
Indirect taxes				
<i>Non-excise taxes</i>				
VAT	State tax	State budget	None	23.9
Gambling tax	State tax	State budget	NGOs ^a	0.6
<i>Excise taxes</i>				
Motor fuel	State tax	State budget	75% for road construction	5.6
Alcohol	State tax	State budget	3.5% for culture	2.9
Tobacco	State tax	State budget	3.5% for culture	1.3
Electricity	State tax	State budget	None ^b	0.4
Packaging	State tax	State budget	None	0.0
Other				
Environmental charges	State charge	State budget, municipal budgets	State part for environmental purposes	0.8
All local taxes (sales, advertising etc.)	Local tax	Municipal budgets	None	0.1

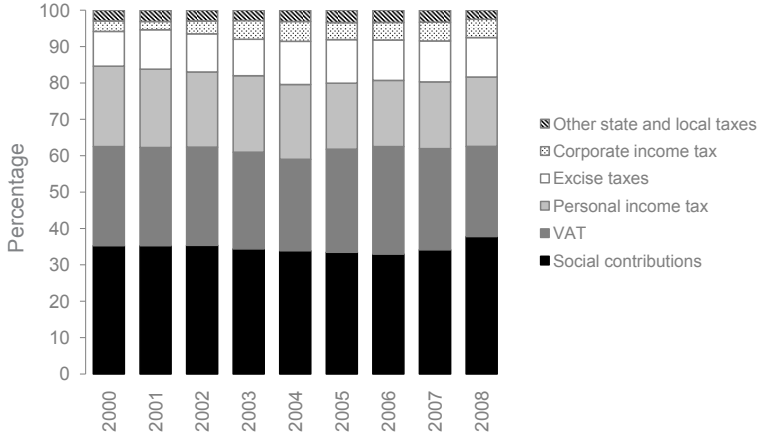
Source: Based on data from Statistics Estonia.

Note: A few minor taxes are omitted. NGO = nongovernmental organization.

^a 46% to Eesti Kultuurkapital, 37.4% to Hasartmängunõukogu, 12.7% regional investments via the Ministry of Interior and 3.9% to the Red Cross.

^b This was earmarked for environmental protection purposes until 31 March 2009.

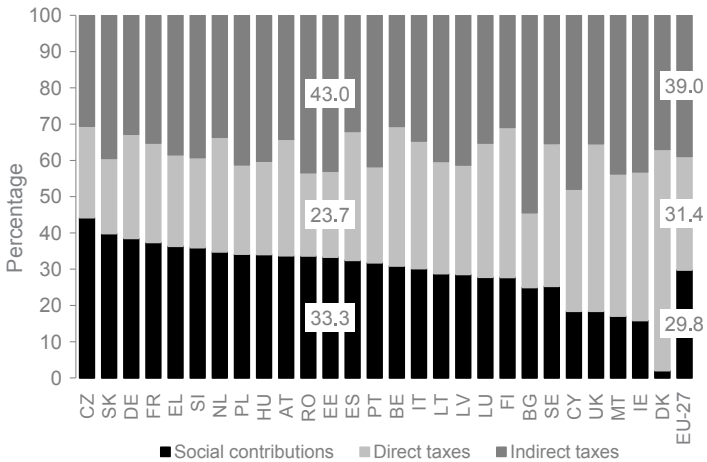
Figure 12. Tax structure, 2000–2008



Source: Based on Statistics Estonia (17).

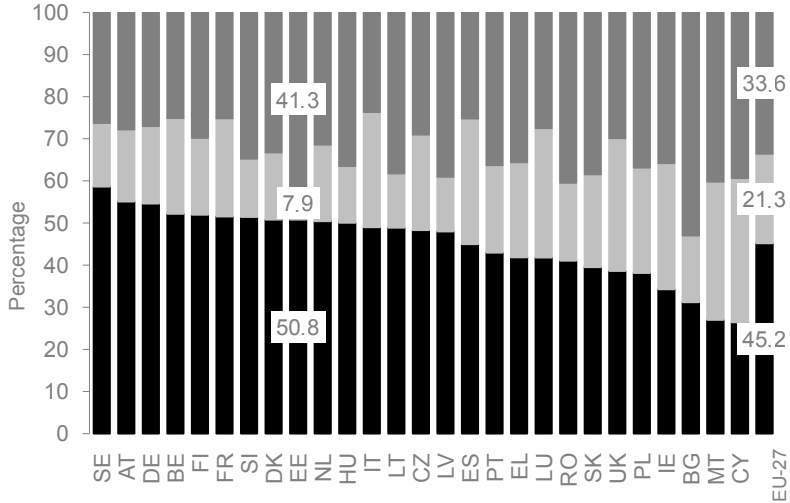
The share of indirect taxes in total taxation is relatively high in Estonia (43% in 2007 and 38% in 2008), as in many other EU-12 Member States (Figure 13), while the share of direct taxes is low, especially for capital (Figure 14).

Figure 13. EU tax structure, 2007



Source: Based on Eurostat (16).

Figure 14. EU tax structure by economic activity, 2007



Source: Based on Eurostat (16).

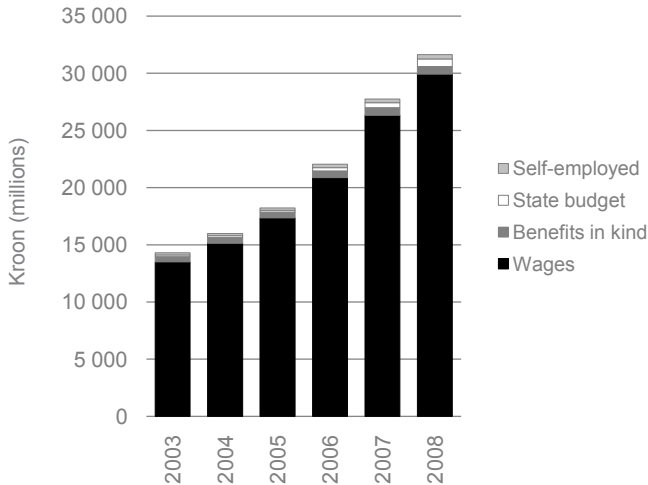
The social tax

The social tax is levied on four categories:

- wages paid by employers (about 95% of total social tax revenue; Figure 15)
- benefits in kind (about 2%)
- tax paid from the state budget or from the unemployment insurance fund on behalf of some socioeconomic groups (about 2%; Table 13)
- the earnings of self-employed people (about 1%).

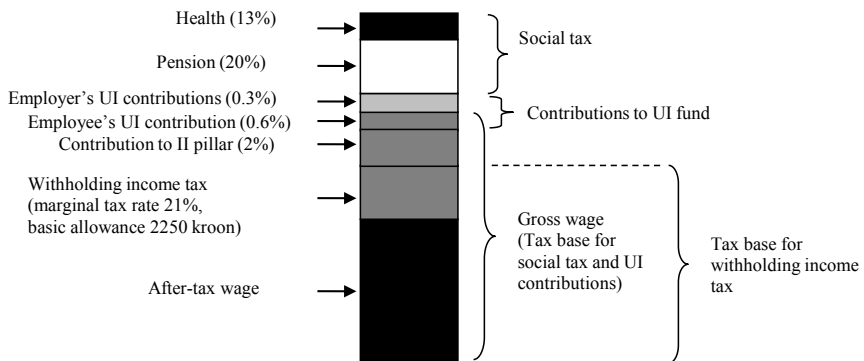
Social tax is not levied on non-earned income from dividends, deposit interest, capital gains, rental income or royalties. As a result, labour taxes are considerably higher than capital taxes, which can lead to distortions (see below). The share of active contributors (either wage earners or the self-employed) to social insurance funds as a percentage of the population and its dynamics over time reflect the overall share of workers in the population: 44% at the end of 2004, about 49% at the end of 2008 and declining since.

The social tax on wages is paid by employers, at a rate of 33%, of which 13% is transferred to EHIF and 20% to pension insurance schemes (Figure 16). The rates have not changed since 1992. Contributions to the unemployment insurance system are also calculated on gross wages.

Figure 15. Structure of declared social tax, 2003–2008

Source: Based on data from Statistics Estonia and the Ministry of Finance .

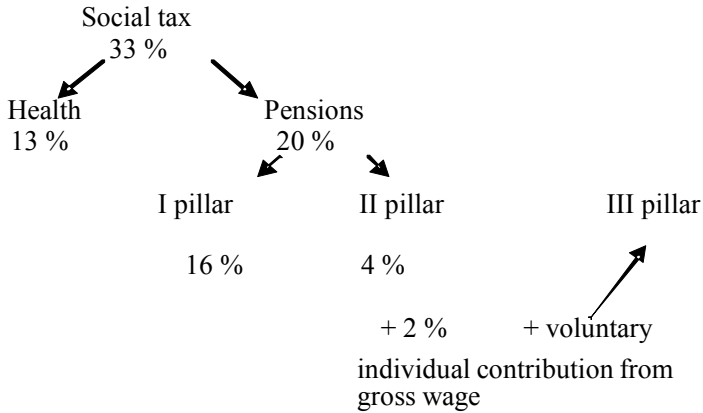
Note: Data for 2007 and 2008 are partially based on forecasts.

Figure 16. Structure of wage taxes, 2008

Note: UI – unemployment insurance.

For participants in the funded pension insurance scheme (the ‘second pillar’ of the pension scheme), 4% of the social tax is shifted from the state pension insurance scheme to the private scheme and an additional 2% of gross wage is paid into it by the participant (Figure 17). Contributions to voluntary pension schemes (the ‘third pillar’) benefit from a limited deduction from the income tax base.

Figure 17. Social tax on wages and contributions to pension schemes



The minimum monthly base for social tax calculation set by the National Budget Act has been increasing gradually. It was 700 kroon in 2005 and increased to 1400 kroon in 2006, 2000 kroon in 2007 and 2700 kroon in 2008. As of 2009, it cannot be less than the minimum monthly wage of 4350 kroon. The minimum base affects part-time workers, the self-employed and the state contribution on behalf of certain groups (parents on maternity leave, unemployed, military service, pension scheme for parental benefits, etc.; Table 13).

There is no upper ceiling for employees. There is one for self-employed people, who after deductions are not obliged to pay social tax on an amount not more than fifteen times the sum of the legal minimum monthly wage for the taxable period.

Table 13. Social tax paid by the state or the unemployment insurance fund

Group	Basis	Rate	Who pays
Recipients of unemployment insurance benefit	Gross unemployment insurance benefit	13% (health)	Unemployment Insurance Fund
Recipients of unemployment assistance benefit, or registered unemployed (since May 2009)	Monthly minimum	13% (health)	State budget
Recipient of parental benefits	Monthly minimum	33%	State budget
Recipients of childcare allowances	Monthly minimum	33%	State budget
Recipients of benefits for parents of families with seven and more children	Monthly minimum	33%	State budget
Dependent spouses of people in certain public occupations	Monthly minimum	13% (health)	State budget

Table 13. (cont.)

Group	Basis	Rate	Who pays
People who are paid care-giver's allowances pursuant to the Social Benefits for Disabled People Act	Monthly minimum	33%	State budget
Conscripts in the Defence Forces	Monthly minimum	33%	State budget
Estonian citizens or people of Estonian nationality who have settled in Estonia from a foreign country and receive social benefits	Monthly minimum	13% (health)	State budget
Employees with a 40% or greater loss of work capacity	Monthly minimum	33%	State budget
Non-working accompanying spouses of diplomats and public servants serving in Estonian foreign missions	Monthly minimum	33%	State budget
Non-working people who have participated in the elimination of the effects of a nuclear disaster, nuclear test, or an accident at a nuclear power station	Monthly minimum	33%	State budget
To the funded pension scheme (II pillar): Parental Benefit	Gross benefit	1% per child	State budget

Note: Since July 2009 the Unemployment Insurance Fund also pays out unemployment assistance benefits, but the funds come from the state budget.

Increasing the minimum social tax obligation can help stabilize EHIF revenues across business cycles, because when unemployment increases the state (or the unemployment insurance fund) pays the health part of the social tax. Hence, the larger the minimum obligation, the higher the contributions. On the other hand, a high minimum social tax obligation may reduce the demand for low-skilled, part-time workers and the self-employed (see below), thus effectively reducing the net gain.

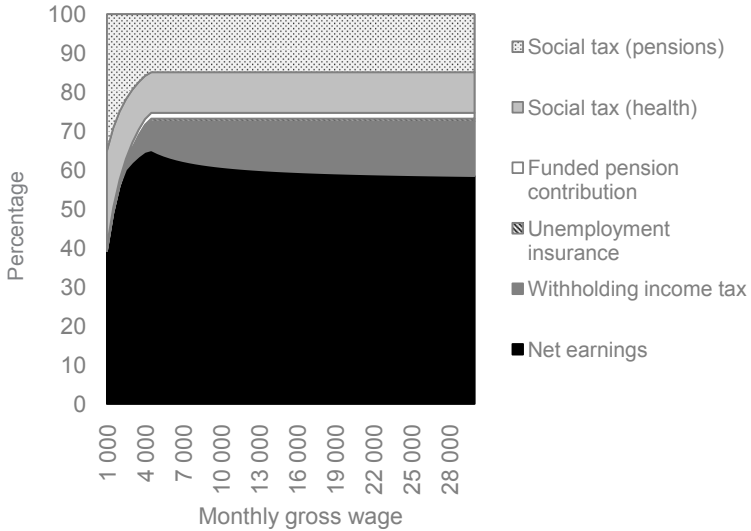
Economic implications of health financing

The way health care is financed influences the size and stability of both short- and long-term revenues, labour costs (thus demand for labour), the distribution of disposable income among households and poverty levels. Below we briefly discuss its impact on labour costs, employment and redistribution. Long-term developments are discussed in Section 4.

The social tax constitutes a large part of labour costs (Figure 18). In 2008, for a full-time average wage earner, the health part of the social tax accounted for 9.8% of the cost of labour, or about a quarter of the total tax wedge (the difference between labour costs and after-tax income received by an employee). For part-time workers with low wages, the impact is even greater because of the minimum social tax base. The other large components of the tax

burden are income tax and the pension part of the social tax. The share of unemployment insurance contributions was negligible in 2008, but increased considerably in 2009, reaching 4.2% of gross wages in August.

Figure 18. Structure of labour costs, 2008



A higher tax wedge negatively influences employment, because it either increases labour costs (if gross wages are fixed) and decreases demand, or it decreases net disposable income (if gross wages are flexible and adjust downwards) and may reduce labour supply incentives, especially for low-wage earners. The negative effect of higher labour taxes on employment is confirmed in international studies. Analysis of panel data on EU-15 countries shows that on average an increase of a percentage point in the tax wedge reduces the employment rate by 0.25% (18). A 2007 study confirmed this is also the case in EU-12 Member States, suggesting that a 1% increase in the tax wedge reduces the employment rate by 0.2–0.7% (19). The negative impact applies to men and women, older workers (the most affected) and the lower-educated.

Applying these econometric results (from partial analyses) to Estonia, we could speculate that abolishing the health part of the social tax might increase the employment rate by about two percentage points (9.8% x 0.2); or in contrast, increasing the health part by one percentage point (from 13 to 14%), would increase the cost of labour by about 0.8% (if gross wages do not decline) and increase the tax wedge by about 0.6 of a percentage point. Overall, this might lead to a reduction of around 0.12 percentage points in employment. However, recent wage fluctuations have suggested that an increase of a few percentage points in the social tax would not be a major factor in wage growth.

High labour taxes might also cause an increase in the share of undeclared work, to avoid paying the social tax. This could be mitigated by workers' desire to maintain the health coverage to which they are entitled via declared labour, which has been cited as the most popular reason for not favouring undeclared labour. Nevertheless, the Ministry of Finance suggests that there may be a practice of only declaring the minimum income required to be eligible for health coverage and not disclosing the remainder of one's income (based on the fact that many firms pay in exactly the minimum amount).

Other taxes on wages (for example, unemployment insurance tax or income tax) have similar economic effects, although the progressivity of the income tax may make it a special case. Workers may be more likely to accept lower after-tax wages for the sake of eventual benefits from the funded pension scheme or unemployment insurance fund.

Potential tax structure developments

Successive Estonian governments have aimed to shift the tax burden from labour to consumption and use of environmental resources. In October 2008 the government approved the Estonian Action Plan for Growth and Jobs 2008–2011, which states that a moderate tax burden (one factor among others that may stimulate economic growth and encourage private investment) requires balancing government revenue and spending in the medium and long term. The initial plan projected labour taxes to remain stable as a share of GDP (16.8–16.9%) from 2008 to 2011 by reducing personal income tax (lowering the tax rate and increasing the basic allowance) and increasing social security contributions. The plan also predicted that consumption taxes would continue to rise from 2008–2009 forward as part of the overall plan to reduce labour and capital taxes.

However, the income tax rate was not changed in 2009 and probably will not be changed in 2010–2011. The effective tax rate may even increase as various allowances have been abolished. On the other hand, social insurance contributions have risen due to higher unemployment insurance contributions and minimum social tax liabilities.⁹ This has been compensated by temporary freezing of payments to the funded pension system. In November 2009 the government approved the Estonian Strategy for Competitiveness 2009–2011, an update of the 2008 Action Plan. The new strategy notes that the government's general objective remains shifting the tax burden from labour to consumption and use of environmental resources, mentioning a ceiling on the social tax as a possible means.

In June 2009 the government approved the National Budget Strategy 2010–2013.¹⁰ This states that the government has set a goal of keeping the budget deficit below the limit of the Maastricht budget criterion of 3% of GDP and achieving a budget surplus by 2013. The tax system is to remain stable, simple and transparent, with as few exemptions as possible. The strategy foresees abolition of the right to deduct trade union membership fees and interest on student loans from tax. It also foresees a reduction in the proportion of revenue-dependent

⁹ In 2009 the minimum social tax obligation was made equal to the previous year's minimum monthly wages. Before that it was lower and changed in ad hoc manner.

¹⁰ National budget strategies are the basis for the draft state budget.

expenditures and budgetary commitments from various legal provisions and contractual obligations (e.g., earmarking of electricity excise taxes was abolished in April 2009), and an increase in unemployment insurance contributions.

The current economic crisis has also influenced tax policy, partly reflected in the national budget strategy mentioned above. Following heated debate in parliament, the ruling coalition decided to increase unemployment insurance contributions further (to 4.2%), VAT (to 20%), excise taxes on motor fuel (by 10–12%), tobacco (5%) and natural gas and environmental charges.

The Estonian Development Fund (Arengufond) published a white paper in June 2009 proposing that labour taxes be lowered in the long term together with a change in health and pension financing. To attract foreign high-earning specialists, their earnings should be subject to a social tax ceiling. The white paper also proposes that the tax rate on dividend income be lowered to encourage investment, and that private investors have temporary tax holidays when reinvesting revenues from securities.

Recent increases in the minimum social tax base have been criticised by the Estonian Taxpayers' Association. In February 2009 it proposed to the Ministry of Social Affairs and Ministry of Finance that the base be reduced to preserve low-paid jobs. It also maintained that the base increase may harm the self-employed, who have to make quarterly prepayments of social tax based on the minimum base, even if their predicted revenues are clearly falling.

There is also an ongoing discussion of whether dividends can be interpreted as labour earnings, and hence subject to social tax, especially in cases where single proprietors pay themselves dividends but no or very low wages, in order to avoid taxes. The tax authorities estimate that about 200 million kroon (or approximately 0.5%) of social tax revenues were lost because of this in 2008 (20). It has been similarly argued that those who take out dividends may be using that money to pay undeclared wages to employees, again avoiding the social tax. In June 2009, the Tallinn District Court gave the Estonian Tax and Customs Board the right in principle to interpret dividends as labour earnings, but there must first be specific rules for distinguishing active income (subject to social tax) from passive income (exempt from social tax).

In 2009 the first OECD economic survey on Estonia (21) suggested that the social tax be reduced to enhance job creation, and that dividend taxation be lowered. This could be compensated by a reintroduction of (low) capital taxes on earned profits (currently only on redistributed profits) and higher consumption taxes. The survey also proposed introducing a property (real estate) tax, since Estonia currently has only land tax. The favourable tax treatment and credit guarantees of housing loans, which amplified the housing boom, should be phased out over the medium term, in contrast to the National Housing Development Plan for 2008–2013, which states that the favourable tax treatment and credit guarantees should remain intact.

An International Monetary Fund (IMF) delegation in October 2009 concluded that Estonia should consider focusing more on environmental taxes and introduce annual motor vehicle or property taxes, which would broaden the tax base and reduce economic distortions (22).

To conclude, various social partners and experts believe that labour taxes, especially the social tax used to finance health and pensions, are too high. Foreign experts suggest that taxes on capital income or property could be increased to compensate for a reduction in labour taxes. However, Estonian governments have mainly considered increases in consumption and excise taxes. In November 2009 the government approved further increases in excise taxes on alcohol, tobacco, motor fuel and electricity to reduce the budget deficit in 2010. This makes an increase in the social tax on labour earnings unrealistic; it is more likely to be subject to a ceiling or exemptions. If labour taxes are not increased and capital income taxes cannot be increased, then the only possibility is that a larger share of financing will come from consumption taxes. Some also suggest that the social tax, or part of it, should be applied to currently exempt social benefits, for example pensions. It is possible, therefore, that pensions will be reduced by as much as 13%. The revenue this would generate could be spent directly on health care by the central government. Conversely, the central government could transfer additional funds to EHIF by paying the social tax on behalf of pensioners, children or the unemployed.

3. Assessment of health financing policy

This section attempts to assess the performance of health financing policy in Estonia against objectives identified by WHO (8, 9):

- financial protection
- equity in financing
- equity in service use
- quality and efficiency in service delivery
- administrative efficiency
- health financing transparency and accountability to the public.

Financial protection

Health insurance in Estonia is almost exclusively provided by EHIF, since private health insurance plays a very minor role. EHIF covers over 95% of the population and its resources are pooled nationally, resulting in a highly unified financing system, which is a key strength. However, the central government is responsible for financing emergency care, so those funds are paid separately to providers rather than being pooled with EHIF funds.

Coverage breadth

The proportion of the population without EHIF coverage has remained relatively stable – generally around 4% to 6% (23). Previously, EHIF coverage of the unemployed was restricted to the first nine months of registered unemployment. In May 2009 the government lifted this restriction, extending coverage to all those registered as unemployed and seeking work. The remainder of this subsection discusses the situation prior to the extension of coverage.

At the end of 2008, 4.4% of the population were not covered by EHIF. Although there has been no systematic analysis of the characteristics of uninsured people and their access to health care (1), reports suggest that most of these people were of working age, with the highest rates among those 40–59 years old (24). Because EHIF coverage was restricted to the first nine months of registered unemployment, the long-term unemployed seemed more likely to be uninsured than other groups. The uninsured have free access to emergency care but have to pay out-of-pocket for all other forms of care, including primary care.

Estonia's continuing policy of linking health coverage to participation in the formal labour market ¹¹ and its former policy of restricting coverage for the unemployed meant that the proportion of uninsured people in the population was high relative to other EU Member States (most of which do not exclude the long-term unemployed from coverage, since this group is generally seen as being at high risk of ill health and therefore in particular need of financial protection). However, research shows that the absence of health insurance in

¹¹ This policy was intended to address the problem of undeclared earnings and in this respect it has had some success. Public attitudes to undeclared earnings have in general become less tolerant in recent years, with the share of people who do not favour undeclared earnings rising from 57% in 2000 to 85% in 2006 (http://www.mkm.ee/failid/1Varimajandus_Eestis_2006__elanike_hinnangute_alusel.pdf).

Estonia did not seem to increase the risk of high levels of OOPs (15). This may be because the uninsured are predominantly under 60 years old and are able to obtain free essential drugs and treatment on an emergency basis. It may also be due to the small number of households with uninsured members in the survey sample used. As we discuss below, the inefficiencies associated with limiting the uninsured's access to non-emergency care may be more immediately problematic than the issue of financial protection.

Coverage scope

People covered by EHIF have access to a good range of health services, with few restrictions. Areas that are not well-covered include dental care for adults and long-term care. In 2003 dental care for adults (19 and over) was removed from EHIF's benefit package and replaced by a capped cash benefit intended to cover the cost of an annual preventive check-up for all adults and the cost of dentures (once every three years) for older people (24). The proportion of eligible people applying for these cash benefits was low (21% for check-ups and 11% for dentures in 2006), and they were abolished in 2009 for all adults except pregnant women and pensioners.

The low take-up of cash benefits for dental care might reflect limited awareness of the entitlement among the population. It might also reflect the relatively low priority poorer households attach to dental care, particularly when OOPs are high. Research shows that dental care accounts for a much larger proportion of OOPs among the richest fifth of the population than in the poorest fifth, at over 30% and 7–8%, respectively (15). As Vörk et al. have noted, in absolute terms the richest fifth of the population spent on average 40 times more on dental care in 2007 than the poorest fifth.

Long-term inpatient and outpatient nursing care are covered by EHIF, while the municipalities finance social care. Coverage of social care varies across the country and is subject to high levels of cost sharing.

Coverage depth

The extent of user charges for publicly financed benefits (cost sharing) has expanded in the last ten years. While charges for general practitioner (GP) visits have been abolished, charges for GP home visits and hospital per diems have been introduced and charges for outpatient specialist visits and prescription drugs have increased. Children are exempt from dental care and hospital charges. Very young children (under 2 years) and pregnant women are exempt from charges for outpatient specialist visits. User charges for these services are in the form of a copayment per visit or hospital day (the latter for the first 10 days of inpatient care only) and there is no cap on OOPs (Table 9).

For outpatient prescription drugs, there is a system of differential user charges based on the nature of the illness and the drug price and effectiveness. The type of charge imposed involves a copayment plus coinsurance (that is, the patient pays a flat rate plus a fixed percentage of the cost of a drug). Complex arrangements are in place to protect some children, pensioners

and heavy users of prescription drugs. However, there is no cap on OOPs; rather, there are EHIF reimbursement limits for drugs subject to 50% coinsurance.

Long-term nursing care has until recently been free of charge, while social care financed by municipalities is subject to high levels of cost sharing (85% of a person's pension). From 2010 EHIF-financed long-term nursing care will be subject to a coinsurance rate of 15%.

The design of user-charges policy in Estonia suggests the policy is guided by three principles. First, those who make use of EHIF benefits should contribute at the point of use, but some patients warrant protection from the financial burden of user charges – for example, very young children, pensioners, pregnant women, people with disabilities, patients with chronic conditions and patients with moderate OOPs for prescription drugs. Second, user charges should not constitute a financial barrier to entering the health system. Thus, charges are applied to health services that require prescription or referral by a doctor but not to patient-initiated services such as GP visits or emergency care. And third, user charges can be employed to steer patients towards more cost-effective outpatient prescription drugs.

In addition, the policy seems to reflect certain assumptions – for example, that poorer households do not require explicit protection from user charges; that when faced with higher user charges for less cost-effective prescription drugs (for example, originator drugs or so-called 'me-too' drugs), patients will choose the cheaper option; that there is no need to extend protection from user charges to those with the highest levels of OOPs for prescription drugs (over €1278 per year); and, perhaps, that user charges will contribute to cost control. However, research shows that these assumptions do not hold in practice. As a result, the current user-charges policy is not robust enough to protect some groups from financial risk and creates financial barriers to access.

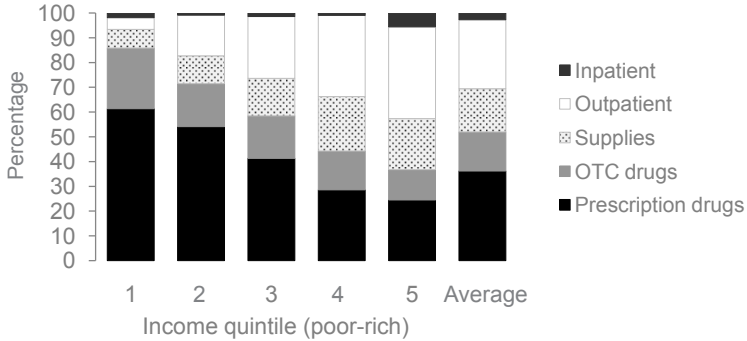
Comprehensive analysis of financial protection in the health system reveals that in 2007, 3.3% of households experienced catastrophic levels of OOPs, spending more than 40% of their capacity to pay on health care,¹² while 14% of households were spending 20% or more of their capacity to pay on health care (15). Not surprisingly, the risk of high out-of-pocket spending on health is higher for low-income households, households with older members (aged 65 and older) and households with people with disabilities or chronic conditions. The risk is highest for single pensioners but does not seem to be affected by lack of EHIF coverage, although this may be explained by the small number of uninsured households in the study sample. Between 2000 and 2006 high OOPs pushed 1-1.5% of households into poverty (15). The largest effect was on pensioners, 5% of whom were pushed into poverty.

Drugs account for the highest proportion of OOPs (53% in 2007), followed by supplies (medical products, appliances and equipment such as medical devices, dentures, eye glasses, condoms, etc.) (22%), outpatient care (including dental) (21%) and inpatient care (5%) (15).

¹² Catastrophic spending is here defined as household OOPs above 40% of capacity to pay, defined as household income above subsistence expenditure, i.e. the amount available for non-food spending. If actual food expenditure is lower than subsistence spending, then the capacity to pay includes total non-food expenditure.

However, there are large variations in the structure of out-of-pocket spending patterns across income groups (Figure 19). While drugs account for a very high proportion of out-of-pocket spending by the poorest fifth of the population (84%), they are a much smaller proportion of out-of-pocket spending by the richest fifth (33%). Richer households tend to spend much more on outpatient care and supplies.

Figure 19. Structure of OOPs by household income quintile, 2006



Source: Based on Võrk A et al (15).

Policy implications

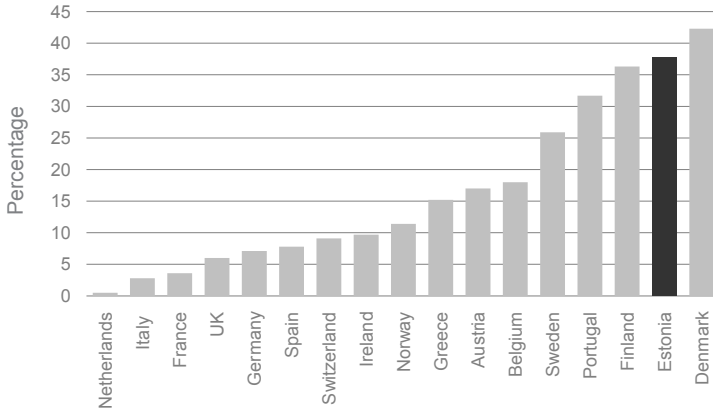
Rapidly growing levels of OOPs have pushed up the private share of total health spending from 7.5% in 1995 to around 20% in 2002 and 25.6% in 2006. Most of this spending comes from OOPs (94%) rather than private health insurance (6%) (24). The private share is close to the EU-27 average (26% in 2006) but higher than the EU-15 average (23% in 2006) (25). Estonia is one of only two EU Member States (with Slovakia) where private spending on health has more than doubled since 1996 and actually increased as a share of GDP (25).

In itself, increasing private spending need not be a problem. What is important from a policy perspective is its distribution and impact on financial protection and ultimately on health outcomes. Research shows that rising private spending during the late 1990s and early 2000s pushed some low-income households into poverty (14, 26). More recent analysis confirms that the degree of financial protection the Estonian health system affords has fallen over time. The proportion of households with catastrophic OOPs (that is, above 40% of capacity to pay) rose from 10 700 households in 2000 (1.8% of the population) to 25 100 households in 2006 (4.4%) and 19 200 households in 2007 (3.3%) (15). The proportion of households with OOPs of 20–40% of capacity to pay also almost doubled during that time, from 4.6% in 2000 to 8.8% in 2007.

Analysis of how much patients pay out-of-pocket for prescription drugs covered by EHIF illustrates both the extent of the decline in financial protection for pharmaceuticals and how high OOPs for prescriptions drugs are in Estonia compared to other countries. The share of

the total cost of EHIF-reimbursed prescription drugs borne by the patient increased from 25% in 1997 to 38% in 2008 (27) and is much higher than in most EU Member States (Figure 20), for example, 0.5% in the Netherlands, 3.6% in France, 6.0% in the United Kingdom and 7.1% in Germany.

Figure 20. Share of total prescription drug costs borne by patients, EU, 2006



Source: Based on Kanavos P et al (27).

Financial protection from the costs of health care has declined in Estonia and is at present inadequate for poorer households, older people and people with low health status. The fact that OOPs have the most deleterious effect on older people, who are entitled to EHIF benefits, suggests that the erosion of financial protection is not simply a function of lack of EHIF coverage (although that seems to play a growing role), but also reflects user-charges policy. This is particularly true for the poorest households, whose OOPs go almost entirely on drugs. In other words, it is OOPs for drugs (as opposed to other health services) that seem to be mainly responsible for impoverishing the poorest households in Estonia. The absence of dental care coverage for adults is also a source of concern. The relatively low share of OOPs for dental care among poorer households suggests that poorer people may be foregoing dental care due to its high cost. In future, the fragmented, potentially patchy coverage of long-term care seems likely to become an issue.

Equity

The stated goals of the health insurance system in Estonia are solidarity,¹³ limited cost sharing and equal availability of treatment for those covered by EHIF (28). These goals are intended to ensure a degree of cross-subsidization, equity in financing and equity in service use.

¹³ Solidarity implies a degree of cross-subsidization from richer to poorer, younger to older, those who are active in the labour market to those who are not and those who are in good health to those who are not.

Equity in financing

Equity in financing concerns the distribution of the burden of financing the health system. Health financing is considered to be progressive (and therefore generally more equitable) if wealthier people pay more as a proportion of their income than poorer people and regressive if the opposite is the case. Overall, financing in Estonia is slightly progressive (Table 14) (15). The social tax and personal income tax are both progressive, but although both taxes are set as flat rates across the population, personal income tax is more progressive than the social tax due to tax-free allowances. Indirect taxes (VAT and excise taxes) are regressive. Excise taxes on tobacco and alcohol are much more regressive than VAT, mainly due to the higher levels of tobacco and alcohol consumption among poorer groups. Breaking down excise taxes on alcohol even further shows that excise tax on wine is progressive (0.02 in 2007), because richer households consume more wine, whereas excise tax on vodka is highly regressive (-0.32 in 2007), because poorer households consume more vodka (29). OOPs are the most regressive financing source of all.

Table 14. Kakwani progressivity indices of health financing, 2000–2007

	2000	2003	2005	2007
Social tax	0.142	0.163	0.150	0.143
Personal income tax	0.216	0.219	0.244	0.216
VAT	-0.169	-0.151	-0.131	-0.128
Excise taxes	-0.145	-0.124	-0.131	-0.113
Environmental	-0.032	-0.038	-0.039	0.000
Tobacco	-0.325	-0.214	-0.259	-0.264
Alcohol	-0.117	-0.150	-0.181	-0.241
OOPs	-0.300	-0.319	-0.378	-0.379
Contribution to the total index (weighted according to contribution to health financing)				
Social tax	0.094	0.107	0.099	0.092
Personal income tax	0.007	0.007	0.005	0.006
VAT	-0.008	-0.008	-0.007	-0.007
Excise taxes	-0.002	-0.002	-0.003	-0.002
Environmental	0.000	0.000	0.000	0.000
Tobacco	-0.001	-0.001	-0.001	-0.001
Alcohol	-0.001	-0.001	-0.001	-0.001
Total without OOPs	0.092	0.104	0.095	0.088
OOPs	-0.059	-0.066	-0.077	-0.083
Total with OOPs	0.032	0.037	0.018	0.005

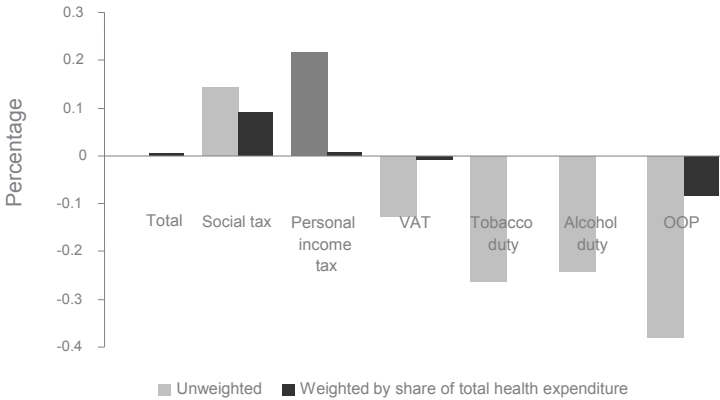
Source: Based on Vörk A et al (15).

Note: Totals are calculated as weighted sums using shares of total health financing. Positive values show that a tax is progressive, negative values show that a tax is regressive.

If sources are weighted for their contribution to financing, the progressivity estimates look slightly different (Figure 21). For example, although personal income tax is progressive, its small contribution to health financing (accounting for only 2.7% of total health expenditure in 2007) means its effect is less so. Conversely, while VAT is regressive, this is mitigated by its relatively small contribution.

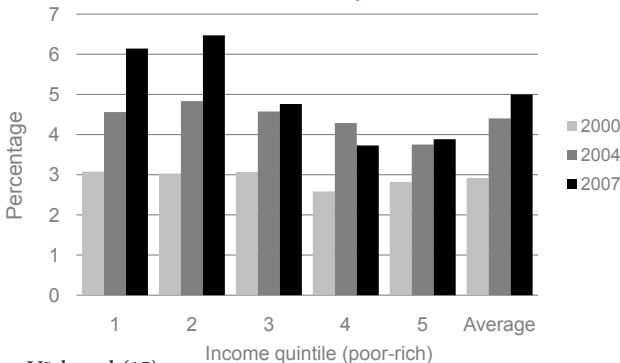
Overall, financing progressivity has declined considerably since 2000, mainly due to the rising share of OOPs, without which the decline in progressivity is much less marked. Figure 22 shows that whereas OOPs were proportionate in 2000 (accounting for a more or less equal share of household spending across income groups), by 2007 they had become highly regressive, with the poorest households spending proportionally almost twice as much as the richest households.

Figure 21. Financing source contributions to progressivity, 2007



Source: Based on Vörk et al (15).

Figure 22. OOPs for health as a share of total household spending, selected years



Source: Based on Vörk et al (15).

Equity in service use

Research examining income-related inequalities in the use of health services finds that the use of dental care, telephone consultations, specialist visits and day treatment¹⁴ are positively related to income (15). This means that if need for health care is taken into account, the rich have better access to these services than the poor. In international comparison, Estonia's inequality in service use is slightly lower than in most OECD countries for specialist care but relatively high for dental care, on a par with Ireland, Portugal, Spain and the United States (15, 30, 31).

Policy implications

Health financing policy in Estonia is mildly progressive overall. Social tax contributions to EHIF are proportional to income, but because EHIF operates on a pay-as-you-go basis, the employed finance the costs of non-working people (children, students and pensioners). Although non-contributors¹⁵ currently account for 45% of those covered by EHIF, many of those benefiting from entitlement to EHIF-financed health care (for example, pensioners) have contributed to the cost of care for others in the past, while others will contribute in future (children and students). Also, while the ratio of non-contributors to contributors seems high, the ratio includes children and students and most EU Member States do not expect these groups to contribute directly.

Other things being equal, the degree of solidarity in the Estonian health insurance system is lower than in countries that extend coverage to the whole population (including the unemployed) and exempt poor households and heavy users of health care from cost sharing. At present, coverage rules and user-charges policy undermine the principle of access based on need rather than ability to pay. The evidence suggests that 'equal access to treatment' is not sufficient to ensure equitable use of all health services, particularly dental care and specialist visits. The evidence also suggests that OOPs for pharmaceuticals have played a key role in this negative trend. Given that in 2007 60% of household spending on health was for prescription drugs (NHA data), we conclude that user-charges policy and pharmaceutical policies (see below) are largely responsible for the decline in financial protection and equity in the last ten years.

Health service quality and efficiency

There is no single indicator to measure the way in which health financing policy contributes to quality and efficiency in the delivery of health services (8). This part of the assessment considers the extent to which policy adheres to a range of principles broadly intended to ensure that the health system produces the most value (health improvement) it can for its resources:

- avoiding financing fragmentation
- matching resources to needs
- using health technology assessment (HTA) to assist in setting priorities

¹⁴ Although the use of day treatment is highly correlated to income, the analysis did not find it to be statistically significant due to the small proportion of people in the sample who used it.

¹⁵ About half of all non-contributors are children under 19 years, just over a third (35%) are old-age pensioners and students account for 3–4%.

- linking provider payment to process and outcomes
- encouraging delivery of care at the appropriate level
- avoiding unacceptable variation in care delivery
- ensuring that savings from efficiency gains are used to improve system performance.

Avoiding fragmentation

Over two thirds of total health spending is pooled by EHIF (68% in 2007; Table 5). Funds pooled by the central government and municipalities account for a much smaller proportion of the total (respectively 9.9% and 1.7% in 2007). Thus, EHIF pools about 85% of public health expenditure, representing a significant advantage for the health system and contributing to a strong and coordinated purchasing function for most health services as well as administrative efficiency, greater transparency and clearer lines of accountability. However, there is some fragmentation in the financing arrangements in four key areas: emergency care for the uninsured, large-scale health promotion and prevention programmes (financed by the central government), long-term care and capital costs (financed by the central government and EU structural funds).

EHIF does not pool finances for emergency care for the uninsured, although it administers billing for some emergency services. The current situation is an improvement over previous arrangements, in which municipalities were responsible for financing care for the uninsured and there were significant geographical variations in the levels of assistance available (24). Nevertheless, differences in the contracting methods for emergency and non-emergency care may create incentives to shift costs. More importantly, perhaps, the fact that the uninsured do not have free access to primary care means that they may only seek care in acute situations, resulting in higher costs for the health system.

Some public health programmes are financed by EHIF and/or central government ministries. For example, the Ministry of Social Affairs also finances cancer prevention and alcohol abuse programmes, while the Ministry of Justice finances treatment of HIV in prisons. There would be clear advantages in moving away from a vertical system of financing programmes focusing on specific diseases or behaviour towards a client- or patient-oriented approach focusing on groups that may benefit from coordinated interventions (8). Such a shift would facilitate joint planning, improve coordination, avoid administrative duplication of tasks and ultimately lead to more cost-effective and better outcomes.

Long-term care financing still suffers from some of the regional variations experienced when municipalities were responsible for emergency care for the uninsured. As a result, there are likely to be inequalities in access to long-term services based on place of residence. Until recently long-term nursing care (EHIF financed) has been free at the point of use, while non-medical long-term care (municipally financed) has been subject to high cost sharing – 85% of a person's pension. The limited depth of municipal long-term care coverage combined with differences in cost sharing depending on the type of facility has created incentives to use long-term care hospitals, even when people do not require medical attention. From 2010, EHIF-covered inpatient long-term care will be subject to a coinsurance rate of 15%, partly intended to redress this particular inefficiency.

Capital costs for the renovation of hospital infrastructure are financed by the central government and EU structural funds. From 2003 to 2007 capital costs were included in the prices EHIF paid to providers (24). The disadvantage of this system was that capital investment was linked to activity levels rather than based on an independent assessment of capacity needs. In 2008 the central government took responsibility for financing capital costs to alleviate financial pressure on EHIF; funds were allocated directly to hospitals by incorporation into the prices paid by EHIF. However, in 2009 the government failed to transfer any funds and EHIF was forced to cover capital costs itself. At the same time, hospitals are encouraged to make use of EU structural funds for capital investment and many have already done so. The Ministry of Social Affairs is responsible for scrutinizing applications for capital investment, with limited EHIF involvement. The weaknesses of this process are discussed in more detail below.

Requiring some of these disparate funding streams to be channelled through EHIF would strengthen the pooling function and contribute to resource allocation efficiency if the following criteria were also met. First, the revenue to fund the different areas would need to come from outside EHIF's budget – in other words, just because EHIF pools resources to finance these elements does not mean it should generate the funds itself. Second, the process of allocating resources to each of these areas would need to be based on assessment of population health needs. Third, resource allocation would need to be based on a coordinated, patient-oriented approach. Fourth, careful attention would need to be paid to avoid creating perverse incentives to shift costs among providers, levels of care or payers.

Matching resources to population health needs

This section discusses risk-adjusted capitation to allocate resources to purchasers and health needs assessment to guide investment in infrastructure and equipment. Both tools aim to ensure as little waste of resources as possible. For example, it would be wasteful, from a policy perspective, if regions with lower levels of need spent more on health services per capita than regions with higher levels of need. It would also be wasteful if there were more hospital beds than necessary for the population, due to the high fixed costs of maintaining hospitals; the more resources purchasers must spend on utility costs, the less they have to spend on inputs such as medicines (32). Finally, it would be wasteful to have more diagnostic equipment than necessary, particularly when the diagnostic equipment is expensive to buy, maintain and operate.

Among EU Member States and beyond, risk-adjusted capitation has emerged as the most frequently used method of allocating resources from one part of the health system to another (33, 34). In line with this trend, EHIF allocates a significant proportion of its resources to its four regional branches.¹⁶ Allocations for specialist care are based on pure capitation, while allocations for long-term care are adjusted for the size of the population over 65 years old. For primary care, regional branches are allocated a budget based on expected payments to GPs. Capitation adjusted for a single risk factor – population age structure – accounts for

¹⁶ Very expensive specialist care, pharmaceuticals and cash benefits are administered centrally.

about 70% of the primary care budget. This is in contrast to England and the Netherlands, where the formula used to allocate resources to purchasers is adjusted for a wider range of risk factors – notably, indicators of socio-economic status, utilization patterns, measures of disability-free life expectancy to capture unmet needs and tackle health inequalities (England) and variations in unavoidable supply costs (35, 36). Estonia has been reluctant to consider utilization data alone since this would skew allocation in favour of urban areas, where higher use does not necessarily reflect higher need (24). However, it may be time to revisit the resource allocation formula, since research shows that age alone is not a good predictor of variation in health expenditure across the population (37, 38).

Estonia has made concerted efforts to engage in capacity planning for investment in infrastructure (mainly hospitals), first through the Hospital Master Plan 2015 (HPM) prepared in 2000 and more recently through an updated version, the Hospital Network Development Plan (HNDP) approved in 2003. However, the link between investment and population health needs may be undermined for two reasons. First, the HPM has not yet been fully implemented and is some way off reaching its initial target of 2 acute beds per 1000 population. Second, central control over capital investment and expensive medical equipment is not as strong as it should be.

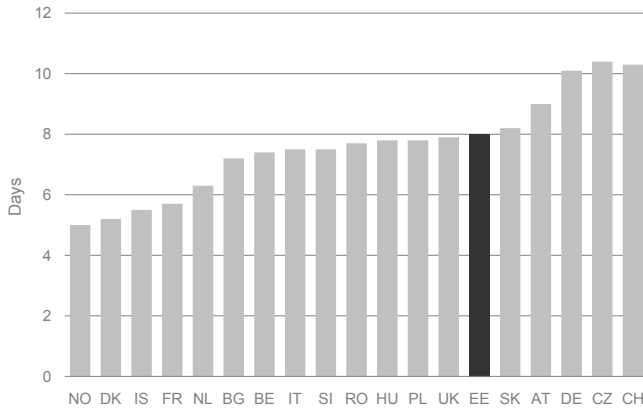
In spite of the fact that the HPM has not been fully implemented, Estonia has made good progress in reducing excess capacity in the hospital sector and in key efficiency indicators for the use of inpatient resources. Between 1993 and 2007 the number of hospitals fell from 115 to 57, the number of beds from 14 400 to 7473 and the average length of stay from 15.4 to 8.0 days (24). By 2006 the number of acute beds per 1000 population in Estonia was lower, at 4, than the EU-27 average of just over 4 and the EU-12 average of just over 5, but not as low as in Denmark, Finland or Slovenia (16). The average length of stay in Estonia is at the higher end of the spectrum in the European Economic Area (Figure 23), but Estonia does better than the Czech Republic and Slovakia and is on a par with Hungary and Poland. Estonian hospital occupancy rates for acute care are towards the lower end of the spectrum for OECD countries, on a par with Hungary and the Czech Republic and slightly higher than Slovakia (Figure 24). Thus, while there is room for improvement in the use of inpatient resources in Estonia, achievements in this area are already significant and international comparison suggests Estonia does not perform badly relative to other countries in the region.

Limited central control over capital investment is a more pressing problem. Hospitals applying for EU structural funds for infrastructure development are at present required to submit their proposals to the Ministry of Social Affairs for approval, but the Ministry does not seem to have enough capacity to thoroughly review them. This issue requires immediate attention because the ability to control and coordinate investment in new infrastructure is essential if the health system is to avoid unnecessary costs in the years to come.

It is also important for those in charge of scrutinizing proposals to pay attention to the design of new infrastructure and be equipped to ensure that any hospitals planned and built today

are capable of responding to changes (39). A critical factor for successful capital investment is that architectural form should follow function. The challenge for hospital designers is to account for changing patterns of morbidity and clinical practice arising from population ageing, shorter lengths of stay, an increase in ambulatory surgery and technological advances (39). As Rechel et al. conclude: “An optimal design is therefore one that allows continuous change” (40). One way forward is for the Ministry to develop a set of criteria for infrastructure approval and require applicants to demonstrate that the new facility will be cost-decreasing and designed so as to ensure maximum flexibility.

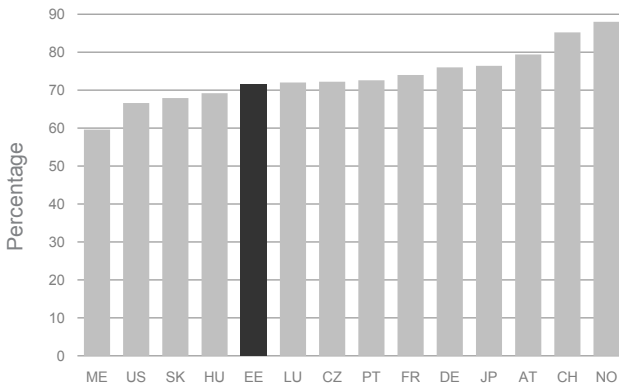
Figure 23. Average inpatient length of stay, European Economic Area, 2007



Source: Based on Eurostat (16).

Note: Data for Iceland, Italy and Slovakia are for 2006.

Figure 24. Inpatient occupancy rates for acute care, Estonia and OECD, 2007

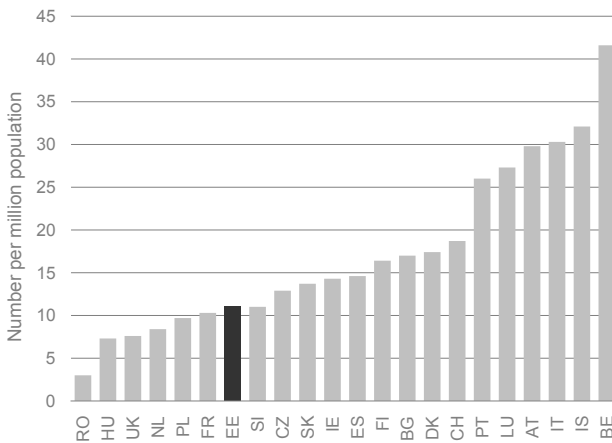


Source: Based on NIHD (13); OECD (41).

Control of investment in expensive medical equipment is another area of concern. Although the central government has made some attempt to control and coordinate the distribution of expensive medical equipment (for example, through the Committee on Medical Technology), its efforts have been largely unsuccessful and hospitals are effectively free to purchase whatever equipment they want (24). A recent National Audit Office study of value for money in the supply of widely used expensive equipment such as x-rays, CT and MRI scanners underscores how Estonia would benefit from having a clear and effective national medical equipment policy (42). The study identified the following weaknesses: the central government does not have good information about the distribution of expensive medical equipment; equipment is not always used appropriately; and hospitals do not have sufficient criteria to help them make decisions about investment in equipment.

The study also shows how having too much equipment relative to need contributes to inefficiency in the use of resources. First, the study found that on average CT scanners in general hospitals are being used at only one third of the optimal workload calculated by EHIF (42); a hospital with under-used CT scanners is actually drawing on funds that could be used to provide other services. Second, 17% of MRI scans carried out on patients with headaches and backaches were not clinically justified, suggesting that the availability of equipment may encourage providers to refer patients for unnecessary procedures. Third, only 46% of patients with light head trauma and 76% of stroke patients were given a CT or MRI scan even though treatment guidelines recommend that all of these patients be scanned. One reason may be that due to the lack of coordinated investment some areas have too much equipment and others do not have enough.

Figure 25. CT scanners, European Economic Area, 2007



Source: Based on Eurostat (16); OECD (41).

Note: Data for Italy, the Netherlands and the UK are for 2006.

Although the number of CT scans per million inhabitants is still relatively low in Estonia compared to other European countries (Figure 25), it is already noticeably higher than in the Netherlands and the United Kingdom. Also, the absolute number of CT and MRI scanners doubled between 2006 and 2008 (Figure 26). Further escalation in the numbers of scanners and other expensive medical equipment would probably lead to over-use of diagnostic tests and, at the same time, under-use per piece of equipment, with negative consequences for efficiency and potentially harmful effects on patients' health. Better planning of the distribution of expensive medical equipment across the country would also serve equity goals.

Figure 26. Growth in expensive medical equipment, 2006–2008



Source: Based on NIHD (13).

Using HTA to assist in setting priorities

Unlike many of the EU-15 Member States, Estonia has no systematic HTA programme, although it does make use of HTA, particularly in the pharmaceutical sector, in setting EHIF reimbursement for outpatient prescription drugs. In recent years EHIF has also tried to increase awareness of HTA among stakeholders and has invested in training its own staff in this area.

Using HTA to set priorities and guide investment decisions is not without its technical and political problems, particularly analysis of cost-effectiveness. It is also resource intensive. Nevertheless, HTA can make a significant contribution to enhancing value in the health system (43, 44). It would therefore be good for policy-makers to consider using it more (including cost-effectiveness analysis), not just to assess the value of new technologies but to look at the value of goods and services in EHIF's benefit package. For example, using cost-effective analysis to decide which prescription drugs EHIF can exclude from the benefit package might be advantageous for both EHIF and patients. However, in light of current prescription and dispensing patterns (see below), it would be important for any exclusions from the benefit package to be accompanied by strict guidelines for doctors and pharmacists.

Linking provider payment to process and outcomes (rather than inputs)

Estonia has already introduced reforms to improve the way providers are paid, many of which have had positive effects for the system (moving away from a focus on input-driven payment) and doctors (income) (24). However, some of the changes have created powerful incentives to increase the volume of services provided without focusing sufficiently on rewarding efficient practice or improved patient outcomes. For example, purchasing inpatient care on the basis of cases rather than episodes of care encourages greater production of cases but does not provide incentives for continuity of care or cooperation among providers or levels of care. Similarly, the system of bonus payments for GPs emphasizes specific activities rather than patient-centred care.¹⁷

It is worth noting that although there is a great deal of interest in using financial incentives to improve the quality of care – for example, through pay for performance (P4P) – the scope for this may be limited (32, 45, 46). Thus, changes in provider payment intended to enhance quality need to be accompanied by more long-term measures, including changes in medical training. Nevertheless, there is considerable scope for action to remove incentives that promote uncoordinated care and other inefficiencies. Examples include: the absence of penalties for GPs who prescribe originator drugs when generic equivalents are available; the presence of incentives for pharmacists to dispense more expensive drugs and their ability to do so even when a doctor has prescribed a cheaper alternative; allowing patients with chronic conditions to access specialists without referral and exercising only partial gate-keeping for access to certain specialists such as gynaecologists and psychiatrists.

Encouraging delivery of care at the appropriate level

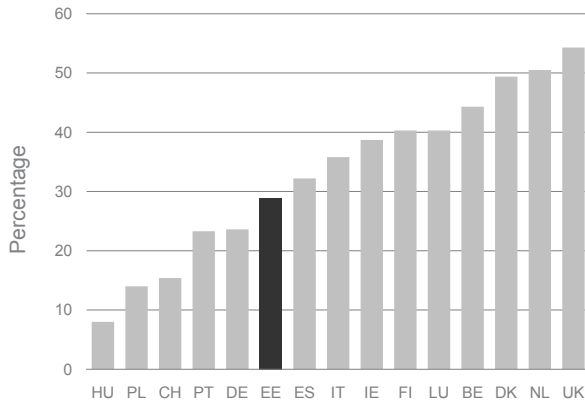
A key principle of care efficiency is that it should be provided at the appropriate level. Here we focus on four approaches to ensuring that patients have access to the most appropriate and cost-effective treatment possible: shifting from inpatient to outpatient care, an associated strengthening of primary care, improving coordination between providers and sectors and expanding and enforcing generic drug policies.

Shifting care from inpatient to outpatient settings is a guiding principle of the purchasing process in Estonia and is an objective of EHIF's development plan. Through negotiations on contract volumes and costs, EHIF has made good progress in meeting the objective. The proportion of surgical procedures carried out on an inpatient basis fell from 72.8% in 2001 to 58.4% in 2008, but the rate of surgical procedures carried out as day cases still lags behind EU-15 levels (Figure 27) Resource allocation that continues to favour inpatient care while non-hospital care remains underdeveloped is likely to result in structural inefficiencies.

Doing more to shift care out of hospitals involves action on the following fronts: more aggressive contracting with volume targets for inpatient and outpatient care and prices that encourage providers to meet them, reductions in inpatient capacity, changes in provider payment and training and strengthening of primary care to enable further restructuring without lowering quality of care (47).

¹⁷ Bonus payments cover vaccinations and regular check-ups for children, management of some chronic conditions and extra activities such as post-partum follow-up and minor surgery.

Figure 27. Share of day cases in total surgery, European Economic Area, 2007



Source: Based on EHIF (11); OECD (41).

Note: Data for Belgium, Italy and Spain are for 2006.

An evaluation of primary care in Estonia concludes that while there have been many signs of improvement in quality since the 1990s, there is room for further action (47). In particular, there are concerns that the role of primary care in the health system and its key functions have become less clear in recent years. This may be because the regulatory framework and provider payment methods do not support expectations about GPs' formal role in managing patient care. As a result, this role has been poorly and unevenly implemented. Other key issues affecting the performance of primary care include inadequate capital investment, the difficulty of attracting health professionals to rural areas and a shortage of human resources, particularly family nurses (24).

One indicator of the effectiveness of primary care is the measurement of avoidable hospitalization for ambulatory care sensitive conditions (ACSC).¹⁸ These involve inpatient admissions that evidence suggests could have been avoided through better access to high-quality outpatient care (48).¹⁹ In the United States research has found that lower availability of primary care is associated with higher rates of ACSC admissions (49), while in England the Department of Health has measured the number of avoidable hospital admissions to identify the potential for cost savings (50). The rate of inpatient discharges for angina per 100 000 inhabitants provides an example of avoidable hospitalization for ACSC. Figure 28 suggests that this rate is very high in Estonia compared to other European countries. Additionally, the reduction in this rate over time has not been as great in Estonia as in some other countries in the region or the United Kingdom.²⁰ Efforts to tackle avoidable hospital admissions might include providing feedback to GPs to let them know which of their patients fall into this

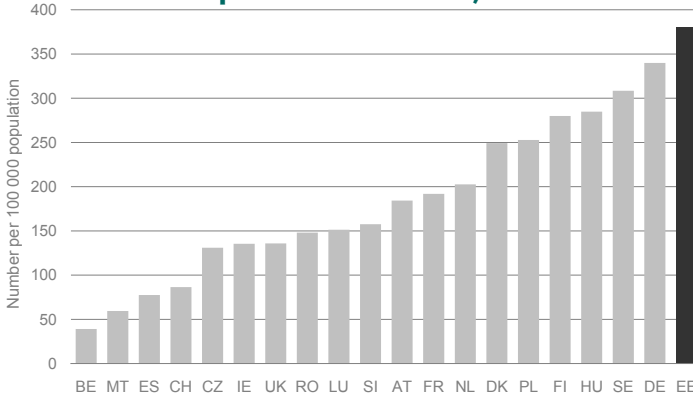
¹⁸ Includes admissions for angina, asthma, chronic obstructive pulmonary disease and diabetes, among others.

¹⁹ Although a too-low rate might indicate under-use of appropriate care.

²⁰ For example, the rate in Estonia declined between 2002 and 2007 by 6%, compared to declines of 40% in the Czech Republic, 32% in the United Kingdom, 26% in Finland and Sweden, 24% in Poland (between 2003 and 2007) and 15% in Hungary (between 2004 and 2007).

category and how much of their (notional) budget is spent on treating these patients in hospital. Another option is to encourage GP practices to use community nurses to identify patients at risk of avoidable hospital admissions (Box 1).

Figure 28. Inpatient discharges for angina pectoris, European Economic Area, 2007



Source: Based on Eurostat (16).

Note: Data for Finland and Sweden are for 2006.

Box 1. Using community nurses in England to support patients at risk of hospitalization

Community matrons are senior nurses with prescribing rights, established in England in 2005 to use case management techniques to identify, treat and support patients with chronic conditions and patients at risk of hospitalization. They are responsible for coordinating primary and specialist care as well as social services. Evaluation of pilot schemes set up in 2003 found that community matrons did not significantly lower unplanned (emergency) hospital admissions, perhaps because they successfully identified additional cases (51). Nevertheless, they improved coordination and access to care through frequency of contact, regular monitoring, psychosocial support and expanding the range of referral options for frail older people (51). As a result, they were highly valued by patients and their carers, even though they have not demonstrated cost savings (52). The national strategy appears to have been most successful where community matrons were introduced as part of a broader chronic disease management programme, integrated with other services (53). However, there are concerns that in drawing on a pool of district nurses who already work in the community, community matrons may divert resources away from other areas rather than genuinely adding to the overall level of services (53).

Some of the problems facing primary care in Estonia reflect a process of resource allocation that continues to be skewed in favour of specialist care. In 2008 EHIF spent just 8% of its budget on primary care compared to 10% on pharmaceuticals and 50% on specialist care. Similarly, in 2006 the Ministry of Social Affairs spent 15% of its health budget on administration and only 11% on prevention programmes (24). Taking into account some of the challenges facing primary care noted above, it seems unlikely that efforts to strengthen the sector will have much success unless this imbalance is redressed.

Coordination has long been recognized as a key indicator of the quality of primary care (54). More recently, countries have attached increasing importance to coordination across different levels of care (55). The need for better coordination reflects fragmented delivery by multiple providers working alone or in small groups, particularly in countries without a long history of gate-keeping, where continuity of care has been limited. It also reflects the complexity of managing care for rising numbers of patients with one or more chronic conditions (56). Coordinated care can prevent wasteful duplication (of diagnostic tests, for example), potentially harmful use of different drugs and confusion among patients (57).

Estonia already has a system of GP gate-keeping in place but it does not apply to patients with chronic conditions, who may visit specialists without referral. All patients can also access some specialists without referral. Extending the gate-keeping requirement to all patients and strengthening and enforcing the policy (for example, requiring specialists to issue discharge notes to GPs to qualify them for payment) would have positive effects on care coordination and continuity, particularly for patients with chronic conditions, and would contribute to stronger primary care. A complementary strategy to improve care coordination would be to invest in better IT infrastructure and systems, but IT in itself cannot be relied upon to stimulate coordination.

Estonia already uses various strategies to encourage rational use of drugs (27, 58).²¹ EHIF uses HTA to inform its positive list of covered drugs. It has introduced some prescription guidelines and monitoring of prescribing behaviour, and there is a policy of compulsory generic prescription in place. These steps are commendable. However, the guidelines and monitoring appear to have a very limited impact, the generic prescription policy is not enforced, doctors have no financial incentive to consider cost or even effectiveness when prescribing and pharmacists have a financial incentive to dispense more expensive drugs (27). As a result, the use of generic drugs is low, the generic market is under-developed and the price of generics is higher than it could be (59). For example, EHIF internal analysis shows that in 2007 only 50% of prescriptions for Ramipril (an ACE inhibitor used to treat hypertension and congestive heart failure and the most frequently used drug in Estonia), were for the generic version²² (27). Even when the active ingredient was prescribed, in 70% of cases the filled prescription was for the originator drug. When the originator drug was

²¹ Defined by WHO as a situation in which 'patients receive medicines appropriate to their clinical needs, in doses that meet their individual requirements, for an adequate period of time, and at the lowest cost to them and their community'.

²² Compared to England, where 83% of all prescription items in primary care were for generic medicines in 2008 (up from 63% in 1998).

prescribed, the pharmacist substituted the generic version in only 15% of cases. Thus, overall, only 20% of filled prescriptions for Ramipril were generic. Another study of Ramipril found that 97% of patients were dispensed the originator version (27).

The low level of generic prescription and dispensing has serious financial implications for patients and for EHIF. Since the originator drug (sold in 2007 at 170.21 kroon for a pack of 28 10mg tablets) is 17% more expensive than the reference price and 28% more expensive than the generic drug, the patient has a copayment of 76 kroon, equivalent to 45% of the drug's cost (27). The generic drug requires a copayment of 48 kroon only (37% of the drug's cost). EHIF has estimated that in the case of hypertension, the level of cost sharing for patients would fall from 42% to 24% of a drug's cost if doctors prescribed on the basis of clinical cost-effectiveness criteria and patients chose the least costly alternative at the pharmacy.

In theory the cost to EHIF is the same for originator and generic drugs, because it pays the reference price. However, if generic prescription were enforced, increasing the market, the price of generics would probably fall, lowering the cost to EHIF. At present cheaper generics appear to have very small market shares in Estonia (27). In England, for example, the same pack of Ramipril cost £2.17 (37.50 kroon) in 2009 (60), just over half of what it cost in 2005 (£3.98) (61) and only a quarter of the price in Estonia. As long as the financial incentives do not support generic prescription and substitution by pharmacists is not allowed, the status quo seems highly likely to persist, to the detriment of efficiency and financial protection.

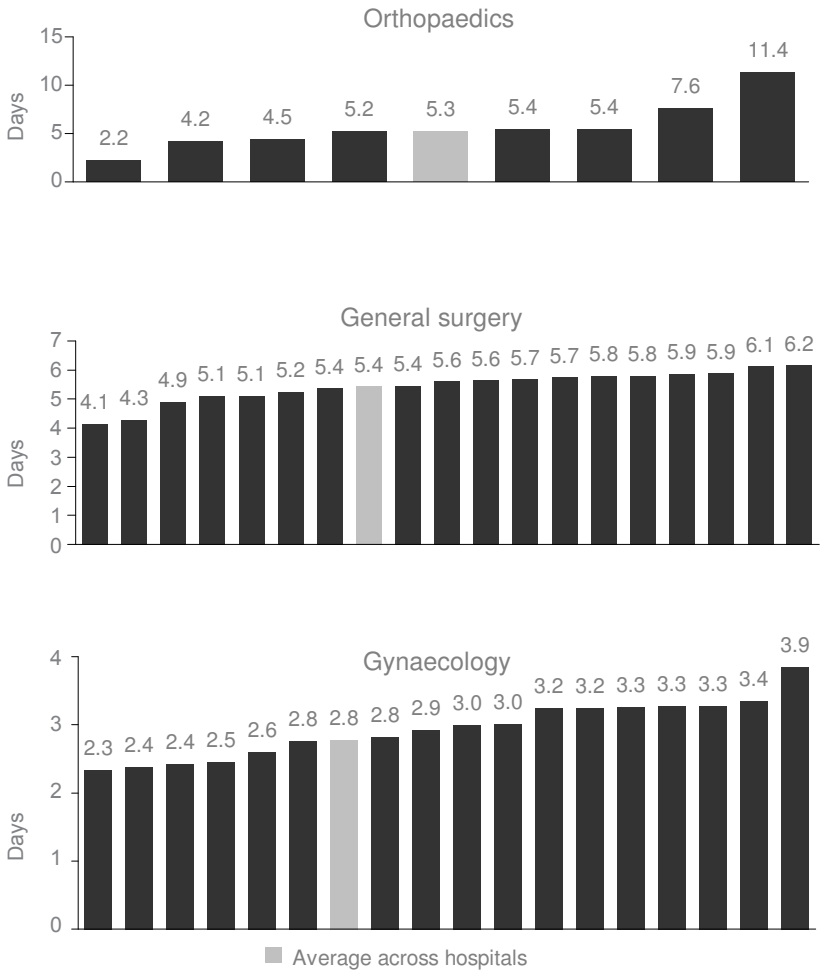
Avoiding unacceptable variation in the delivery of care

Comparing aspects of health care delivery across different parts of the country reveals quite large variations among hospitals, for example, in average lengths of stay (Figure 29). Some of these variations are likely to be wasteful and addressing them would therefore enhance efficiency. In addition, widely differing performance may undermine public confidence in the quality of the health system.

EHIF is already tackling unacceptable variation via clinical audits to detect variations and deviations from set quality standards, financing of clinical guidelines, prioritizing areas of care in which there is high clinical variation and invoice and medical record checks by trustee doctors²³ to detect non-compliance in these areas. Since 2005 EHIF has provided DRG-based feedback to providers, allowing them to compare themselves to national averages; since 2009 they have been able to compare their performance in relation to other providers (case-mix indices, average length of stay, etc). In 2009 EHIF also set up an internal reporting system to detect abnormal variation based on information in its database.

²³ Doctors employed by EHIF who are not usually involved in clinical work.

Figure 29. Variation in average length of stay across hospitals, 2009



Source: Based on EHIF (11).

Ensuring that savings from efficiency gains are used to improve system performance

EHIF has accumulated and retained reserve funds well above the minimum legal requirements (Table 15). However, while EHIF is in theory an independent entity, its decision rights concerning the use of its reserves seem to be restricted by its proximity to and importance for government fiscal and monetary policy (for example, joining the Eurozone). In the short term this has consequences for its ability to maintain quality of care in the face of resource constraints; in the longer term these limits to EHIF's autonomy may be even more detrimental if they undermine incentives to invest in prudent management and efficiency savings.

Table 15. Cumulative EHIF reserves, 2001–2008

Cumulative reserves	2001	2002	2003	2004	2005	2006	2007	2008
Legal reserve	189	415	493	493	423	481	603	800
Risk reserve	3	146	146	146	146	160	201	266
Retained earnings	193	371	561	875	1 219	2 024	2 800	3 098
Share of annual expenditure (%)	9	20	22	24	25	33	35	34

Source: Based on EHIF.

Note: The minimum legal reserve is 6% of the annual budget; the minimum risk reserve is 2%, as stipulated by the Health Insurance Fund Act.

The fact that health insurance is kept entirely separate from other forms of social insurance (for example, pensions and unemployment benefits) is a major advantage for the health system, particularly since EHIF is internationally recognized for its good governance (32). This separation ensures that the health system will have the benefit of EHIF's competent management rather than other sectors. The absence of a clear separation might lower incentives to operate efficiently (not just for EHIF, but for all the social insurance funds) and compromise accountability in the health system and the broader social sector.

Administrative efficiency

Promoting administrative efficiency involves focusing on minimizing duplication of responsibility for administering health financing policy and maximizing the cost-effectiveness of administrative functions (8). In 2007 public administrative costs for the whole health system accounted for 2.6% of total health expenditure and 3.4% of public sector expenditure (NHA data). These administrative costs are comparatively low: the 2007 figures for other countries ranged from 1.6% of total health expenditure in Hungary, 2.7% in Poland, 3.8% in the Czech Republic and 5.4% in Slovakia (41).

The administrative costs of health insurance in Estonia are also low. In 2008 EHIF spent only 0.9% of its revenue on administration (24). While this is similar to Hungary and Poland, it is much lower than Slovakia and the Czech Republic. Slovakian health insurance funds are legally restricted from spending more than 3.5% of their revenue on administration (and

0.5% for the Health Insurance Supervisory Agency). The average among health insurance funds in the Czech Republic is 3.7%, with the larger funds having lower costs (source: personal conversation with Peter Pazitny).

Policy implications

Estonia's single-payer system has good administrative efficiency, avoiding the duplication of functions of health systems with competing insurance funds. The significantly higher administrative costs seen in Slovakia (where they are capped by law) and the Czech Republic suggest that a move towards purchaser competition in Estonia would result in less spending on service provision and more on administration.

Transparency and accountability

Transparency and accountability mean that people should have a good understanding of their entitlements and obligations and an understanding of efforts to improve quality and efficiency (for example, generic prescription), and that the government should periodically indicate the extent to which it is providing what it has promised (8). EHIF (with the Ministry of Social Affairs since 2005) conducts an annual population satisfaction survey containing questions regarding the population's awareness of their rights and obligations, and other aspects of performance, and uses the results (published on its website)²⁴ to plan more effective awareness campaigns (24).

Population awareness about different aspects of health insurance has not changed much since 2004. It is high (90%) regarding eligibility for care in emergency situations but lower regarding GP referral requirements and user charges for primary care (11).²⁵ People may not have sufficient information about waiting times or choosing cheaper drug options. In some cases this is compounded by a lack of clear boundaries between public and private health services, since doctors are able to offer public and private care in the same setting. Public satisfaction with health system performance declined between 2001 and 2004 (1) but more recently it has risen. The annual surveys show that the proportion of the population very or generally satisfied with the overall quality of services rose from 65% in 2001 to 73% in 2008; the proportion very or generally satisfied with service access declined from 56% in 2001 to 53% in 2008; and the proportion satisfied with the availability of services covered by EHIF rose from 44% in 2003 to 46% in 2008.

This results-oriented approach to accountability has been held up as an example of best practice (8). EHIF has also been effective in tackling informal payments, which can be a major obstacle to transparency and accountability. Informal payments seem to be lower in Estonia than in other countries in the region (24). Although this has always been the case, it is partly due to actions taken to outlaw informal payments, plus EHIF's swift sanctioning of errant providers (including taking them to court if necessary).

In spite of strong governance in some areas, there is potential for better oversight in others – for example, monitoring and evaluation of provider behaviour. Governance of hospitals is

²⁴ <http://www.haigekassa.ee/haigekassa/uuringud>

²⁵ For example, in 2007 only 49% knew they needed a GP referral to an otorhinolaryngologist and only 53% for a rheumatologist, while 60% knew GPs cannot charge patients. Surveys have not included questions about pharmaceutical user charges.

highly decentralized, to the level of individual providers, and there has been little action to assess financial management or the quality of clinical care. The same is true of GPs. Both types of provider therefore lack accountability with respect to national health policy objectives.

Policy implications

The governance structures in place suggest some imbalance in the autonomy afforded providers and EHIF. Government encroachment on EHIF independence contrasts with its limited interest in oversight of hospitals and self-employed doctors. The absence of national health policy objectives and targets means the government cannot monitor the progress of different institutions, which lowers transparency, weakens public accountability and ultimately may inhibit performance.

Summary of key findings

- Financial protection has fallen due to rising levels of OOP spending on health during the late 1990s and early 2000s. The patient contribution for EHIF-reimbursed prescription drugs increased from 25% in 1997 to 38% in 2008. Growth in OOPs has pushed some low-income households into poverty and has had a particularly adverse effect on older people. It has also led to a significant decline in equity. In 2000 OOPs were proportional to income but by 2007 they had become highly regressive.
- User charge and pharmaceutical policies must accept a large share of the responsibility for the decline in financial protection and equity in the last ten years. They also contribute to inefficiency. The generic prescribing policy is not enforced, pharmacists are not encouraged to dispense cost-effective drugs and patients may not have sufficient information about cheaper drug options.
- Central control over capital investment and expensive medical equipment is not as strong as it should be. Better planning of the distribution of expensive medical equipment across the country would serve efficiency and equity goals.
- More needs to be done to ensure that incentives are aligned across the health system in support of quality and efficiency in service delivery. International evidence suggests some hospitalizations that could be avoided if the primary care system were more effective and provider payment encouraged greater use of care at the appropriate level. There is also a degree of potentially unacceptable variation across providers (for example, in average length of stay).
- The significantly higher administrative costs seen in Slovakia (where they are capped by law) and the Czech Republic suggest that a move towards purchaser competition in Estonia would result in less spending on service provision and more on administration.
- The absence of national health policy objectives and targets undermines efforts to monitor and evaluate the progress of different institutions. This lowers transparency, weakens public accountability and may inhibit performance. Transparency and accountability are also weakened if patients do not have sufficient information about their access rights or understanding of efforts to improve quality and efficiency.

4. Health expenditure and revenue projections

This section begins with a brief discussion of different factors that are likely to affect levels of revenue for the health sector and levels of health expenditure in future. It then presents projections of health sector expenditure and revenue levels, to identify the size of the financing gap and estimate the relative importance of different factors on projected expenditure levels, and concludes with a summary of key findings.

Factors affecting future revenue and expenditure

The factors we discuss in this section include those relating to demographic changes, the labour market, macroeconomic indicators and the way in which the health system allocates and uses its resources. Demographic, labour market and macroeconomic projections are based on data from Statistics Estonia, Eurostat and the Ministry of Finance.

Demographic factors

Changes in fertility and life expectancy lead to changes in the population's size and structure,²⁶ which in turn lead to changes in dependency ratios, the ratio of working-age people to children and older people.²⁷ When thinking about the impact of demographic changes on the health system, people often focus on population ageing, which they typically associate with rising life expectancy, paying less attention to population size and fertility. However, it is worth noting that fertility can be a key factor due to its potential to affect both population size and age structure.

Life expectancy should rise in Estonia over the next twenty years (Table 16). The gap between male and female life expectancy will narrow from 11 to 9 years, but will not reach the targets set in the National Health Plan 2009–2020 (76 years for men and 84 years for women by 2020). Despite people living longer, the population is set to fall by almost 4% by 2030, with females declining by 6% and males by 1.5%. The population will be smaller in 2030 because even though the fertility rate²⁸ will increase slightly, it will remain below the replacement level.

In all but the most developed societies, population ageing is caused by declining fertility levels ('ageing from the bottom') rather than by increasing life expectancy ('ageing from the top') (62, 63). Estonia is no exception. People aged 65 years and over currently account for about 17% of the population (Table 16). By 2030 this figure is projected to rise to around 22% (17). As the proportion of older people in the population grows, the proportion of working age²⁹ people will fall to 63%. The number of working age people for every older person (the old age dependency ratio) will decline from four now to three in 2030.

²⁶ Population structure refers to the mix of males and females in the population and the mix of different age groups.

²⁷ In this report 'older people' refers to people aged 65 and over. While this is an arbitrary threshold, it is used for convenience.

²⁸ The average number of children a hypothetical cohort of women would have at the end of their reproductive period if they were subject during their whole lives to the fertility rates of a given period and not subject to mortality, expressed as children per woman. The replacement level is 2.1 children per woman.

²⁹ The 'working age' population usually refers to those between 15 and 64 years old.

Table 16. Demographic projections, 2007–2030

	2007	2010	2015	2020	2025	2030
Total population	1 341 672	1 339 659	1 337 642	1 330 544	1 313 613	1 290 962
Total fertility rate ^a	1.64	1.65	1.66	1.68	1.70	1.71
Life expectancy (male)	67.1	68.3	70.0	71.3	72.5	73.6
Life expectancy (female)	78.7	79.3	80.3	81.2	82.0	82.8
% 0–14	14.9	15.2	16.5	17.1	16.3	14.9
% 15–64	68.0	67.9	65.9	64.1	63.3	63.2
% 65+	17.1	16.9	17.6	18.8	20.4	21.8
Old age dependency ratio ^b (%)	25.2	24.8	26.7	29.4	32.2	34.5
Dependency ratio ^c (%)	47.0	47.2	51.7	56.0	58.0	58.1

Source: Based on Statistics Estonia (64).

^a The baseline total fertility rate used in our projections is higher than the rate in EUROPOP2008 (1.55 in 2008) but we assumed the same rate of increase by 2030. The latest national population projections from Statistics Estonia actually suggest that the total fertility rate will increase to 1.8 or even 1.9 by 2030.

^b The ratio of people 65 years old and over to people 15 to 64.

^c The ratio of people 0 to 14 years old and 65 and over to those 15–64 years old.

It is a commonly held view that population ageing poses a serious threat to the financial sustainability of health systems around the world. On the revenue side, as the Estonian projections show, an older population will have to rely on a smaller pool of working age people to pay for health care. On the expenditure side, it is assumed that health spending will rise as older people incur higher health care costs than younger people, and the demand for long-term care will also grow. However, this view is open to challenge on various grounds. First, research does not find ageing to be a major driver of health care costs. In fact, its contribution to health expenditure growth is in the magnitude of 10%, much less than the contribution of technological innovation, which ranges from 50% to 75% of all growth in health spending (65–71). Thus, there should be no doubt that technological development is the largest driver of health expenditure growth, and by a significant margin, as further discussed below.

Second, the extent to which ageing affects a country's ability to generate sufficient revenue for health care is highly dependent on the nature of a given health system's revenue base. Countries that rely extensively on the labour market to finance health care will find it much harder to cope with changing dependency ratios than countries that draw on a broader public revenue base.

Third, views about the relationship between age and health expenditure are based on assumptions that may not hold. For example, many people assume that calendar age is a key determinant of health spending, but a significant body of research confirms that there is no causal relationship between them (72, 73). Rather, health spending is determined by how

close a person is to dying. Not only is proximity to death a better predictor of health care costs than age; it is also a significant (if slightly less influential) determinant of long-term care and associated costs (74).

Furthermore, it is assumed that average age-related expenditure will remain static over time. However, this might not be the case because research shows that those who die at older ages have lower health care costs than those who die at younger ages (75). As greater longevity pushes death to later in life, the average cost of dying will fall; and as more individuals leave one age group by moving into an older age group, the average costs of the group in question will fall (71). Recent projections by the European Commission show that accounting for proximity to death resulted in a reduction of 0.2% of GDP in public health expenditure in Estonia in 2030 compared to the baseline projection (3).

Whether or not age-related expenditure profiles will remain the same depends on changes in health status (71), which are more difficult to predict. In some countries research shows support for the compression of morbidity hypothesis (76), which states that in future people will not just live longer but will also spend more time in good health (also referred to as 'healthy ageing'). In others there seems to be evidence of the reverse: an expansion of morbidity. A recent report concludes that in many EU countries extra years of life are free from major disability, perhaps because conditions that might have caused severe disability in the past now cause only mild or moderate disability; at the same time there is an increased prevalence of mild disability and chronic disease, in line with the 'dynamic equilibrium' scenario, which links increasing longevity to a reduction in severe morbidity and increase in light morbidity (77).

We can draw the following conclusions from this brief discussion of the impact of ageing on health expenditure. First, spending on long-term care is highly likely to increase as the population ages, but the extent of the increase will depend on factors such as changes in health status and the impact of declining fertility levels on the availability of informal carers. The effects of ageing on health care spending are less clear. Again, changes in health status are a critical factor. Ultimately, however, the most important factor may be the speed and extent of the policy response to ageing, particularly when we consider that improved health status among older people would not only lower spending on health and long-term care, but would also boost health sector revenues by allowing older people to stay longer on the labour market.

Labour market factors

Estonia's heavy reliance on the labour market to finance health care has several ramifications, mainly (but not exclusively) on the revenue side. Most obviously, the level of health sector revenue the labour market can generate will depend on changes in the labour force, including its size and rates of participation, employment and unemployment. A higher rate of unemployment will not only generate less revenue but may also push up expenditure levels by affecting demand for health care. However, as the population ages, the share of the unemployed and people on parental leave in the population will decline overall. Other

relevant factors include changes in the level of self-employment, the size of the informal economy, the retirement age and the health workforce due to ageing and migration.

Our projections assume that labour market participation rates will grow up to 2017 and then decline (Table 17). By 2030 the real size of the labour force will fall by 6% compared to 2007 due to population shrinking and ageing. The employment rate will gradually decline and the number of employed people will fall by 9% by 2030. The unemployment rate will climb steeply to 2010 and then decline, but by 2030 it will still be higher than it was in 2007.

Table 17. Labour market projections, 2007–2030

	2007	2010	2015	2020	2025	2030
Labour force (thousands)	687.4	696.7	687.1	673.2	658.1	643.0
Labour force growth (%)	0.1	0.1	-0.5	-0.5	-0.4	-0.4
Labour force participation rate (%)	65.8	67.3	68.3	67.8	67.1	66.4
Employed (thousands)	655.3	579.0	614.5	619.1	606.0	595.5
Employment rate, 15–74 (%)	62.7	55.9	61.1	62.4	61.8	61.5
Employment growth (%)	1.4	-3.2	1.3	-0.4	-0.4	-0.3
Unemployment rate (%)	4.7	16.9	10.6	8.0	7.9	7.4

Source: Based on data from Statistics Estonia and the Ministry of Finance.

Macroeconomic factors

Macroeconomic factors such as changes in GDP can potentially affect health sector revenue and expenditure. National health expenditure is closely related to income: estimates suggest that health spending tends to rise more or less proportionately to economic growth (78). However, debate continues about the extent to which health care is a normal good (a necessity, with income elasticity close to one) or a luxury good (higher income elasticity, with spending rising at a faster rate than income). If GDP declines but health spending does not, then there will be less money available to spend on other things. To the extent that reduced spending in other areas negatively affects health status, this could have an impact on demand for health care.

Our projections assume that real GDP growth is highest in 2014 but will then decline due to a combination of demographic changes, employment trends and declining labour productivity (Table 18). In recent years competition with Finnish, Swedish and other European labour markets and rapid economic growth have driven wage increases in Estonia. From 2014 growth in real wages will be driven by growth in labour productivity.

Table 18. Macroeconomic projections, 2007–2030

	2007	2010	2015	2020	2025	2030
GDP, current prices (billion kroon)	238.9	201.1	268.7	362.2	471.2	600.6
GDP per capita (kroon)	178 083	150 088	200 933	272 219	358 733	465 233
Nominal GDP growth (%)	16.5	-4.4	7.3	5.5	5.3	4.8
Real GDP growth (%)	6.3	-2.0	4.2	3.0	2.8	2.5
GDP per capita growth (%)	16.7	-4.3	7.4	5.7	5.6	5.2
Inflation (GDP deflator) (%)	9.6	-2.5	3.0	2.4	2.4	2.3
Nominal wage growth (%)	20.5	-4.0	6.0	5.9	5.7	5.2
Real wage growth (%)	13.0	-4.2	2.9	3.4	3.2	2.8
Labour productivity growth (%)	4.9	1.2	2.9	3.4	3.2	2.8
Inflation (CPI) (%)	6.6	0.2	3.0	2.4	2.4	2.3
Average gross wage (kroon)	11 336	11 679	14 094	18 853	25 054	32 499

Source: Based on data from Statistics Estonia and the Ministry of Finance.

Health system factors

New technologies may reduce costs if they result in efficiency gains or health improvements that reduce the need for further, perhaps more costly care. They can also lead to higher costs by increasing utilization, expanding the scope of available treatments, extending treatment to more people, replacing cheaper technologies (79) or extending the use of technologies on hand (80).

The interaction between technological change and intensity of service use suggests that policy-makers need to pay careful attention to the way new technologies enter the health system and are taken up by providers. Policy-makers should also consider patterns of health service use, making sure that patients and providers have incentives to use and supply care in the most cost-effective, coordinated way in order to avoid wasteful and potentially harmful duplication. In addition, since it is widely recognized that the majority of health care costs are driven by supply factors (including the price of supply) (81) rather than demand factors, policy-makers should take great care to ensure that providers do not have perverse incentives to prescribe unnecessary or ineffective treatment.

Finally, there is need for policy-makers to focus on areas such as prevention of ill health and control of chronic conditions. Linking resource allocation to population health needs should result in better investment in interventions to promote healthy ageing. This is likely to improve quality of life, save health costs in future and, as indicated above, boost revenue for the health sector (77). All of this underlines the central role of health financing policy in contributing to financial sustainability.

Expectations and values

WHO has identified improving the health system's responsiveness to the population's non-health-related expectations as a key health system goal (9). Along with population ageing and technological development, rising expectations are frequently cited as a major driver of health care costs (82). Yet the extent to which people's expectations influence the resources available for health remains unmeasured – perhaps understandably, due to the complexity of the issues involved (82, 83). The assumption is that people expect to have easy and timely access to health services of increasingly high quality. Rising expectations provoke the question of whether people are willing to pay more, publicly or privately, for higher-quality health care.

Willingness to pay more for health on a collective basis (i.e. through taxes and contributions) depends on various factors, among them political beliefs and values and views on how well the publicly financed health system performs now and is likely to perform in future. Some people will want higher quality but, recognizing that this means higher taxes, they may prefer to rely on the private sector to cater to their needs. In other words, they might be willing to accept a two-tier health system in which publicly financed coverage provides a decent minimum for everyone and allows richer groups to supplement their statutory entitlement privately. The quality of publicly financed health care may play a pivotal role in this process. If people perceive the quality to be so low or likely to deteriorate to such an extent that it will take a long time and significant additional investment to raise it to an acceptable level, they might feel it is not worth supporting the public system and demand greater opportunity for private financing through voluntary health insurance or individualized medical savings accounts.

Clearly, differences in incomes and health status mean that some people will have greater ability to pay privately for health care than others. Supply-side factors can play a role, too – for example, older people and those with existing health problems may not be able to access the market for private health insurance if insurers can reject applications and exclude coverage of pre-existing conditions. Recognition of the limitations of private financing for some groups – and perhaps awareness of the need for financial protection in changing economic circumstances – could enhance willingness to pay collectively for health care.

On the expenditure side, rising expectations about quality and access seem likely to push health spending up, although once again the dynamics and outcomes of this process may be more complex than is often assumed. While public perception of the quality of the health system is clearly important, understanding of the concept of value for money may be an equally critical factor. For example, if people understand the equity and efficiency objectives behind strategic resource allocation – greater control over the number and location of hospital beds and CT scanners, requiring referrals to specialists, exclusion of less effective or expensive drugs from the benefit package, etc. – then they may be willing to support the government in resisting lobbying from other interest groups (providers, private insurers, the pharmaceutical industry, medical device manufacturers) for unconditional

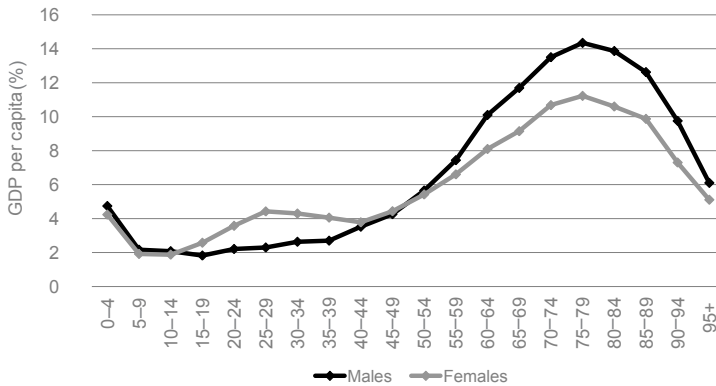
extra spending in areas that do not demonstrate value, or for cuts in public coverage to create opportunities for private financing. Public backing for value-enhancing measures might boost political will to focus on supply-side issues, rather than falling back on the relatively easier (but less effective) option of making greater use of demand-side incentives to contain costs.

Consequently, policy-makers should consider rising expectations about quality and access as an opportunity to improve health system performance. They should also seize the opportunity to inform and educate people about the benefits of investing public resources in health and the value to be gained from avoiding waste and making the available resources go further.

Expenditure projections

To project health expenditure to 2030, we calculated a unit cost for each type of health service in the base year (2007). For the years 2008 to 2030 we took the age and sex health expenditure profiles indicated in Figure 30 and multiplied them by projected population size and structure, expenditure coefficients and unit costs.

Figure 30. Age-related health expenditure profiles, 2007



Source: Based on data from EHIF and NIHD.

The expenditure projections are based on four different scenarios³⁰ (Figure 31). While each scenario differs from the others in important ways, they are all based on the following assumptions:

- no change in health status
- no change in expenditure profiles by age and sex
- changes in population size and structure as indicated in Table 16.

³⁰ The pure ageing and the labour intensity scenarios correspond to those used in EC projections (2009), but the convergence scenario does not directly correspond to the EC scenario of the same name.

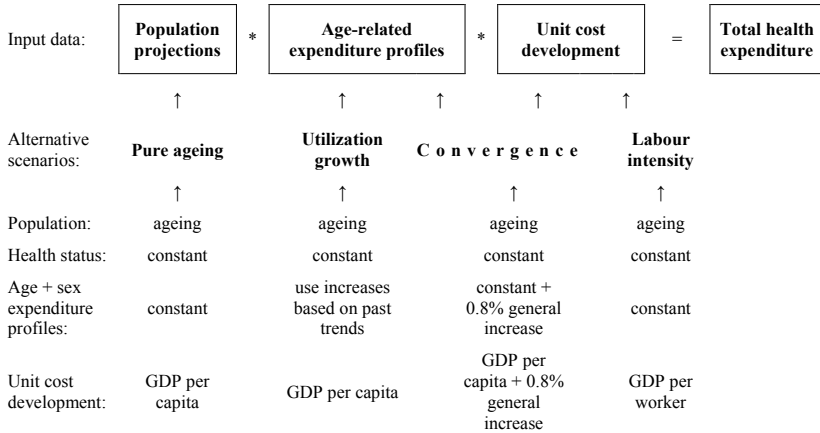
The baseline **pure ageing scenario captures** the impact of changes in population size and structure on health expenditure. It assumes that the unit costs of health care develop in line with GDP per capita growth (in other words, that health care prices are at an optimum level and future costs-per-person will rise as society becomes richer).

The **labour intensity scenario**³¹ reflects the health sector's labour-intensiveness, assuming that the unit costs of health care are driven by changes in productivity and salaries rather than by GDP growth alone.³² Thus, unit costs develop in line with growth in GDP per worker. The scenario implicitly assumes that health care costs are driven more by supply than by demand.

The **convergence scenario** assumes that health expenditure will grow faster than GDP per capita due to technological development, health sector salaries growing faster than those in other sectors, higher expectations arising from improved living standards and a desire to catch up to more developed neighbours and political decisions (for example, about levels of health sector salaries and benefits). Unit costs follow growth in GDP per capita, but are set at 0.8% above it to allow Estonian per capita health expenditure to converge with the EU-15 by 2030.³³ The scenario also assumes a slight increase in the use of health services.

The **utilization growth scenario** assumes that unit costs will develop in line with growth in GDP per capita and that the use of health services will increase/decrease in line with trends in the last 5–10 years (Table 19). It also assumes that there are unmet needs in some areas (for example, long-term care), that there will be increased use due to technical innovations in diagnosis and treatment, and that there will be a trend toward more cost-effective services like day care or primary care.

Figure 31. Schematic of projection methodology



³¹ One difference between our projections and the EC projections is that they assume that costs grow faster in the labour intensity scenario than in the pure ageing scenario, because growth in GDP per worker is usually faster than that of GDP per capita. Our results show the opposite, because the Ministry of Finance expects real wages and GDP to fall more than GDP per worker in the short term, because of the economic crisis, and to grow faster again in the long term.

³² Labour productivity grows faster than GDP per capita when the unemployment rate falls.

³³ The scenario assumes that the current level and structure of health care prices is optimal due to hospital payment now accounting for real costs and the fact that doctors' salaries, at twice the average national salary, should not rise further in relation to other salaries. However, the scenario assumes that further structural increases apply to technological developments (although they will not rise as fast in future as they have in recent years).

**Table 19. Assumptions about health service use
in the utilization growth scenario**

Type of service	Past trends	Future assumptions (% annual change per person)
Inpatient care	Cases over past 10 years (an annual decline of -0.6% in absolute numbers, but as the population has become smaller, the annual per capita decline was actually -0.1%) Average length of stay: last 5 years	Inpatient cases: -0.1% Average length of stay: -1.7%
Day care	Due to the lack of sufficient national trend data, the current rate of 5 day cases per 100 population in Finland and Denmark was used as a target.	Day cases: 1.1%
Ambulatory care	Specialist and primary care visits: last 5 years Dental visits: last 10 years	Specialist outpatient visits: 0.3% Primary care visits (mainly nurses): 2.4% Dental visits: 0.1%
Ancillary services	Laboratory tests: last 15 years Diagnostic images: last 10 years	Laboratory tests: 0.1% Diagnostic images: 2% ^a
Medicines	Prescriptions: since 2003	Prescriptions: 5% ^b
Long-term care	Ambulatory long-term care visits: since 2003 (actually increased by 43.2% annually per person aged 65 and over; 4.5% required to fit in with nursing care development plan targets) Inpatient long-term care cases: since 2003	Ambulatory long-term care visits: 4.5% Inpatient long-term care cases: 3.5%

Source: Based on NIHD (13).

^a The actual rate of growth in the last 10 years was 3.8% annually per person, partly due to a large increase in the purchase of diagnostic equipment at the end of 2006 (to avoid an increase in the rate of VAT from 5% in 2006 to 18% in 2007). The lower rate of 2% chosen for the projections is based on the assumption that the market is now saturated.

^b The actual rate of growth since 2003 was 6.7% annually per person. The lower rate of 5% chosen for the projections is based on the assumption that there is some saturation and that further increases will not be as large.

All four scenarios use EHIF's 2008 real unit cost change, summarized in Table 20, applied to health services regardless of payer because other payers often use EHIF's price list; we therefore assumed that EHIF cost changes would drive cost changes for other payers.

Table 20. Assumptions about unit cost development

Year	Unit cost development	Use/expenditure profiles	Population
2007	Base year	Actual data	Base
2008	Actual: EHIF+government ^a Model: government+ other payers		Model
2009	Constant (but fall in OOPs), according to scenario	Constant	
2010	Fall in unit cost according to scenario		
2011 2012	Constant at 2010 price level (except OOPs), according to EHIF 4-year cost planning principles		
2013	Constant at 2010 price level + 1% (except OOPs), according to EHIF 4-year cost planning principles		
2014 onwards	According to scenario	Increase according to the convergence and utilization growth scenarios	

Source: Based on EHIF (84).

^a The current projections for government expenditure include both central and local government spending.

Results by scenario

In 2007 total health expenditure (without sick leave benefits) was equal to 5.4% of GDP. The projections suggest it will be between 1.5 and 4.1 percentage points higher (6.9% to 9.5% of GDP) in 2030 (Figure 32). If we include sick leave benefits,³⁴ the total is expected to rise to between 7.5% and 10.1% of GDP in 2030 (Figure 33).

The pure ageing and labour intensity scenarios result in the lowest expenditure growth (7.0% and 6.9% of GDP in 2030, respectively). The utilization growth scenario results in the highest expenditure growth (9.5% of GDP in 2030). The projections therefore show that the effect of ageing on future levels of health expenditure is much smaller than the effect of changing patterns of health service use and technological development.

³⁴ Sick leave benefits are not included in the System of Health Accounts (SHA), so results are given with and without them.

Figure 32. Total health expenditure (without sick leave), 2000–2030

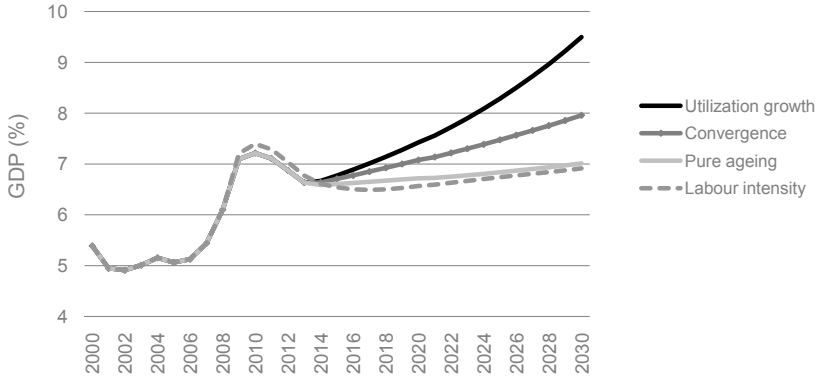
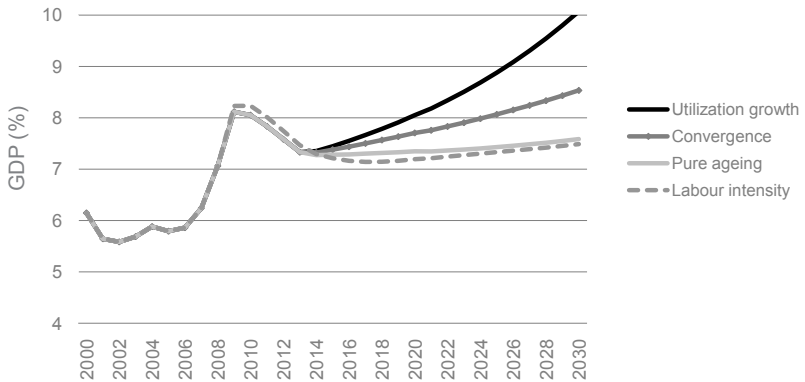
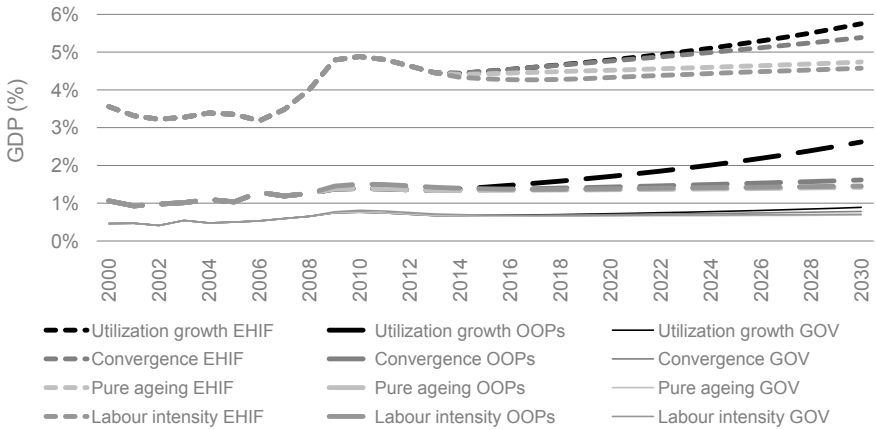


Figure 33. Total health expenditure (with sick leave), 2000–2030



Under all scenarios expenditure growth is highest for EHIF (1.1 to 2.3 percentage points higher) and for OOPs by households (0.2 to 1.4 percentage points higher) (Figure 34 and Table 21). However, the impact of higher spending by households is particularly marked under the utilization growth scenario: household health spending more than doubles as a share of GDP, from 1.2% to 2.6%.

Figure 34. Health expenditure by financing source, 2000–2030



Note: GOV = government expenditure.

Table 21. Projected change in health expenditure 2007–2030

Financing source by scenario	2007 (% GDP)	2030 (% GDP)	Change 2007–2030 (% points GDP)
Pure ageing			
EHIF without sick leave	3.5	4.7	1.2
EHIF with sick leave	4.3	5.3	1.0
Government	0.6	0.7	0.1
Public sector	4.2	5.5	1.3
Out-of-pocket	1.2	1.4	0.2
Total with sick leave	6.2	7.6	1.4
Total without sick leave	5.4	7.0	1.6
Labour intensity			
EHIF without sick leave	3.5	4.6	1.1
EHIF with sick leave	4.3	5.2	0.9
Government	0.6	0.7	0.1
Public sector	4.2	5.4	1.1
Out-of-pocket	1.2	1.5	0.3
Total with sick leave	6.2	7.5	1.3
Total without sick leave	5.4	6.9	1.5

Table 21. (cont.)

Financing source by scenario	2007 (% GDP)	2030 (% GDP)	Change 2007–2030 (% points GDP)
Convergence			
EHIF without sick leave	3.5	5.4	1.9
EHIF with sick leave	4.3	6.0	0.7
Government	0.6	0.8	0.2
Public sector	4.2	6.2	1.0
Out-of-pocket	1.2	1.6	0.4
Total with sick leave	6.2	8.5	2.3
Total without sick leave	5.4	8.0	2.6
Utilization growth			
EHIF without sick leave	3.5	5.8	2.3
EHIF with sick leave	4.3	6.3	2.0
Government	0.6	0.9	0.3
Public sector	4.2	6.7	2.5
Out-of-pocket	1.2	2.6	1.4
Total with sick leave	6.2	10.1	3.9
Total without sick leave	5.4	9.5	4.1

Note: Public sector' includes capital costs but excludes sick leave benefits.

Different scenarios also result in changes in spending structure (Table 22). EHIF spends less of its budget on inpatient and outpatient care under each scenario, but the reduction for inpatient care is notable in the utilization growth scenario, where spending on pharmaceuticals more than doubles. The increase in the proportion of EHIF's budget spent on day care is modest for all scenarios.

Notable changes in the structure of government spending include reductions in the proportion of its budget spent on ambulance services in the utilization growth scenario and significant increases in its spending on long-term care and pharmaceuticals and medical goods (the latter almost doubling). Households also see the most change in the utilization growth scenario, with pharmaceuticals rising from 62% to 82.6% of their spending on health (most of this on prescription drugs) and spending on dental care going down. While the reduction in the proportion spent on dental care may reflect lower demand among older people, it may equally reflect unmet need for dental care.

Table 23 summarizes the differential impact of changes in utilization on total health expenditure as a share of GDP. From this we can see that increased use of pharmaceuticals has by far the largest impact on future health expenditure for all payers, including households. We can also see that the decline in hospital use would almost compensate for increases in the use of more cost-effective services such as day care, ambulatory care and long-term care.

**Table 22. Changes to health expenditure structure in 2030
by financing source**

	Baseline	Pure ageing	Labour intensity	Convergence	Utilization growth
	2007	2030	2030	2030	2030
EHIF					
Inpatient	40.6	39.0	39.0	39.0	23.6
Outpatient	27.9	25.4	25.4	25.4	24.8
Pharmaceutical and medical goods	14.0	17.2	17.2	17.2	32.5
Ancillary services	9.7	9.9	9.9	9.9	9.7
Day care	3.1	3.3	3.3	3.3	3.3
LTC	2.3	2.6	2.6	2.6	4.0
Government					
Ambulance	24.1	27.8	26.9	27.8	21.5
LTC	16.3	18.9	18.3	18.9	26.1
Pharmaceutical and medical goods	12.6	12.5	12.9	12.5	22.2
Out-of-pocket					
Pharmaceutical and medical goods	61.9	66.5	64.3	66.5	82.6
- prescription	37.1	42.8	39.8	42.8	53.1
- OTC	14.3	13.5	14.0	13.5	16.8
Dental care	19.1	15.9	17.0	15.9	8.8
LTC	2.1	2.2	2.3	2.2	1.8

Note: LTC= long-term care.

Table 23. Summary of utilization changes and impact on total health expenditure

Type of service	2007	2030	2030 (% GDP) ^a	Change from pure ageing scenario (% points)
Hospitalizations per person	0.179	0.176	} 6.50	} -0.50
ALOS (days)	6.7	4.6		
Day cases per 100 population	4	5	7.05	0.03
Specialist OP visits per person	3.3	3.5	7.06	0.04
Primary care visits per person	3.5	5.9	7.20	0.19
Dentist visits per person	1.49	1.52	7.02	0.01
Laboratory tests per person	10.3	10.6	7.02	0.01
Diagnostic images per person	1.45	3.4	7.10	0.08
Prescriptions per person	5	14.5	9.48	2.46
LTC hospitalizations per person aged 65+	0.06	0.12	} 7.22	} 0.20
LTC ALOS	28	28		
LTC ambulatory cases per person aged 65+ (21 visits per case)	0.08	0.20	7.04	0.02

Source: Based on NIHD (13).

Note: ALOS= average length of stay; LTC= long-term care; OP=out patient.

^a Impact of specific health service utilization growth holding the use of all other health services constant.

Revenue projections

This section makes projections of the level of EHIF revenue generated by the social tax between now and 2030. The mix of taxes and other mechanisms used to finance the health system are the result of political choices. Changes may be introduced overnight if needed – a point illustrated by tax increases and cuts in temporary sickness benefits in 2009. Consequently, any attempt to project future revenue can only serve as a guide as to what might happen under the assumption that there are no changes in current tax policy. We begin by looking at EHIF revenue from the social tax³⁵ and then from the social tax contributions paid to EHIF by the central government on behalf on some non-contributing groups.

Social tax revenue from employment

The amount of revenue generated by the social tax depends on the effective contribution rate (which might be lower than the nominal rate of 13% if there are undeclared wages). This is applied to the total wage bill, which in turn depends on the average wage, the employment rate and the size of the working age population (Equation 1). Revenue from the social tax applied to employment in the baseline year (2013) is multiplied by Ministry of Finance projections of growth in the rate of real wages, consumer prices and employment growth.³⁶

³⁵ Any reference to the social tax is to the health part of it only, unless otherwise stated.

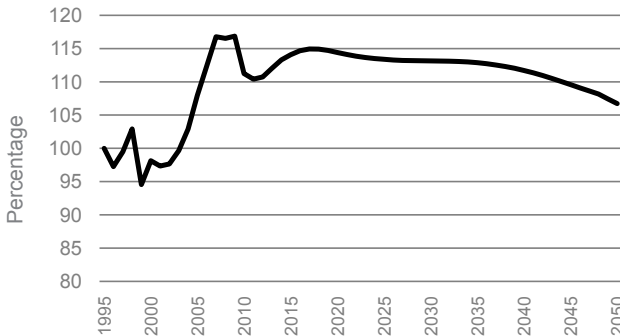
³⁶ $Revenue_{t+1} = Revenue_t \times (1 + \text{real wage growth}_{t+1}) \times (1 + \text{consumer price growth}_{t+1}) \times (1 + \text{employment growth}_{t+1})$

Equation 1

$$\text{Revenue} = \underbrace{\frac{\text{Health insurance contributions}}{\text{Wage bill}}}_{\text{Effective contribution rate}} \times \underbrace{\frac{\text{Wage bill}}{\text{Employment}}}_{\text{Average wage}} \times \underbrace{\frac{\text{Employment (15-69-year-olds)}}{\text{Populations (15-69-year-olds)}}}_{\text{Employment rate}} \times \underbrace{\frac{\text{Populations (15-69-year-olds)}}{\text{Populations}}}_{\text{Population structure}} \times \text{Populations}$$

Between 2013 and 2030, social tax revenue from employment remains constant as a share of GDP (around 4.7% to 4.8%).³⁷ During the same period social tax revenue per capita as a proportion of the average gross wage will decline slightly and by 2050 it will decline further to reach the level seen in 2005 (Figure 35). In other words, a decline in the employment rate between now and 2050 will result in lower social tax revenue per capita from employment when compared to average wages. Therefore, on average health expenditure per capita financed from social tax revenue cannot grow faster than average wages in a situation where overall employment falls.

Figure 35. Long-term development in social tax revenue per capita (1995=100)



Source: Based on data from Statistics Estonia, the Ministry of Finance and EHIF.

Social tax contributions paid by the central government

Social tax contributions paid by the central government or the unemployment insurance fund (referred to later jointly as the central government) account for between one and two per cent of total social tax revenue. The share is slightly higher for the health part of the social tax revenue, because only the health part is paid for some social groups.

This proportion is expected to increase due to rises of the minimum base for contributions in relation to the average wage. The minimum base was increased from about 10% of the average wage in 2005 to 23% in 2008 and was predicted to reach 39% in 2009.³⁸ Over the long term it is likely to remain at around 33%, in line with trends in the minimum wage in the last ten

³⁷ This is because the reduction in the working-age population and the employment rate affects GDP and social tax revenue at a similar rate so long as the effective contribution rate does not change and labour productivity and wages grow at the same pace.

³⁸ From 2009 it cannot be less than the minimum wage of the previous year.

years. The Ministry of Finance forecast that the central government's share of social tax revenue would increase to 3% in 2009, but due to declining employment, the share may actually be larger (up to 3.5%).

Equation 2, where the effective contribution rate is 13% and the average contribution base is the minimum base (or the size of unemployment benefits), was used to simulate possible changes in the central government's social tax contributions for various groups.

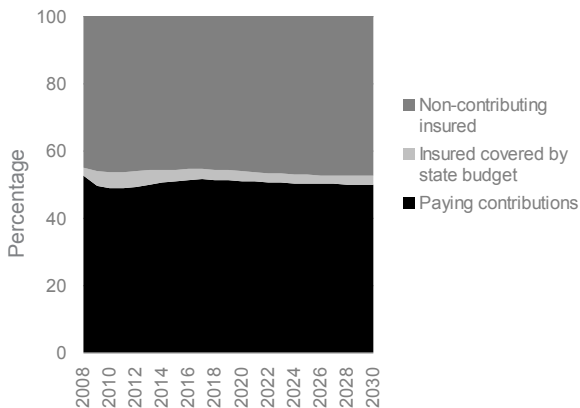
Equation 2

$$\text{Revenue} = \underbrace{\frac{\text{Health insurance contributions}}{\text{Health insurance base}}}_{\text{Effective contribution rate}} \times \underbrace{\frac{\text{Health insurance base}}{\text{Eligible group}}}_{\text{Average contribution base}} \times \underbrace{\frac{\text{Eligible group}}{\text{Populations}}}_{\text{Share of eligible group in population}} \times \text{Populations}$$

If we assume that in the long term the minimum base and unemployment benefits grow at the same pace as the average wage³⁹ and the contribution rate remains unchanged, then changes in the real value of the central government's contributions depend only on the share of the population covered by these contributions. The state mainly covers people on parental leave and the unemployed (Table 7).

Due to changes in the population structure, the share of non-contributing insured people will rise from 45% in 2008 to 47% in 2030 and 51% in 2050 (Figure 36). However, in the long term, the impact of this rise will be small because our baseline projections assume that fertility rates will rise slightly and employment rates will rise to 2006–2007 levels.

Figure 36. Structure of EHIF beneficiaries, 2008–2030

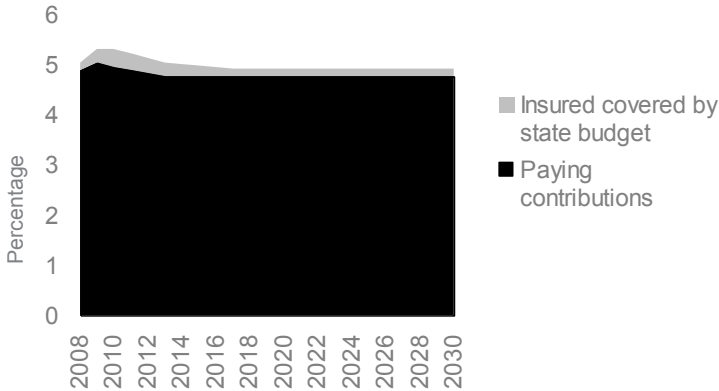


Source: Based on data from Statistics Estonia and EHIF.

³⁹ Meaning that the ratio of the minimum wage to the average wage is constant, which has been more or less true in the past.

In the near future, social tax revenue from employment and from central government contributions will rise as a share of GDP, partly because GDP declines faster than social tax revenue and partly due to rising contributions on behalf of the unemployed and those on parental leave (due to rising numbers and a higher minimum base). In the long term, however, social tax revenue will remain constant as a share of GDP (around 4.8%), in keeping with the most recent Ministry of Finance projections (Figure 37).

Figure 37. Social tax revenue by category, 2008–2030



Note: Paying contributions includes tax paid by employers and the self-employed.

Impact on EHIF revenue

Future EHIF revenue depends mainly on assumptions about employment and wages. In the short term it will fall from its 2008 peak, but will reach that level again by 2014–2015 and then continue to increase steadily due to growth in wages. In 2008 EHIF had about 9300 krooni per capita to spend on health care and temporary sickness benefits. Between 2001 and 2008, EHIF revenue increased 2.8 times in nominal terms, twice as high as the increase in consumer prices and 1.2 times higher than average wages. In the short term, EHIF revenue will decline by up to 15% by 2010, both nominally and adjusted for price.⁴⁰ Thus, health care prices will potentially determine the impact of the revenue loss on the volume of health services provided during the current economic crisis (that is, volume may be maintained at current levels if prices fall). In the long term, EHIF revenue is projected to rise about 1.5 times faster than consumer prices, but at the same pace as average wages (assuming there are no major changes in the employment rate).

⁴⁰ The wage-adjusted decline is not so large (6%) since wages are also predicted to decline on average.

Limitations and sensitivity analysis

Projections are not predictions of the future. They are heavily influenced by their underlying assumptions and involve considerable uncertainty. The current economic changes add to that uncertainty, as does the length of the projection period. Therefore, the projections are limited to twenty years.⁴¹ A key assumption is that health care unit costs will fall slightly during the economic crisis and will not start to rise again until 2014, after which there will be a continuous increase in expenditure to 2030. However, it is possible that unit costs will actually start to rise earlier.

The projections do not account for changes in health status or age-related expenditure profiles, which as stated may have a significant impact on future expenditure. For example, the 'constant health scenario' in the EC projections, which assumed a modest compression of morbidity, clearly shows how healthy ageing can lower the expenditure growth rate (3). Neither is emigration or immigration – which could affect population size and structure, the size of the labour force, salaries and patterns of health care supply and use – considered in the present projections. Finally, because older people in Estonia use health services less intensively and at lower cost than in richer countries, these projections may underestimate future costs if rising living standards and higher expectations increase utilization and costs among older people.

In light of these potential limitations, some of the assumptions underlying the projections were changed to test the robustness of the results. Table 24 summarizes the results of the sensitivity analysis. Key differences are highlighted in bold.

- Assuming the total fertility rate will remain constant between now and 2030 would lower population size a little further but has very little effect on health expenditure. Assuming there will be no rise in life expectancy lowers population size, dependency ratios and the employment rate, also with little effect on health expenditure.
- Assuming the employment rate will remain at 2010 levels lowers GDP and therefore increases health expenditure as a share of GDP. This assumption has an even sharper negative effective on revenue because the health sector relies heavily on the labour market.
- Assuming the unit costs of health care are kept at the 2008 level through 2010 but start to grow again in 2011 (rather than in 2014, as in the four main scenarios) has a large effect on health expenditure, which would rise to 8% of GDP by 2030 (1 percentage point more than in the pure ageing scenario). This suggests that decisions about health care prices made in the next few months and years will have a key impact on future expenditure.

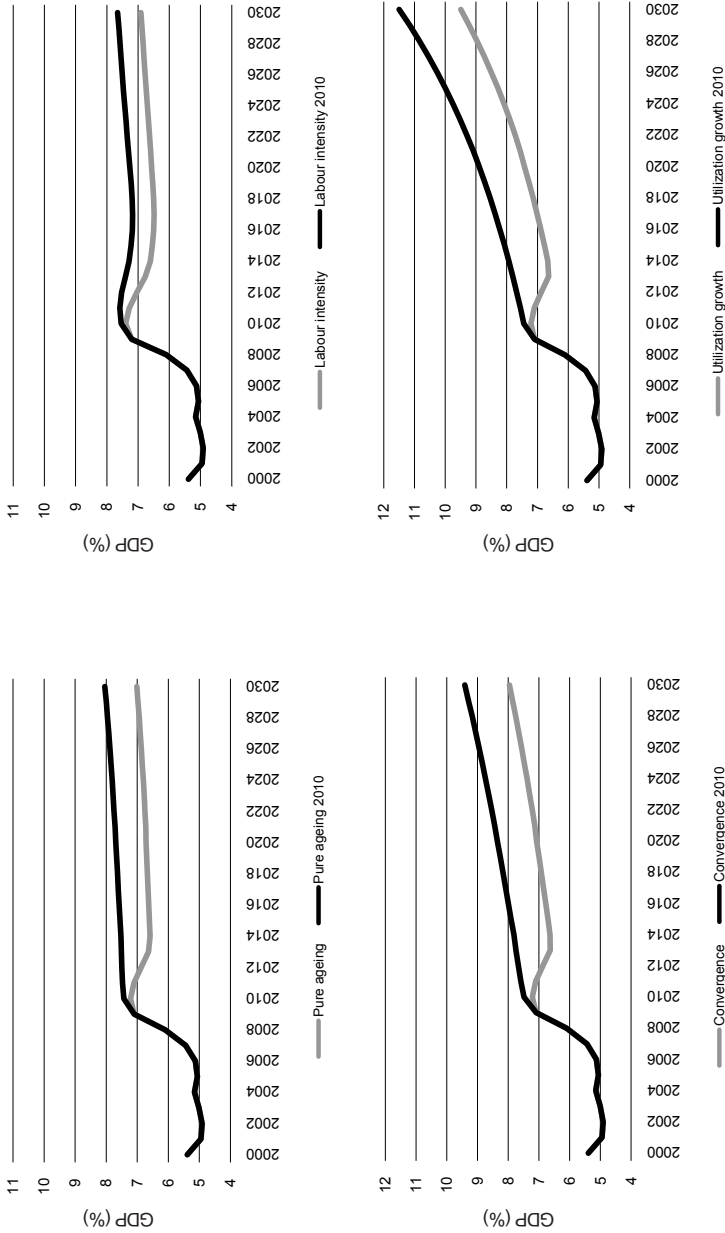
Applying the different assumptions to the other scenarios, we found that the effect was largest on the utilization growth scenario (Figure 38). The same scenarios were also applied to social tax revenue and the resulting financing gap for EHIF. The results are presented in the following section.

⁴¹ This contrasts with the latest EU projections, which cover the next fifty years.

Table 24. Summary of sensitivity analysis, 2030

	Pure ageing scenario	Constant total fertility rate	Constant life expectancy	Constant employment	Earlier growth in unit costs
Total population	1 290 962	1 288 990	1 258 290	1 290 962	1 290 962
Total fertility rate	1.71	1.66	1.71	1.71	1.71
Life expectancy-male	73.6	73.6	68.6	73.6	73.6
Life expectancy-female	82.8	82.8	79.2	82.8	82.8
Share of 0–14 years	14.9%	14.8%	15.2%	14.9%	14.9%
Share of 15–64 years	63.2%	63.4%	64.3%	63.2%	63.2%
Share of 65+ years	21.8%	21.9%	20.5%	21.8%	21.8%
Old age dependency ratio	34.5%	34.5%	31.9%	34.5%	34.5%
Dependency ratio	58.1%	57.8%	55.6%	58.1%	58.1%
Employed (thousands)	595.5	595.8	586.4	541.5	595.5
Labour force participation rate	66.4%	66.4%	66.7%	64.7%	66.4%
Employment rate	61.5%	61.5%	61.5%	55.9%	61.5%
Unemployment rate	7.4%	7.4%	7.8%	13.5%	7.4%
GDP, current prices (billion kroon)	600.6	600.9	591.4	546.5	600.6
GDP per capita (kroon)	465 233	466 196	470 013	423 344	465 233
Total health expenditure (million kroon)	42 109	42 202	40 791	39 687	48 297
Sick leave benefits (million kroon)	3 463	3 463	3 426	3 091	3 463
Total health expenditure as % of GDP	7.01%	7.02%	6.90%	7.26%	8.04%
Total health expenditure with sick leave benefits as % of GDP	7.59%	7.60%	7.48%	7.83%	8.62%

Figure 38. Adjusting for earlier growth in unit costs (from 2010), all scenarios



Note: Scenarios labelled '2010' assume that expenditure will start to rise from 2010 rather than from 2014 (see the section on sensitivity analysis for details).

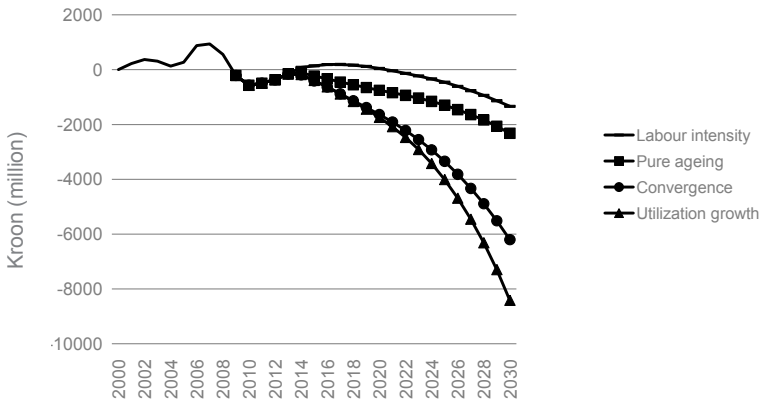
The financing gap

Projections show that the annual gap between revenue and expenditure for EHIF may be around 600 million kroon by 2010 and could be as high as 8 billion kroon by 2030 (Figure 39). As a share of GDP, the annual gap between EHIF revenue and expenditure in 2030 varies from around 0.2% to 1.5% of GDP (Figure 40). If unit costs are allowed to rise in 2010 then the gap could be up to 2.5% of GDP. Based on the pure ageing scenario, the projected minimum gap is set to be at least 0.4% of GDP.⁴²

The large variation in the projected gap reflects different assumptions. Projected revenue–expenditure gaps are particularly sensitive to assumptions about how expenditure develops. While revenue levels clearly depend on developments in employment and wages, there is more uncertainty around expenditure (as we have shown), both in terms of health care prices and services.

The impact of different demographic and labour market assumptions on the projected gap is moderate in the medium term in comparison to assumptions about prices and utilization (Figure 41). Thus, while the pure ageing scenario suggests that the projected gap will be 0.39% of GDP by 2030, if life expectancy does not improve, the pressure on the health sector is lower, resulting in an annual deficit equal to 0.27% of GDP. Even if employment remains at 2010 levels, the gap is larger, equal to about 0.46% of GDP, but not as large as the gap that would emerge if expenditure started to rise in 2010.

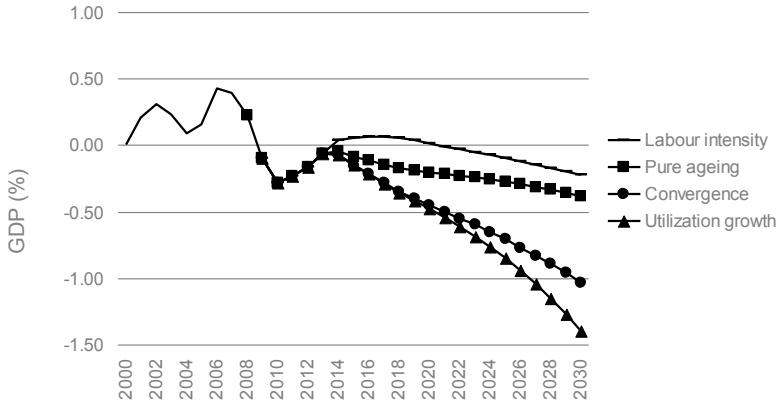
Figure 39. Projected EHIF revenue-expenditure gap (million kroon), 2000–2030



Source: Based on data from Statistics Estonia, the Ministry of Finance and EHIF.

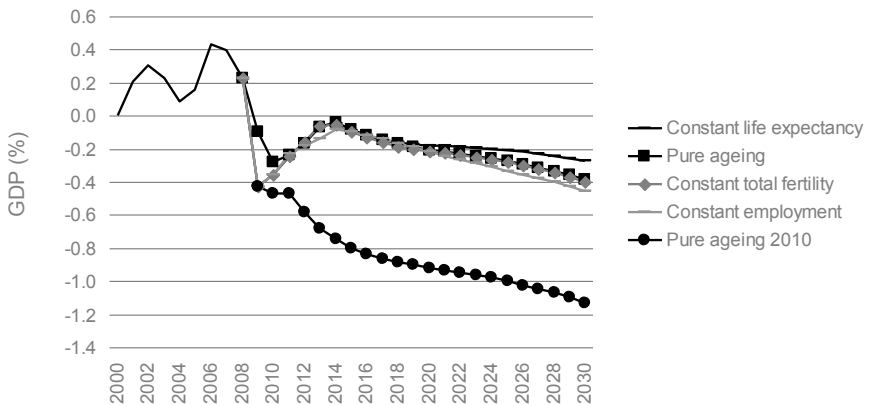
⁴² Corresponding to expenditure for 2009–2013 based on EHIF forecasts.

Figure 40. Projected EHIF revenue-expenditure gap, 2000–2030



Source: Based on data from Statistics Estonia, the Ministry of Finance and EHIF.

Figure 41. Projected EHIF revenue-expenditure gap, pure ageing scenario

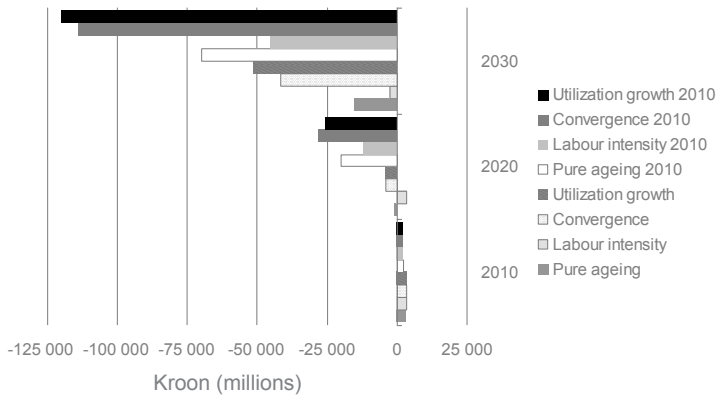


Source: Based on data from Statistics Estonia, the Ministry of Finance and EHIF.

Note: Scenarios labelled ‘2010’ assume that expenditure will start to rise from 2010 rather than from 2014 (see the section on sensitivity analysis for details).

Annual deficits will deplete EHIF's reserve funds. For 2010 the reserves amount to 2–3 billion kroon, but the cumulative loss rises to 28 billion kroon in 2020 and an unimaginable 120 billion kroon in 2030 (Figure 42). As a share of GDP the cumulative deficit varies from 0.45% to 20% in 2030, reflecting uncertainty around expenditure projections (Figure 43). A critical factor is the underlying assumption about health care prices and the question of whether health expenditure will begin to rise in 2010 or only after 2014. In the former case (pure ageing 2010), EHIF exhausts its reserves by 2012; in the latter case by 2019.

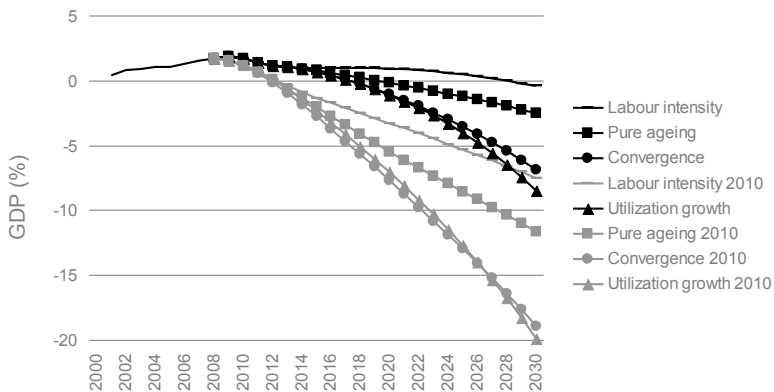
Figure 42. Projected EHIF reserve funds, selected years



Source: Based on data from Statistics Estonia, the Ministry of Finance and EHIF.

Note: Scenarios labelled '2010' assume that expenditure will start to rise from 2010 rather than from 2014 (see the section on sensitivity analysis for details).

Figure 43. Projected EHIF reserve funds, 2008–2030

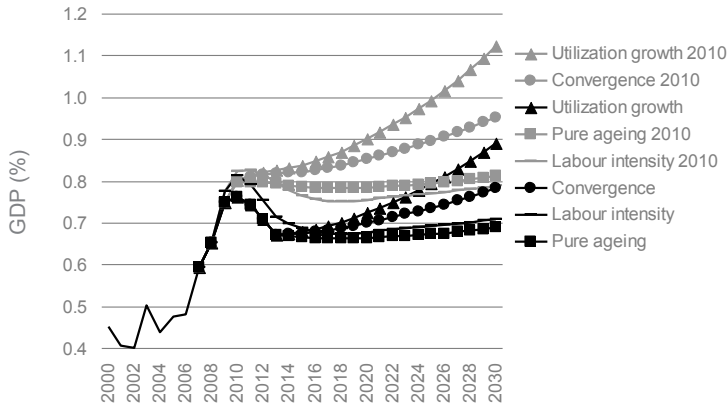


Source: Based on data from Statistics Estonia, the Ministry of Finance and EHIF.

Note: Scenarios labelled '2010' assume that expenditure will start to rise from 2010 rather than from 2014 (see the section on sensitivity analysis for details).

There is similar uncertainty about projections for government expenditure on health, which is set to range from 0.7% to 1.1% of GDP by 2030, depending on assumptions (Figure 44). Thus, the total gap in public sources of health finance in 2030 may be between 0.3% and 1.7% of GDP under conservative assumptions or between 1% and 3% assuming health care prices start to rise again in 2010 rather than in 2014 and expenditure follows past utilization trends (Table 25).

Figure 44. Projections of government health expenditure, 2008–2030



Source: Based on data from Statistics Estonia, the Ministry of Finance and EHIF.

Note: Scenarios labelled '2010' assume that expenditure will start to rise from 2010 rather than from 2014 (see the section on sensitivity analysis for details).

Table 25. Summary of public revenue–expenditure gap in 2030

	EHIF expenditure	EHIF revenue	Annual EHIF gap	Government expenditure increase, 2007–2030	Total gap in public financing
Baseline scenarios					
Pure ageing	5.3	4.9	0.4	0.1	0.5
Labour intensity	5.2	4.9	0.2	0.1	(smallest) 0.3
Convergence	6.0	4.9	1.0	0.2	1.2
Utilization growth	6.3	4.9	1.4	0.3	1.7
Sensitivity to costs					
Pure ageing 2010	6.1	4.9	1.1	0.2	1.3
Labour intensity 2010	5.7	4.9	0.8	0.2	1.0
Convergence 2010	7.0	4.9	2.1	0.4	2.5
Utilization growth 2010	7.4	4.9	2.5	0.5	(largest) 3.0
Sensitivity to demographic and labour market factors (pure ageing +...)					
+ Constant total fertility	5.3	4.9	0.4	0.1	0.5
+ Constant life expectancy	5.2	5.0	0.3	0.1	0.4
+ Constant employment	5.5	5.0	0.5	0.1	0.6

Summary of key findings

In this section we have looked at a range of demographic, labour market, macroeconomic and health system factors likely to affect future levels of health expenditure and revenue for the health sector. We have projected their impact on health sector revenue and on health spending by EHIF, by government and by households for the next twenty years. We have also estimated the potential gap between public revenue and public expenditure between now and 2030.

The projections and the accompanying sensitivity analysis clearly show the following.

- Health expenditure will be higher; the question is by how much?
- Health system factors (technological development and patterns of health service utilization) have a much larger impact on future health expenditure than demographic factors (Figure 32).
- If current patterns of health service utilization continue and grow at the same rate as in the last 5–10 years, the effect on public spending will be great. In addition, private spending will more than double as a share of GDP by 2030 (Figure 34), mainly due to greater use of prescription drugs, with serious implications for financial protection and equity.

- EHIF revenue will remain constant as a share of GDP due to a decline in employment. Population ageing means that EHIF's ratio of contributors to non-contributors will fall and, even with increases in average wages, its revenue will not grow sufficiently to match even the most conservative projections of health expenditure in 2030 (Figure 1). Thus, there is likely to be a significant gap between EHIF revenue and expenditure.
- The size of the projected gap is particularly sensitive to assumptions about how expenditure develops. Health care unit costs have fallen slightly in the last two years in response to the financial crisis. If they start to rise again before 2014, the gap may be even higher than projected. EHIF reserves could be depleted by as early as 2012–2013.
- The total gap in public (EHIF and government) sources of health financing in 2030 could be from 0.3–3.0% of GDP, depending on when and how quickly health care prices start to rise and whether utilization patterns reflect trends seen in the last 5–10 years (Table 25).

5. Stakeholder views

This section summarizes the views of key actors in the health system, representatives from the main political parties and academics, all obtained through two workshops and a series of interviews held in Tallinn in 2009.⁴³ People were asked for their views on the following: the strengths and weaknesses of Estonian health financing policy; the challenges facing financing policy now and in the future; the public-private financing mix; coverage breadth, scope and depth; and the values underpinning the Estonian health system.

Strengths and weaknesses of health financing policy

Strengths

There is a general sense among stakeholders that the Estonian health system produces good value for money, giving most people timely access to a reasonable range of health services of decent quality. Some commented on the fact that quality and outcomes are good given Estonia's relatively low level of spending on health as a proportion of GDP.

Stakeholders identified two key strengths of health financing policy. First, it is based on the principle of solidarity: almost all stakeholders feel it is right that those who are currently employed should collectively contribute to covering the health care costs of those who are not yet or no longer working (mainly children and pensioners). Second, many stakeholders drew attention to the importance of having an earmarked tax (the social tax) to provide a stable revenue base. In their view this dedicated funding source has to some extent protected the health sector from political bargaining. Due to a combination of earmarked revenue, competent EHIF management and a long period of economic growth, there is a general feeling that the health system is in good financial shape at present.

Limitations

In spite of this positive outlook, stakeholders identified limitations in several areas. Many noted the relatively small size of the public sector and question whether the country spends enough on health. In spite of the stability that comes from having an earmarked source of revenue, several stakeholders felt that the link with employment is problematic, partly because it adds to labour costs and partly because projected demographic changes suggest that this base will be shrinking.

Stakeholders also frequently cited coverage-related issues as limitations. Employment-based financing was seen as an obstacle to achieving universal coverage and many stakeholders expressed dissatisfaction with the number of people who are not entitled to EHIF coverage (about 5% of the population at the time of the first workshop and interviews) and the limited range of health services available to this group. Also, while some thought the scope of EHIF benefits to be adequate, many highlighted the lack of coverage of adult dental care and the paucity of long-term care coverage. Several stakeholders felt that the level of investment in public health, prevention and primary care is very low.

⁴³ See the introduction for further details and a list of workshop participants and interviewees, Annex 1 and Annex 2 for a summary of the two workshops and Annex 3 for a list of the specific questions asked during the interviews.

Many interviewees thought it was inappropriate for EHIF to cover occupational injury and illness. In their view, setting up a separate scheme to provide dedicated coverage of occupational injury and illness, with greater employer involvement, would bring Estonia in line with international experience. Several interviewees criticized the system for penalizing employers who invest in services to improve employee health (currently subject to taxes on benefits-in-kind) and there was a relatively widespread feeling that employers should be given incentives to play a greater role in preventing occupational injury and disease.

Some stakeholders were critical of reductions in the scope and depth of EHIF coverage in recent years, leading to a significant rise in OOPs, particularly for outpatient drugs and dental care. In their view, this has increased financial barriers to access. The geographically uneven nature of local government social assistance, reflecting large variation in municipality size (therefore resources), was also cited as a limitation that might exacerbate access inequalities. On the other hand, a minority felt that the health financing system fails to encourage people to look after their own health.

Finally, several stakeholders pointed to limitations in health services planning and purchasing, notably: a lack of sufficient control over pharmaceutical prices, inadequate control over the location of big-ticket technology, an absence of criteria for coverage decisions and failure to fully implement the Hospital Master Plan. Stakeholders saw these limitations as sources of inefficiency and several regarded enhancing efficiency as a key factor for financial sustainability. In general, the workshop participants placed more emphasis on strengthening purchasing than the interviewees. This may be because there was more time for explicit discussion of efficiency issues at the workshop, as well as the participants' technical expertise.

**Table 26. Stakeholder views of the health financing system
(in unranked order)**

Strengths	Limitations
<ul style="list-style-type: none"> • Financing based on solidarity • Stable funding through earmarked taxes for health • Transparency in funding channelled through EHIF • Expenditure control by EHIF • Timely access to health care • Reasonable scope of coverage • Value for money 	<ul style="list-style-type: none"> • Financing linked to employment limits potential to generate sufficient revenue in future • Low ratio of EHIF contributors to non-contributors • Coverage is not universal • Inadequate provision for the uninsured • Inadequate coverage of adult dental care and long-term care • Insufficient investment in public health and prevention • No dedicated coverage of occupational injury and illness • Lack of incentives for employers to invest in improving employee health • Reductions in coverage depth leading to rising OOPs • Inequalities of access • Lack of incentives to encourage healthy behaviour • Planning and purchasing could be improved

Challenges facing health financing policy

Stakeholders identified challenges from pressures associated with demographic factors (mainly population ageing); the size of the state and other public finance factors; health system factors; and public values.

Demographic factors

Discussion of population ageing focused on its revenue implications rather than its expenditure implications. There was a universal feeling among stakeholders that reliance on employment-based financing means difficulty generating sufficient revenue in coming years. In their view, not only is the revenue base likely to shrink in the short-to-medium term as recession leads to rising unemployment, but in the long term it will continue to shrink as the ratio of employed to not-employed declines due to demographics. There was consensus among stakeholders about the need to broaden the public revenue base, although workshop participants were on the whole more likely to favour direct over indirect taxation than were interviewees.

Public finance factors

There was general agreement among stakeholders that the level of funding provided directly by the government should be higher, both now and in the future. Measured as share of GDP, the Estonian public sector is one of the smallest in the European Union. Several interviewees referred to the state as being too 'thin', 'slim' or 'lean' to provide a sufficient degree of social protection. Almost all stakeholders thought that health spending would have to increase to meet growing demand attributed to population ageing, declining health status as a result of insufficient investment in public health and prevention as well as inadequate incentives for people to look after their own health, and changing public expectations about the quality of health care and public services more generally. However, many stakeholders noted that raising government funding would be challenging for two main reasons: a political commitment to not raising taxes and public mistrust and scepticism toward politicians.

While some stakeholders thought greater reliance on indirect taxes such as VAT would boost government spending, others suggested that this might be unrealistic in a time of economic recession. Also, for the sake of equity in financing, it would be preferable for additional government revenue to come from progressive direct taxes, as opposed to the current policy of lowering direct taxes and raising indirect taxes. Some stakeholders felt that political decisions about broader aspects of public finance (such as adopting the euro or treating EHIF reserves as part of the government budget for accounting purposes) are likely to undermine financing stability and add to cost pressures.

Many stakeholders questioned the wisdom of relying on financial transfers from the government budget, particularly in light of recent experience with hospital capital costs. Even though there is a widely shared view that employment-based funding is not financially sustainable, it is equally apparent that stakeholders do not believe that the government budget allocation process can be relied on to secure sufficient investment.

Health system factors

Health system factors identified by interviewees as likely to contribute to cost pressures in the longer term include: a lack of investment in public health and prevention, which is reflected in low life expectancy for men in particular, and an absence of universal coverage for non-emergency care (both are seen as counterproductive because they may affect health status and undermine efficient use of resources); technological innovation, especially in the area of pharmaceuticals, but also with regard to big-ticket items such as CT scanners; the ability to negotiate lower pharmaceutical prices, which may restrict future investment in new drugs; the absence of criteria to assist in coverage decisions; and the ageing of the health workforce, which may lead to a shortage of human resources for health. Overall, most stakeholders felt there was room for improved efficiency, but that efficiency savings alone would not be sufficient to address the projected revenue-expenditure gap.

Public values

A minority of interviewees suggested that the health financing system was ‘too fair’, largely because of the ratio of EHIF contributors to non-contributors (almost one to one), which is seen by some as a burden. Underpinning this view is the observation that older people are exempt from paying the social tax once they retire but are, on average, relatively high users of services. Most of these interviewees acknowledged that while this degree of redistribution was not ‘actuarially fair’, it was an inevitable and appropriate consequence of collective health financing based on solidarity. Nevertheless, one interviewee noted that the public perception of this ‘unfairness’ might become increasingly controversial.

Some interviewees mentioned the possibility of a widening gap between people’s expectations and the system’s ability to provide high quality, including timely access and individual choice. This was, in their view, an argument in favour of expanding private health insurance to increase choice for those who wanted to spend more (individually) on health. At the same time, others suggested that the current commitment not to raise taxes is out of step with growing public recognition of the need to pay more collectively in order to secure good quality public services.

Views on financing, coverage and values

Public-private financing mix

Interviewees were asked for their views on the balance between public and private spending (currently 75% public and 25% private) and how they thought it might change in future. A slight majority felt that private spending should not increase, that 25% was already a critical upper limit. Others favoured a higher private share, usually as a result of an expanded role for private health insurance, although some felt that the share should not go beyond 30%. A handful expressed no clear view either way, but felt it was inevitable that the private share would increase as the potential for higher public spending seemed limited.

Just over half of the interviewees felt that the level of OOPs was too high compared to other European countries or at the very least should not increase in future. In their view, OOPs present a financial barrier to access and undermine financial protection, particularly for the

poor, the old and those with chronic conditions – especially for dental care and drugs. The remainder thought it was not such an issue at the moment, perhaps because drug coverage for people with chronic conditions is comprehensive or because they consider it appropriate for people to take responsibility for their health. However, some thought it might be problematic in future.

Just under half of all interviewees did not think it would be appropriate to expand the role of private health insurance, mainly because of its potential to undermine solidarity and contribute to inequalities of access. Others were broadly in favour of expanding private insurance, mainly as a means of providing patients with faster access to care and a greater range of services. However, most of those in favour of more private insurance noted the very small current market and acknowledged that it would be difficult to stimulate demand for voluntary private cover without providing tax incentives.

Coverage breadth, scope and depth

Interviewees were asked for their views on the lack of EHIF coverage for around 5% of the population, who only have publicly financed emergency care. Two-thirds of interviewees felt that the absence of universal coverage was an issue and that the range of health services for the uninsured should at the very least cover primary care. Some argued that coverage should be universal, pointing to the inefficiency of having to provide people with expensive emergency services when it might have been cheaper to give them access to non-emergency care.

Those who felt that the proportion of the uninsured in the population was not a matter for concern gave different reasons: some thought the situation in Estonia compares favourably with other countries; others regarded the uninsured as largely undeserving and worried about the 'free rider' effect of providing better services for those who chose not to contribute through the tax system. One interviewee noted that extending coverage to the uninsured is probably a low political priority since there is a public perception that uninsured people are mainly non-deserving poor.

Asked whether they thought the scope of benefits provided by the health system should be changed in any way, most interviewees felt there were areas that are not sufficiently covered, most frequently (in order of perceived importance) public health and prevention; long-term care, particularly for older people; dental care for adults, especially pregnant women and new mothers; and drugs. Some interviewees emphasized fragmentation in the current long-term care financing system, leading to inequality of access. Many expressed a desire for a separate scheme to cover occupational injury and illness.

Some interviewees felt that lowering the scope of coverage would not be appropriate since the range of services currently provided is not overly generous. A small minority felt that it would be necessary to consider removing benefits, mainly due to resource constraints, but that this is a challenging task and must be done systematically, based on explicit criteria. A small majority felt that reducing coverage depth through cost sharing (for example, for outpatient prescription drugs) would be unwelcome because it creates financial barriers

and may affect health status, particularly for poor people. However, when asked whether they would prefer a system that provided a wider range of benefits in return for higher cost sharing (rationing by price) or one offering a narrower range of benefits but with access for all, with lower or no cost sharing, most interviewees chose the first, thus preferring broader coverage over financial protection.

Values underpinning the health system

Stakeholders were asked their views on the values underpinning the health system, the extent to which these reflected broader societal values and whether or not they had changed over time. Most stakeholders felt that people supported the principle of solidarity in health; only a few thought this went against the grain of what they saw as Estonians' generally individualistic outlook. However, interpretation of solidarity and fairness more generally varied among stakeholders. As noted above, a small number of interviewees suggested that the financing system is unfair in ways that could become problematic; several interviewees called for increased contribution by pensioners and one favoured contributions based on individual risk of ill health. Those who did not agree with these suggestions acknowledged that some older people benefited from services without having contributed to EHIF prior to retirement, but noted that this was due to the introduction of a new system following the collapse of the Soviet Union, which meant that those on the point of retiring in the early 1990s were not able to contribute. In practice, they observed, many pensioners have already contributed to EHIF and in future all older people will have 'earned' their entitlement to health benefits. These interviewees also felt that there was a common understanding of the obligation to cover older people, children – 'everybody'.

Some interviewees mentioned the possibility of a widening gap between expectations and the system's ability to deliver as an argument in favour of expanding private health insurance, but it was not clear whether this reflected public opinion as much as the interviewees' ideological position or professional interests or both. Nevertheless, there was a more general concern among interviewees about the relatively low priority given to health in government spending and the effect this might have on the quality of care, which could in turn lower public support for collective financing.

Two factors suggest that some interviewees may not be as strongly committed to solidarity as they say they are. First, there was a general preference for the health system to provide a greater range of services even if this means a higher level of cost sharing (as opposed to a more limited range of benefits that are free at the point of use). Second, a minority expressed a preference for increasing 'individual responsibility', either by financially rewarding those who look after their own health or penalizing those who engage in unhealthy behaviour. Also noteworthy is the widely shared lack of trust in government, which was demonstrated by many interviewees' preference for the employment-based financing system over greater reliance on government budget allocations, even though most recognize that the status quo is not well suited to coping with coming cost pressures. Workshop participants felt that solidarity would increase in the short-to-medium term, particularly given rising unemployment, which might encourage greater appreciation of publicly financed benefits.

6. Options for financial sustainability

This section presents a range of options in four areas: broadening the public revenue base and generating additional revenue; changes to coverage breadth, scope and depth; improving resource allocation and purchasing; and strengthening governance. The options come from two sources: stakeholders during the workshops and interviews and analysis in sections 3 and 4 of this report.

Challenges to financial sustainability

Section 4 shows that the projected public revenue–expenditure gap could be significant by 2030 – between 0.3% and 3.0% of GDP, depending on when and how quickly prices start to rise and whether utilization patterns will reflect trends seen in the last 5–10 years (Table 25). EHIF's current financial reserves could be depleted by as early as 2012 or 2013 (Figure 43). There are three potential responses to bridging the projected gap: broadening the public revenue base to generate additional finance; cutting public entitlements to health care to lower public spending; and introducing changes to enhance efficiency in the use of resources within the health system.

If the challenge of financial sustainability is regarded as an accounting problem – a need to balance revenue and expenditure – then any of the responses would be appropriate to the extent that they were able to prevent deficits. The obvious option would be to cut entitlements to match expected revenue. That might involve reducing coverage breadth (excluding people from EHIF coverage), scope (removing benefits) and depth (new or higher user charges). However, the concept of financial sustainability is meaningless if not linked to health system objectives (80). Thus, the report's ultimate aim is to identify ways to strengthen financing policy so the system is better able to meet its objectives. For this reason, the main principle guiding the discussion of different options and the subsequent recommendations is the extent to which the options would contribute to greater attainment of financing policy goals.

Many of the challenges the projections highlight reflect the policy weaknesses identified in Section 3. This is good news for policy-makers, since it suggests that future expenditure levels are amenable to a range of policy levers. Some expenditure growth can be prevented or offset by actions taken now to enhance efficiency – for example, promoting healthy ageing through more investment in public health, prevention, primary care and nurses; tighter control of prices, technology (particularly pharmaceuticals), infrastructure, expensive equipment and provider activity; a sustained shift away from inpatient care; and better access to health care for poorer and sicker households. Healthy ageing may in turn enable people to remain at work for longer. Strengthening financing policy can address inefficiencies that create and exacerbate cost pressures. Nevertheless, the gap between revenue and expenditure is too large to be closed through efficiency savings alone and the government will need to broaden the public revenue base. Heavy reliance on an employment-based tax alone does not seem to be sustainable in light of declining employment, rising old age dependency ratios and payroll tax sensitivity to economic fluctuations.

Broadening the public revenue base and generating additional revenue

Social tax options

Many interviewees viewed the social tax as both a strength and a weakness of financing policy: a strength because it is well-established and has so far provided a secure and generally adequate supply of funds to the health sector, and a weakness because its levy base affects labour costs and fails to capture other sources of income (for example, capital investments or pensions). Reflecting the general consensus that the health system will require greater revenue, many interviewees would like to see significant changes in the way the social tax operates.

• *Raising*

A couple of the interviewees suggested raising the health part of the social tax, perhaps from 13% to 15%, which they argued might be feasible if the tax were also capped, although they acknowledged that having a higher social tax was unlikely. The social tax has the advantage of being a stable source of revenue due to its earmarking for health. It is also a mildly progressive tax (Table 14) and therefore contributes to equity in financing. However, raising it would ignore concerns about the already heavy reliance on employment-based health financing, deviate from the principle of broadening the public revenue base and exacerbate the contribution inequality of salaried employees and those with dividend income.

• *Lowering*

Only one interviewee suggested lowering the social tax, specifically to reduce the impact of welfare financing on the labour market. In itself, this would not address the central issue of ensuring sufficient revenue for the health sector in the medium-to-long term. Such a change could be revenue-neutral for the health sector if it increased willingness to pay taxes and thus reduced tax evasion. However, there might be negative consequences for equity in financing to the extent that the government found it more politically acceptable to raise and earmark regressive indirect taxes for health.

• *Capping*

A somewhat more popular option, favoured by just under a third of interviewees, was to cap employer social tax contributions.⁴⁴ Such a ceiling already exists for the contributions of the self-employed in Estonia and for employee and employer social insurance contributions in several other EU Member States⁴⁵ (34, 85). In the view of the stakeholders we consulted as well as the Estonian Development Fund and the Estonian Taxpayers' Association, a cap would have the advantages of allowing rich people to spend the money 'saved' to buy private health insurance (PHI), reducing the impact of health financing on the labour market (as long as PHI is not purchased by employers), preventing highly skilled staff from looking for work in other countries, and attracting skilled workers from other countries. However, capping the tax would have the immediate effect of lowering public revenue for the health

⁴⁴ Although this would not broaden the public revenue base or generate additional revenue, it is discussed here in relation to changes to the social tax.

⁴⁵ Austria, Bulgaria, Cyprus, the Czech Republic, Germany, Greece, Luxembourg, the Netherlands and Slovakia.

sector and therefore runs contrary to the aim of boosting and broadening the public revenue base. The size of the impact would depend on the level of the ceiling. If the ceiling were set at twice the average wage, social tax revenue for health and pensions would fall by 8.4% (Table 27). This short-term negative effect has to be weighed against potential positive behavioural effects such as increased employment as labour costs decrease and, perhaps, a reduction in tax avoidance. Nevertheless, the potential positive effects would not be sufficient to compensate fully for the decline in tax revenue.

A cap would have three additional disadvantages. By increasing the tax burden of poorer people and providing relief for richer people, it would make the social tax regressive and would therefore lower equity in financing. An upper ceiling would be difficult to implement for people with multiple employers and involve quite high transaction costs. It would also increase the tax system's complexity, which goes against a key objective of Estonian fiscal policy.

Table 27. Short-term impact on revenue of capping the social tax

Level of ceiling	Amount (kroon)	Affected people		Reduction in total social tax revenue	
		Number	% of total	Kroon (millions)	%
2x average wage	22 672	43 264	5.8	2 257	-8.4
3x average wage	34 008	14 477	1.9	1 114	-4.1
4x average wage	45 344	6 468	0.9	673	-2.5

Source: Based on Estonian National Social Insurance Board micro data.

Note: Total social tax revenue includes revenue for health and pensions.

• *Splitting*

A small minority of interviewees thought it would be fairer to split the social tax between employers and employees. This option might bring a psychological benefit of making health financing seem less of a burden to employers. However, it would not significantly change social tax revenue or lower labour market impact since both employer and employee contributions would still come from the same pool. Even if this change encouraged some employers to comply with social tax legislation, the effect on tax revenue would probably be marginal. Additionally, one interviewee noted that splitting the social tax could trigger a greater sense of ownership rights among employees over their contributions, which might in turn lead to calls for lowering the social tax or allowing people to spend their contributions as they see fit (for example, on PHI or private health care) – in other words, it might adversely affect political support for collective financing.

• *Adding pensioners*

Many stakeholders felt it was important that those who use health services be seen to contribute to paying for health care. In future, the proportion of non-contributing EHIF

beneficiaries will rise slightly (Figure 36). The share of the unemployed and parents with benefits will go down, however, as the population ages. In the long term, therefore, the only socioeconomic group that could reasonably contribute, either directly or via government, is pensioners, who currently constitute 28.3% of the population, expected to be 32% by 2030.⁴⁶

There was unanimous support among all political parties represented among the interviewed stakeholders for including old age pensioners in the contributing base,⁴⁷ but there were different opinions about how to do so. Some stakeholders favoured applying the social tax directly to pensions. While they acknowledged this to be a difficult option, they thought it might be feasible if the social tax were applied to pensions at a lower rate, if there were a ceiling on contributions and if people with first-pillar pensions only were exempt. One interviewee noted that it would need to be introduced sooner rather than later, since an ageing electorate might not tolerate higher taxes on pensions.

Other stakeholders dismissed the idea of applying the social tax to pensions for several reasons. First, in many cases it is unreasonable to regard pensioners as non-contributors: those who have retired in the last few years will have paid the social tax prior to retirement and in future this will be the case for all pensioners. Pensioners also face high OOPs, particularly for outpatient prescription drugs, and therefore their contribution to health spending is already significant. Second, the level of pensions is generally low ('there is nothing to tax') and taxing pensions would increase the risk of poverty for older people. Recent analysis shows that this risk is already very high in Estonia – among the highest in the European Union after Latvia and Cyprus (86).⁴⁸ If pensions were larger, it would be possible to tax them, but forecasts show that pensions are not likely to grow much, either as a share of GDP or in relation to wages (3, 87). An EC report estimates the pension share of GDP will fall from 5.5% in 2010 to 4.8% in 2030, even though pensioners will make up more of the population in 2030 (3).⁴⁹ Third, applying the social tax to pensions without reducing the net pension amount would simply involve a re-arrangement of the central government budget, 'taking money from one part to put in another part'. And finally, it would be politically difficult to tax second-pillar pensions, because some people have paid into them on a voluntary (if tax-subsidized) basis.

Some suggest that the social tax could be applied to pensions at a lower rate – for example 11% – since pensioners would not be eligible for temporary incapacity benefits. The lower rate applied to the first pillar would generate enough additional revenue (0.6% of GDP) to bridge the financing gap. But it would be subject to all of the objections noted above. Rather than taxing pensions at all, it would be more feasible for the government to pay the health part of the social tax on behalf of pensioners, as other countries do (Box 2). This option has numerous advantages. It would secure additional resources for the health sector, broaden

⁴⁶ Assuming no change in the accessibility of pensions, for example, through an increase in the retirement age or fewer possibilities for early retirement.

⁴⁷ The pensionable age in Estonia is currently 63 years for men and 60.5 years for women, but will increase to 63 for women by 2016.

⁴⁸ The percentage of people aged 65 and over at risk of poverty in Estonia is estimated to be 39%. This compares to an EU-27 average of 19%, an EU-15 average of 20% and an EU-12 average of 18%. At-risk-of-poverty rates are calculated as the proportion of persons living in households with an equivalized income below the poverty threshold, which is set at 60% of the national median equivalized income.

⁴⁹ The report finds that even though new pensioners will be entitled to pension benefits from the compulsory funded pension scheme (second pillar), the benefits from the state pension scheme (first pillar) will fall almost proportionally.

the public revenue base and uphold the principle of EHIF beneficiaries contributing to costs. It is fairer and simpler than applying the social tax to pensions. Some stakeholders felt that making the government responsible for a specific group of people would raise visibility and make it harder to renege on commitments.

Government contributions on behalf of pensioners at a rate of 13% of pension expenditure would amount to 2.6 billion kroon (1.2% of GDP in 2009). If pension expenditure remains at the 2009 level of about 9% of GDP or does not decline significantly, this transfer would be more than sufficient to cover the minimum financing gap of 0.4% of GDP in 2030. In fact, this amount could be covered by a much lower contribution rate of 6%. However, it seems more likely that pension expenditure will decline to the level of 2005–2007 (about 6% of GDP). A contribution rate of 13% on this lower level would yield 0.8% of GDP. Alternatively, contributions could be levied on the minimum contribution base. At present this would not make any difference as the average pension is almost equal to the minimum contribution base (4350 kroon per month).

Box 2. Central government transfers to health insurance funds for non-contributing beneficiaries in selected countries

Czech Republic The Czech government pays about €300 per year per person on behalf of non-contributing beneficiaries (about 5 million people).

Germany Since 2008 the central government in Germany has made transfers to the national health insurance fund. These amounted to €2.5 billion in 2008 and €4 billion in 2009. From 2010 the government contribution is to increase by €1.5 billion per year until it reaches €14 billion in 2012. The increase in government revenue flowing into the health fund is intended to lead to a reduction in the health insurance contribution rate and lower non-wage labour costs. Although the transfers are nominally linked to financing coverage of children, there is no legal basis for this and no specific formula in place.

Hungary In Hungary the government has made contributions on behalf of non-contributing beneficiaries, including pensioners and children, since 2006, but the calculation of the amount is not as transparent as in the Czech Republic or Slovakia. In response to the current economic crisis, there will be a reduction in the payroll tax rate in 2010 (three percentage points from the employers' share) and an increase in government transfers to make up for the gap.

Slovakia The government pays on behalf of non-active people (about 3 million people). For 2010 the amount is 4.78% of the average wage in 2008, equal to €35 per person per month.

• *Taxing dividends*

Pensioners are not the only group in Estonia who do not contribute to EHIF. Government contributions also apply to children and students. However, stakeholders felt it was appropriate to focus on pensioners since their use of health services is very visible. However, there are others who may at present benefit from EHIF coverage without having paid contributions on all their income. For example, people who receive only a small part of their income in wages and the rest in the form of dividends from capital investment (which are not subject to the social tax) are still eligible for full EHIF coverage. Some may have deliberately chosen to be paid mainly in share options rather than cash so as to avoid paying higher social tax. The Estonian Tax and Customs Board estimates that EHIF loses 0.5% of possible annual revenue due to avoidance of the social tax by the self-employed (20).

Current tax policy specifically aims to avoid taxing capital. As a result, capital taxes are very low as a proportion of total taxes (7.9% in 2007 compared to an EU-27 average of 21.3%) (Figure 14) and their contribution to health financing is therefore marginal. Applying the social tax to dividends would broaden the public revenue base, enhance equity in financing and uphold the principle – clearly valued by Estonians – that those who benefit from EHIF coverage should be seen to contribute towards its costs. As a starting point, some dividends could be regarded as labour earnings by the Estonian Tax and Customs Board. However, this would only raise about 0.08% of GDP (88), which would not be sufficient to cover the financing gap. If all dividends for physical people were taxed at 13%, this would generate the equivalent of 0.3% of GDP, a substantial contribution to covering the financing gap.

Applying the tax to dividends raises other issues, such as eligibility for EHIF coverage and benefits, equal capital tax treatment of different legal entities,⁵⁰ the effect on international capital flow, etc. Nevertheless, there are examples of countries introducing taxes on non-wage income that are earmarked for health and specifically intended to broaden the public revenue base, for example, France (Box 3), Hungary⁵¹ and Switzerland.⁵²

Box 3. Broadening the public revenue base for health in France

In France, for most of the second half of the twentieth century, social security in general and health insurance in particular were almost exclusively financed through employee and employer contributions levied on wages, initially with a ceiling and later without. The contribution rate steadily increased, but could not keep pace with rising health expenditure. By 1997 the contribution rate amounted to 12.8% of gross earnings for the employer and 6.8% for the employee.

During the 1990s, the French government introduced a new tax earmarked for social security – the general social contribution (CSG) – to broaden the public revenue base.

⁵⁰ One issue is whether dividends paid to people and corporations should be taxed similarly. If the social tax were only applied to physical people, there would be further incentive to avoid it by investing through corporations.

⁵¹ In Hungary the general tax rate on dividends is 25% and there is an additional levy of 14% earmarked for health.

⁵² If wages are low and dividends high.

Box 3. (cont.)

The tax is levied on wages (7.5%, 5.1% for health) and all other sources of income, including dividends from capital investment (8.2%, 5.9% for health), gambling winnings (9.5%), pensions (6.6%) and other benefits (6.2% on sick leave, maternity leave, etc). Lower-income people (about half of all French households) pay the CSG at a lower rate of 3.8%, so it is a progressive tax.

As a result, health insurance revenue has been broadened and partially disconnected from employment, making it less vulnerable to fluctuations in wages and the labour market. By 2000, revenue from the CSG accounted for 34.6% of total health insurance revenue, while the employment share had fallen to 54.5% (from 95.3% in 1990). The CSG has almost totally replaced employee contributions, which have fallen from 6.8% of gross earnings to 0.85%.

The French pharmaceutical industry also contributes to health financing through a 1% tax on turnover and taxes on advertising, retailing and turnover above a threshold.

Source: Based on Sandier S et al (89).

Other taxes

Many of the stakeholders felt that the relatively small size of the government budget limited what could be achieved in terms of high-quality health care and other forms of social welfare. There was a widespread consensus that the central government should devote more of its resources to health, to provide additional funding and broaden the public revenue base. However, they acknowledged that this might be difficult in the short term, both fiscally and due to the low level of trust in government; several stakeholders expressed scepticism about the government's ability to keep its promises.

If the government were to pay the health part of the social tax on behalf of pensioners, it would either have to spend less on something else or generate additional revenue. In this section we consider different ways the government can increase its budget to finance contributions for pensioners, either by raising existing tax rates or expanding the tax base. We assume that the additional needed revenue will be equivalent to at least 0.4% of GDP (the minimum financing gap between EHIF revenue and health expenditure in 2030), but may be as much as 1.2% of GDP (corresponding to 13% of pension expenditure in 2030) (Table 25). The results are summarized in Table 28.

• Raising VAT

It would take a 1.5 percentage point increase in the VAT rate (to 21.5%) to reach 0.4% of GDP and a 2.7% percentage point increase (to 22.7%) to reach 1.2% of GDP. In 2030, it would take an 0.8 percentage point increase in VAT to generate 0.4% of GDP. Comparable VAT rates can be found in Latvia (21%), Ireland (21.5%), Finland and Poland (22%), Iceland (24.5%) and Denmark, Norway and Sweden (25%).

Table 28. Options for financing government contributions for pensioners

Scenario	Approximate tax increase required to raise 0.4% of GDP by 2030	Direction of tax burden	Progressivity	Compatibility with major tax trends	Other effects
Health social tax paid by government for pensioners	Social tax 6% (if pensions remain circa 9% of GDP)	Depends how it is financed			Stable
13% of health social tax applied to gross pensions		Depends how it is financed			
13% of health social tax applied to gross dividends received by people		Capital	Progressive	No, plan is to reduce income tax on capital	Reduction in income tax; worsening business climate; volatile
Increase in VAT	From 20% to 21%	Consumption	Moderately regressive	Yes, increase in indirect taxes	Stable
Increase in excise taxes on alcohol	About 30% increase from January 2010	Consumption	Very regressive	Yes, increase in indirect taxes	Positive impact on health behaviour; volatile
Increase in excise taxes on tobacco	About 50% increase	Consumption	Very regressive	Yes, increase in indirect taxes	Positive impact on health behaviour; volatile
Increase in social tax rate	From 13% to 14%	Labour	Progressive	No, plan is to reduce burden on labour	Stable
Increase in personal and corporate income tax rate	About 1% increase (from 21 to 22%)	Labour, capital	Very progressive	No, plan is to reduce burden on labour and capital	Stable

Source: Based on data from Statistics Estonia and the Ministry of Finance.

- **Raising alcohol excise tax**

In January 2010 the alcohol excise tax rate was raised by 10%, which is expected to generate an additional 0.1 percentage point of GDP (to 1.2% of GDP). To reach a further 0.4% of GDP would require an additional increase of about one third.

- **Raising tobacco excise tax**

Revenue from tobacco excise tax is currently about 0.9% of GDP. To reach 1.3% of GDP would require a raise of about 50%. The tobacco excise rate is scheduled to be raised by 20% from January 2011 (*Ministry of Finance, personal communication, 2009*), making it harder to raise it again for health purposes.

- **Introducing taxes on some types of food and drink**

Latvia and Finland have recently introduced taxes on sugar and soft drinks. The tax rate is relatively low: the equivalent of 1 kroon per litre for soft drinks. The soft drink market in Estonia is about 50 million litres per year, which would yield 50 million kroon at the same rate. Thus, while the tax can be used as a signalling device to influence consumer behaviour, and its revenues might finance certain public health programmes, it is clearly not enough in itself to address the health financing gap.

- **Indirect consumption taxes**

Many stakeholders mentioned increasing indirect taxes on consumption⁵³ and, where possible, earmarking some of them for health. This approach has the advantage of being in line with current tax policy and may result in improved health to the extent that it has a positive influence on health behaviour. Nevertheless, it has some drawbacks. First, indirect taxes, especially on alcohol and tobacco, are generally significantly more regressive than direct taxes (90, 91). In Estonia, taxes on vodka and tobacco are particularly regressive because consumption of these goods is highly concentrated among poorer people (29). Relying more heavily on indirect taxes to fund government activity would lower the progressivity of public finance. However, indirect taxes are generally less regressive than OOPs, so if the government were to rely more on indirect taxes to reduce OOPs, it would improve equity in financing.

Second, Estonia already has the fifth highest share of revenue from indirect taxes in the European Union (43% of all tax revenue in 2007, compared to an EU-27 average of 39% and an EU-15 average of 38%) and the second highest share from VAT (Figure 13). Also, the VAT rate was raised from 18% to 20% in 2009, so further raises might not be politically feasible in the short term.

Finally, the revenue generated by consumption taxes tends to fluctuate and is more likely to fall during economic recession than are labour taxes. Earmarking is unlikely to be favoured by the government (in particular the Ministry of Finance) since it lowers political flexibility. One interviewee argued that while earmarking might be 'good for public relations', it made little difference in practice.

⁵³ Excise duty currently applies to alcohol, tobacco, motor fuel and packaging. Taxes on cigarettes and unleaded petrol and diesel are already being increased to reach EU levels by 2010.

- **Introducing a property (real estate) tax**

Property taxes are currently under debate and recommended by the OECD and the IMF (21, 22). On one hand, increasing the revenue generated from capital would enhance progressivity. On the other hand, it would require property valuation, which presents technical challenges given the rapid changes in value in Estonia in a relatively short time.

- **Raising environmental and other taxes**

Further use of environmental and other taxes is an option recommended by the IMF to broaden the tax base (22). Ministry of Finance estimates suggest that an annual motor vehicle tax could generate revenue equal to about 0.4% of GDP.

- **Raising income tax**

Another option is to increase income tax. This is clearly less politically feasible in the short term than raising indirect taxes, because it does not accord with general trends in Estonia. Nevertheless, it would have the advantage of increasing progressivity. In the medium-to-long term it is an option Estonia might consider, since the country's reliance on direct taxes is low compared to other EU countries and taxes on capital are particularly low (Figure 14). It would take a one percentage point increase in personal and corporate income tax (from 21% to 22%) to generate an additional 0.4% of GDP (*Ministry of Finance, personal communication, 2009*).

Changes in coverage breadth, scope and depth

Changes in coverage have implications for financial protection and levels of private spending: reductions in coverage imply an increase in private spending, while coverage expansion generally lessens the need for private financing.

Coverage breadth

Coverage breadth refers to the extent of population coverage. In most EU Member States coverage is based on residence or citizenship and is therefore close to universal (34, 92). Many stakeholders expressed concern about the exclusion of the long-term unemployed from EHIF coverage and felt that the absence of universal coverage was problematic, particularly in the context of economic recession, which might increase unemployment. Since then, however, the government has extended EHIF coverage to many of them, so it is no longer such a pressing issue. Those still excluded from EHIF coverage include unemployed people who do not receive any unemployment benefits, do not participate in active labour market programmes or are not actively seeking work.

Although none of the stakeholders explicitly suggested reducing the breadth of statutory coverage, a couple of interviewees wanted to see an expanded role for PHI. One way of doing this would be to exclude some people from EHIF coverage – for example, richer people with earnings above a certain amount. This would increase demand for PHI to play a substitutive role, but would have some disadvantages. First, it would not relieve financial pressure on EHIF. Although public funds would be covering a smaller group of people and total public

outlay would be lower, total public income would also be lower, since EHIF would lose the contributions of richer people. Not only would EHIF have less to spend per person covered, but the average risk profile of EHIF beneficiaries would also be higher (due to the correlation between income and health status); in other words, EHIF would have less to spend on an unhealthier group of people.

Second, the government would need to introduce extensive regulation of the substitutive PHI market to remove access barriers, particularly for older people and those in poor health (93–95). This would require significant capacity, increase transaction costs and add to the health system's complexity.

Third, expanding the PHI market would not be in line with international experience. Chile, Germany and the Netherlands have had most experience with markets for substitutive PHI. Concern over equity and financial sustainability prompted the Netherlands' government to abolish its substitutive PHI market in 2006, while the German and Chilean governments have had to introduce successive reforms to prevent their markets from undermining the public system (96, 97).

Coverage scope

Coverage scope refers to the range of benefits covered. A benefit package that provided access to a narrow range of services, for example, emergency care only, would undermine financial protection. There was very little stakeholder support for reducing the scope of the publicly financed benefit package. Some interviewees thought that the current benefit package was, if anything, too narrow. Only one interviewee was in favour of reducing the scope of coverage to increase demand for complementary PHI, even while acknowledging the limited potential for this option in Estonia, noting that the very small PHI market had failed to develop products covering adult dental care in the six years since it was excluded from coverage. The interviewee also noted the potential for complementary PHI to encourage two-tier access to care.

International experience of complementary PHI covering services excluded from the publicly financed benefit package is mixed. Most complementary PHI markets focus on ancillary services such as dental care or physiotherapy and population coverage is generally low (95). Key exceptions are the Canadian market, which provides around two-thirds of the population with pre-paid access to outpatient prescription drugs, and the Dutch market, which provides almost the whole population with pre-paid access to dental care, eye care and physiotherapy.⁵⁴ However, both markets have generated equity concerns and the factors contributing to their very high levels of take-up are unlikely to be replicated in Estonia (95). Several stakeholders felt that the government should increase the scope of provision for the uninsured, both to ensure access to needed services and to tackle some of the current inefficiencies. For example, the uninsured are only eligible for emergency care and must pay

⁵⁴ In Canada equity concerns focus on unequal access to PHI covering prescription drugs and the many Canadians who are therefore uninsured or under-insured for prescription drugs. In the Netherlands concerns focus on the potential for the way in which voluntary PHI is sold (by the same entities that provide statutory coverage) to undermine mobility in the statutory health insurance market for older people and people with lower health status.

out-of-pocket for non-emergency care. As a result they may forego the use of cheaper care and rely instead on resource-intensive emergency care. Interviewees who expressed concern about this issue argued that the government should at the very least provide the uninsured with free access to primary care (preventive and GP services).

A third of interviewees suggested improving the coverage of long-term care, although few made direct proposals. Those who expressed an opinion thought long-term care required significant central government support due to its high cost, that local government funding would not be sufficient and that there might be a role for the voluntary sector. One suggestion was to establish a system of prepayment by pensioners for long-term care; this would have to be compulsory since international experience of voluntary long-term care insurance is not positive (98). In all events, the current system is highly fragmented, characterized by perverse incentives for patients and providers and fails to provide adequate financial protection. It is therefore an issue that requires urgent policy attention.

Some interviewees wanted to see better coverage of adult dental care, which was restricted to a cash benefit in 2003 and abolished for all except pregnant women and pensioners in 2009. Research suggests that there are significant inequalities of access to dental care among adults in different income groups and probably a high degree of under-use among the poorest households (15). Easy access to primary dental care can play a role in preventing ill health and is especially important in lower socioeconomic groups, where knowledge about the benefits of preventive dental care may not be so widespread and financial circumstances mean that dental care is not a priority. One option is to re-instate the cash benefit.

Many stakeholders highlighted the need for improved coverage of occupational injury and illness. Some suggested introducing a new system of coverage for occupational injury and illness financed by employers. There was also a feeling that the recent reform requiring employers to cover some of the costs of sickness leave might stimulate them to take more interest in employee health, and that this might be further encouraged by removing the benefits-in-kind tax on employer investment in services intended to improve employee health. Both suggestions aim to encourage employers to bear greater responsibility for the health of employees and to improve the safety of the working environment. While there are clear advantages to having employer-financed coverage of occupational injury and illness, a couple of interviewees expressed concern about imposing additional labour costs. Since the interviews, the government has decided to establish private coverage of occupational injuries and illness, although there is not yet a timetable for implementation. Removing the benefits-in-kind tax needs to be considered with caution since equity among different types of workers may be an issue (for example, if employer-financed benefits were restricted to senior management and not available to all employees). To avoid creating or exacerbating inequality among workers, some countries only grant tax relief for employer-financed benefits where the benefits are provided to all of a firm's employees (95).

Coverage depth

Coverage depth refers to the proportion of the benefit cost that is met by the third-party payer (in this case EHIF). User charges lower the depth of EHIF coverage and have important equity implications, as discussed in Section 3. There was little support among stakeholders for increasing OOPs, either through user charges or service exclusions. The small number of interviewees who favoured a slightly higher share of private financing expected it to come from an expanded role for PHI rather than higher OOPs. A handful of interviewees thought that OOPs were not a pressing issue because they felt that EHIF's drug coverage provides adequate financial protection for people with chronic conditions or because they favoured greater individual responsibility for one's own health and associated costs. However, increasing existing user charges and introducing new ones would be unlikely to contribute to financial sustainability.

There is very little evidence that making people pay (more) out-of-pocket for health care encourages them to take better care of their health or lowers the use of unnecessary care alone. Rather, research shows that user charges are a blunt policy tool, deterring people from appropriate and inappropriate use of health services; they also have a negative effect on the health of poor people – children in particular (99–101). Nor is there evidence to show that user charges result in long-term cost control (101, 102). In fact, the evidence suggests that the introduction of user charges for some health services may lead to higher spending, because people opt for free but more expensive forms of care – the 'squeezed-balloon effect' – similar to the perverse incentives created by giving the uninsured free emergency care but making them pay for primary care.

A small majority of interviewees felt that private spending on health has already reached a critical upper limit, is high in comparison to other European countries, and should not be increased. In their view, OOPs present a financial barrier to access and undermine financial protection, particularly for poorer and older households and people with chronic conditions, especially with regard to dental care and drugs. Thus, there was some support for improving user-charges policy.⁵⁵

Current user-charges policy would benefit from improvement for several reasons. First, as some interviewees acknowledged, OOPs (20.4% of total spending in 2007) are high compared to most EU-15 and some EU-12 Member States⁵⁶ (although they are close to the EU-27 average of 20.7%). In addition, while the share of OOPs has fallen since 1997 in two-thirds of EU Member States, in Estonia it has actually doubled (rising from 10.6% in 1997 to 20.4% in 2007). These two factors alone would not necessarily be a cause for concern, but as mentioned in Section 3, OOPs impose a heavy financial burden on vulnerable social segments; in 2007 19 200 households spent more than 40% of their disposable income on OOPs on health (15). Thus, user-charges policy seems to make a significant contribution to undermining financial protection.

⁵⁵ User charges are currently applied to GP home visits, outpatient prescription drugs, outpatient specialist visits and inpatient stays.

⁵⁶ For example, between 5% and 6% in France, the Netherlands and Luxembourg; between 11% and 13% in the Czech Republic, Denmark, Germany, Ireland, Slovenia and the United Kingdom; and between 15% and 19% in Austria, Finland and Sweden.

The current policy is also complex, particularly for outpatient prescription drugs, which may be confusing for patients, in contrast to the aim of ensuring simplicity in national tax policy. Significantly, the outpatient prescription drug policy fails to achieve one of its main objectives, to encourage patients to use more effective and cheaper (often generic) drugs. The evidence shows that many patients are prescribed and buy drugs on the 50% list, which are both less cost-effective and more expensive, when they could be using drugs reimbursed at a higher rate (75% or 90%). For example, EHIF research reveals that in 2007 only 50% of prescriptions for Ramipril, Estonia's most frequently used drug (used to treat hypertension and congestive heart failure), were for the generic version. Even when the active ingredient was prescribed, in 70% of cases the filled prescription was for brand drugs. When the brand drug was prescribed, the pharmacist substituted the generic version in only 15% of cases. Thus, overall, only 20% of filled prescriptions for Ramipril were generic.

OOPs for outpatient prescription drugs are much higher than necessary due to a mixture of weak (or seemingly non-existent) enforcement of the compulsory generic prescription policy, inappropriate prescription by GPs, perverse incentives for pharmacists to dispense more expensive drugs and poorly informed patients. The user-charges policy penalises patients for GPs' failure to follow the guidelines and pharmacists' ability to boost income by dispensing more expensive drugs. EHIF has calculated that rational use of anti-hypertensive drugs⁵⁷ would result in patients paying 24% of drug costs, compared to the current 63% of the cost of anti-hypertensive drugs on the 50% list and 42% of the cost of those on the 75% or 90% list (see below). It would also be likely to generate cost savings for EHIF (as noted in Section 3).

Options for improving user-charges policy:

- Simplify the policy so that it is easy to understand; the present policy is complicated and may undermine transparency.
- Ensure that the policy is consistent, introduce better targeting and more use of direct (exemptions, caps) or indirect (generic substitution) protection mechanisms.
- Abolish user charges for outpatient prescription drugs (as did the Netherlands in 2007).
- Introduce exemptions from user charges for the poor and heavy care users (for example, those with chronic conditions), as is the norm in many EU Member States.
- Introduce an annual OOP maximum per person as a result of user charges (an absolute amount or a share of household income).⁵⁸

Other ways of encouraging private pre-payment

A very small number of interviewees suggested ways of encouraging the (predominantly) wealthy to contribute more for health in return for enhanced benefits, including greater choice. Two approaches were suggested.

⁵⁷ Since there is no evidence that anti-hypertensive drugs on the 50% list are as effective as those on the 75% or 90% list, rational use of these drugs would be limited to those on the 75% or 90% list which are priced below the reference price.

⁵⁸ As in Germany, where the maximum is 1% of household income for people with chronic conditions, 2% for everyone else.

• **Private health insurance**

One interviewee was keen for the scope of EHIF coverage to be reduced to create an expanded role for private health insurance, while acknowledging that PHI would probably facilitate two-tier access and would not contribute to an efficient use of resources. Another suggested introducing waiting time guarantees and using tax subsidies to encourage development of supplementary PHI providing faster access to care. The main rationale for this option was to provide an alternative to OOPs for privately provided health care. However, international evidence shows that tax subsidies for PHI are highly regressive (103–105). They generally benefit the rich, especially where the tax subsidy is provided at the marginal rate of tax, meaning that higher-rate tax payers receive a higher tax subsidy than lower-rate tax payers (Box 4). Moreover, tax subsidies for PHI are often expensive for the government and rarely finance themselves (104). This means that it would be more cost-effective to invest public revenue in improving the quality of publicly financed care than to spend it on subsidizing faster access to private care for wealthy people.

Box 4. Tax subsidies for private health insurance in the United States

In the United States, tax subsidies are used to lower the price of employer-sponsored PHI. Households with annual incomes over \$100 000 receive an average of \$2780 in tax relief, those with annual incomes between \$40 000 and \$50 000 receive an average of \$1448 and households with annual incomes under \$10 000 receive an average of \$102 (105).

The other reason the stakeholder gave for subsidizing PHI was to stimulate competition among hospitals. However, it is not necessary to create and subsidize a market for PHI in order to encourage provider competition. In many EU Member States public or non-profit hospitals compete with each other and with private for-profit hospitals, with 'money following the patient' used as the mechanism for competition, not private health insurance. In England, a combination of hospital competition for patients, waiting time targets and extra resources to create additional capacity has greatly reduced waiting times for treatment in the last ten years (106–108).

In general, international experience suggests that PHI does not have much to offer policy-makers interested in improving health system performance, particularly in the context of universal or near-universal coverage, as in Estonia. There is little evidence of PHI relieving pressure on public budgets. The rare instances in which it makes a significant contribution to total health expenditure occur in markets covering statutory user charges (for example, PHI amounts to about 13% of total health expenditure in France and Slovenia). However, the existence of these markets has resulted in cost shifting to households, which has raised substantial concerns for equity (95).

Nor is there evidence of superior efficiency among private insurers in Europe. Rather, the reverse: in most EU Member States PHI exists to offer its customers greater choice of provider or health services or amenities in hospital; in other words, it is a luxury market. Private insurers have therefore been reluctant to develop strategic purchasing for fear of restricting consumer choice, which might alienate their customers. As a result, the tendency among private insurers is for passive retrospective reimbursement of patients or providers, and the fees they pay providers are almost always higher than publicly negotiated fees (95).

- **Medical savings accounts (MSAs)**

This option was favoured by a couple of stakeholders for its potential to reward people for looking after their own health and as a means of allowing people to save for additional health benefits. While one proponent thought voluntary savings could be boosted by tax subsidies, the other favoured a compulsory scheme. He also acknowledged the difficulty of deciding which benefits EHIF should not cover, which could then be covered by the savings accounts.

The international experience of medical savings accounts confirms the difficulty of getting people to invest in savings voluntarily. Where MSAs have been introduced to complement publicly financed coverage, they are compulsory (Singapore, China), whereas where they have been developed as part of the PHI market they have been both voluntary and heavily subsidized by tax relief (South Africa, the United States) (95). MSA advocates hope they will empower consumers to become prudent health care purchasers, reduce unnecessary use of services and contain costs (109), but evidence of cost savings is limited. For example, MSA plans in the United States do not seem to be more effective at controlling expenditure than managed care plans (110), while MSAs in South Africa have not slowed down the annual rate of increase in PHI premiums (111). In China early evidence of cost savings in one of the pilot MSA areas was not sustained in longer-term analysis (112). More recent evidence also suggests that the new system has created financial barriers to access. The Singapore government realized relatively quickly that MSAs were unlikely to prevent cost inflation and introduced tight supply-side price controls, which have probably done more to contain expenditure than the expansion of demand-side cost sharing (113).

MSAs are a variant of user charges. Although they involve prepayment, they do not involve any risk pooling. For this reason, introducing MSAs in Estonia, which has successfully created a single risk pool covering almost the whole population, would undo a major national achievement, with adverse consequences for equity and efficiency. It would also undermine efforts to secure value for money through strategic resource allocation and purchasing. Finally, people with low health needs may be able to accrue savings that remain untouched for long periods, while those with greater needs may not have sufficient funds in their account. At a time when the number of people with chronic conditions is growing, in the current climate of economic uncertainty, a move to restrict purchaser flexibility to match resources to needs would be a backward step.

As we noted above, reducing coverage may seem like the obvious option for bringing health sector revenue in line with spending. However, blanket coverage reductions would not contribute to the attainment of financing policy goals. Recognizing the importance of financial protection (not only for poorer households but across the income spectrum) and, in many cases, the challenging nature of directing markets for PHI to serve public interests (particularly given EU rules on state aid and the Internal Market) (114, 115), several EU Member States have taken steps to expand coverage. Some of these initiatives are summarized in Box 5.

Box 5. Expanding coverage in the EU

France In 2000 the government extended coverage to more or less the whole population by changing the eligibility criterion for health insurance from employment status to residence. It also introduced free cover of complementary PHI covering statutory user charges for low-income households.

Netherlands In 2006 the government introduced universal entitlement to statutory health insurance. Previously, higher earners (about one third of the population) had not been eligible for publicly financed coverage, relying instead on substitutive PHI.

Ireland: In 2006 the government introduced universal entitlement to primary care (subject to capped user charges for richer households).

Belgium In 2008 the government extended publicly financed coverage of outpatient care to self-employed people. Previously this group had been forced to rely on voluntary cover, either through public or private insurance.

Germany In 2009 the government made health insurance compulsory for the whole population. It also tightened the rules governing PHI and made it more difficult for higher earners to opt for private coverage.

Source: Based on Thomson S et al (34).

Improving resource allocation and purchasing

Health financing policy in Estonia generally performs well. However, the assessment in Section 3 identified different areas in which the process of allocating resources and purchasing health services could be strengthened. Many of these were underlined by the expenditure projections in Section 4. There was also a broad view among stakeholders that there is scope for improvement, even as they acknowledged that efficiency savings alone would not be sufficient to address challenges. Thus, the options we mention in this section should be seen as a complement to rather than a substitute for government action to broaden the public revenue base. Most of the options were discussed in Section 3. Here we summarize them under three broad headings: avoiding fragmentation, matching resources to needs and aligning incentives across the system.

Avoiding fragmentation

Fragmentation in financing should be avoided where possible because it may skew incentives, undermine transparency, blur lines of accountability and lead to duplication of tasks. Estonia's single-payer system has succeeded in achieving a high degree of unity in pooling and purchasing. The main areas of financing fragmentation relate to emergency care for the uninsured, large-scale health promotion and prevention programmes, long-term care and capital costs. There have already been improvements in some of these areas, notably in shifting responsibility for financing emergency care for the uninsured from municipalities to the central government and in attempting to redress some of the perverse incentives arising from the way in which long-term care is financed. However, more could be done.

Options for avoiding fragmentation in financing:

- Transfer funds from the central government to cover emergency care for the uninsured to EHIF, who would then be responsible for purchasing all emergency care following a standard set of rules.
- Move away from a vertical system of financing public health programmes based on diseases or behaviour towards a client-oriented approach focusing on groups that are likely to benefit from coordinated interventions.
- Develop a comprehensive strategy for financing long-term care. The recent introduction of user charges for EHIF-covered inpatient long-term care (coinsurance of 15%) is intended to redress existing incentives to admit patients to long-term care hospitals, even when they do not need medical attention. However, its effect on access to long-term care should be monitored.
- Re-examine the financing of capital costs following the transfer of responsibility to the central government in 2008, which has not proved to be sustainable. New arrangements should consider national and international (mainly EU) sources of finance together.

Matching resources to needs

Due to well-documented market failures in health care, resource allocation cannot be left to market mechanisms (116). Efforts to match resources to need therefore require a degree of central planning and coordination, although institutional arrangements vary across countries (117, 118). Section 3 identified three key areas in which current resource allocation mechanisms are insufficient (public health), lead to waste (investment in infrastructure and expensive equipment) or may not be sufficiently sophisticated (capitated allocations to regions). The first two of these require urgent attention.

Several factors highlight the importance of better and higher investment in public health. First, life expectancy in Estonia is among the lowest in the EU and has not increased as much since the 1980s as it has in many other EU Member States, while female-male differences in life expectancy at birth are the highest in the European Union after Latvia and Lithuania (119). Second, as we noted in Section 4, there is growing evidence of the multiple benefits of healthy ageing (77). Third, there is also growing evidence of the positive economic effects of

investing in health, as highlighted in the Tallinn Charter (120). Consequently, the Ministry of Social Affairs should take the lead in working closely with other government ministries to generate sufficient investment in public health programmes and prevention and to promote health-in-all policies, which could also help to alleviate cost pressures associated with the burden of chronic ill health.

Weak control over investment in infrastructure, expensive equipment and new health technology more broadly presents a clear challenge to financial sustainability, as shown in Section 3. There is a need for stronger oversight in this area to enhance efficiency and help to control expenditure growth. Options for action include the following:

- Tackle excess hospital capacity by fully implementing the Hospital Master Plan.
- Develop a stronger strategy for guiding investment in and design of hospital infrastructure.
- Establish a central policy to control investment in expensive equipment in hospitals.

Aligning incentives across the system

Section 3 identifies areas in which performance may be undermined by conflicting incentives or incentives that are not strong enough to achieve the desired effect. This is particularly evident in three areas: rational use of drugs (discussed above), strengthening primary care and sustaining the shift from inpatient to outpatient care.

Although there have been significant improvements in primary care since the 1990s, more remains to be done. For example, GP gate-keeping does not apply to people with chronic conditions but if fully implemented it might improve care coordination for this pivotal patient group. GPs also need stronger direction, incentives and support to take on responsibility for care coordination across the whole health system.

Similarly, while EHIF has made some progress in shifting care out of hospitals, efforts in this direction are hindered by conflicting incentives in terms of provider payment and coverage. Current payment methods provide greater margins for inpatient care than day-case or community-based care, while the lack of primary care coverage for the uninsured is likely to result in avoidable use of emergency and inpatient services. Better incentives and coverage would encourage delivery of care at the appropriate level.

Strengthening governance

Although recent analysis has not identified major failings in health system governance (28), there are issues that require attention. First, current arrangements would be strengthened by national health policy objectives and targets. Without these it is difficult to monitor and evaluate the progress of different institutions, which lowers transparency, weakens public accountability and may inhibit performance. This is an area in which the Ministry of Social Affairs should take the lead. Second, there seems to be scope for greater government oversight of hospitals and self-employed doctors. The previous section noted the need for increased central control over investment in hospitals and more direction for GPs and the primary care system. Here the Ministry of Social Affairs might benefit from close cooperation with EHIF. Third, many stakeholders expressed scepticism about central government reliability

in allocating resources for health care. This is clearly a factor that needs to be addressed, particularly if the central government is to take on more health financing responsibility in future.

In terms of health insurance, the current design appears to be optimal and stakeholders were swift to note EHIF's competent performance. Not only has EHIF made significant efforts to manage its resources, develop skills in strategic purchasing and operate transparently, it has also tried to be responsive to patients' needs and demonstrated willingness to be held to account (28, 121). As a result the single-payer system works well and there is unlikely to be any net gain from changing to a competitive multiple-payer model. However, it would be prudent to protect EHIF's independence and address potential conflict of interest among supervisory board members. The system as a whole would also benefit from EHIF investing more heavily in monitoring and evaluating provider activity.

7. Recommendations

The recommendations in this section come from our assessment of health financing policy and the options put forward by stakeholders. In selecting them we were guided by the following criteria:

- contribution to the attainment of health system goals
- significant stakeholder support
- reflection of the Estonian health system's values
- political feasibility.

Among the options considered in the previous section, several were discounted on the grounds that they did not fulfil the first criterion. For example, the report explicitly rejects blanket reductions in coverage breadth, scope and depth. Cutting coverage to match expected revenue might seem to be the simplest way of addressing financial sustainability. However, cuts across the board would not address the financing policy challenges, but rather risk undermining the attainment of important health system goals.

Therefore, the report does not recommend as a response to the challenge of financial sustainability an expanded role for private health insurance and other forms of private pre-payment such as medical savings accounts, which are the corollary of coverage reductions. These options would not improve financial protection for groups of people who already face significant financial barriers to accessing some health services, notably outpatient prescription drugs. Expanding the market for private health insurance would also add to regulatory complexity and administrative costs without enhancing efficiency or relieving financial pressure on EHIF.

Broaden the public revenue base

Health financing policy in Estonia has provided the health system with a stable source of revenue until now. The report therefore recommends leaving the key elements of the current system in place: the earmarked tax for health, national pooling of public funds and the single payer. However, there is more or less unanimous agreement among stakeholders on the need to broaden the base through greater reliance on taxes on capital and consumption. Some stakeholders also feel that ensuring that those who benefit from EHIF coverage contribute to its costs – particularly older people – would enhance public perception of health system fairness. To address both concerns – and recognizing that many older people have either already contributed to EHIF while working or would not be financially able to contribute due to the low pensions in Estonia – the report makes the following recommendations.

- The central government should make contributions to EHIF on behalf of pensioners.
- In the interests of fairness, the government should apply the social tax to dividends from capital investment, since investors can avoid paying some of the social tax if they choose to be paid mainly in dividends, while still benefiting from EHIF coverage. Although the

numbers affected by such a move would be small, it does not seem appropriate to single out pensioners as a source of unfairness in the system when other, potentially better-off groups are also either non-contributors or low contributors. Applying the social tax to dividends would also address the current imbalance between labour and capital as financing sources.

- The mechanisms used to allocate revenue from the central government budget to EHIF need to be stable and transparent. If there is no new earmarking of specific taxes (or parts thereof) for health, the government should establish a clear formula for allocating resources to avoid yearly fluctuations.

Improve financial protection by curbing OOPs

The Estonian health system ensures a degree of solidarity between rich and poor, between those who are active in the labour market and some of those who are not and between those in good health and those in poor health. It also ensures equitable access to primary care, which is free at the point of use, and inpatient care, which is subject to limited cost sharing. Stakeholders expressed strong support for solidarity and nearly all seem to regard it as one of the system's key strengths. However, rapid growth in OOPs in recent years, combined with poorly enforced policy on generic prescribing and dispensing, have conspired to undermine financial protection and equity in financing and promote inefficiency. In the interest of enhancing access, equity and efficiency, we make the following recommendations.

- The Ministry of Social Affairs and EHIF should take urgent action to bolster their policy on the rational use of drugs. We recommend introducing financial or other incentives to enforce the existing policy of compulsory generic prescribing. For example, doctors could be required to pay a proportion of the cost of each brand drug they prescribe (when a generic equivalent is available) and be reimbursed if they can justify their decision. We also recommend establishing a policy of generic substitution for pharmacists.
- At the same time the Ministry of Social Affairs and EHIF should review user-charges policy for all health services – starting with patient charges for outpatient prescription drugs, which pose the most financial risk for poorer and older households – with a view to simplification, improved targeting and strengthened direct and indirect protection mechanisms. The report recommends that these agencies set a timetable for exempting poor households and people with high health care usage from user charges. The savings resulting from a more efficient use of drugs would offset the cost of exemptions (and even abolition), making this a revenue-neutral option.
- The Ministry of Social Affairs should continue to monitor financial protection in the health system and make sure that services such as primary care continue to be free at the point of use.
- In the medium term the government should review EHIF's benefit package and increase the coverage of effective services such as adult dental care. The government's decision to extend EHIF coverage to the long-term unemployed in 2009 demonstrates its ability to respond effectively to changing circumstances.

Continue to improve health system performance through better resource allocation and purchasing

Numerous reports by international organizations such as WHO and the World Bank acknowledge the good performance of the Estonian health system in relation to other countries and its development over time. EHIF is also internationally recognized for its achievements. Nevertheless, there is scope for realizing further efficiency gains by improving investment and resource allocation processes. Although efficiency gains alone will not be sufficient to bridge the projected revenue-expenditure gap, they will improve outcomes. If accompanied by clear communication, efforts to enhance efficiency can also reassure patients, the wider public and politicians that resources for health are being put to good use. On these grounds we recommend action in the following areas.

- The Ministry of Social Affairs should continue to tackle excess hospital capacity by fully implementing the Hospital Master Plan and developing a stronger strategy for guiding investment in and design of hospital infrastructure. A better strategy would readjust the balance of power in favour of the health system rather than hospital management.
- The Ministry of Social Affairs and EHIF should establish a central policy to control investment in expensive equipment in hospitals. Stronger oversight of capital investment in infrastructure and equipment will enhance efficiency and help to control expenditure growth.
- In light of Estonia's relatively poor gains in life expectancy (especially for men), the importance of ensuring healthy ageing and evidence showing the positive economic effects of investing in health, the Ministry of Social Affairs should work closely with other government ministries to generate sufficient investment in public health programmes and prevention and to promote health-in-all policies, which could also help to alleviate cost pressures associated with the burden of chronic ill health.
- The Ministry of Social Affairs should work with EHIF to boost the primary care focus of the health system, for example by: strengthening GPs' gate-keeping and coordination function; equipping them with the tools to steer patients through the system; improving their governance and accountability; and extending free primary care to the whole population (not just those entitled to EHIF benefits).
- The two agencies should also cooperate to enforce existing strategies to encourage rational drug use and introduce new strategies such as financial and non-financial incentives for doctors and pharmacists.
- EHIF should focus on aligning incentives across the health system, making better use of provider payment methods to sustain the shift from inpatient to outpatient care and day-case surgery.
- EHIF should also strengthen efforts to base reimbursement decisions on evidence about the comparative effectiveness of different interventions and, as much as possible, evidence of cost-effectiveness, including use of tools such as HTA.

Maintain strong governance of the health system

EHIF already has relatively strong (accountable and transparent) governance arrangements in place. In the interests of reinforcing and complementing these, the report recommends the following.

- EHIF should continue to invest in and improve the monitoring and evaluation of provider activity across the health system, with particular emphasis on clinical outcome indicators. Investment in e-health may contribute to clinical quality through better exchange of information and less frequent duplication of tests and investigations.
- Along with EHIF, the Ministry of Social Affairs should take the lead in providing policy direction for the whole health system, ensuring a sufficient flow of resources into the health sector (especially for those areas financed from the central government budget, such as emergency care and public health), supporting institutions in carrying out their mandate and being accountable and promoting health-in-all policies.
- Recognizing the landmark approach adopted by the Tallinn Charter: Health Systems for Health and Wealth, the Ministry of Social Affairs should work more closely with the Ministry of Finance to highlight the positive economic effects of investing in health.
- Estonia's single-payer system is effective and should not be dismantled in favour of a competitive model. The central government should make every effort to avoid any further fragmentation in the flow of resources to the health sector, since it results in inefficiency and conflicting incentives. Where a degree of fragmentation exists, for example, in the financing of public health and emergency care, the Ministry of Social Affairs should take the lead in ensuring effective coordination.

Annex 1. Summary of the workshop in Tallinn on 3 April 2009

Background

EHIF, in collaboration with the Ministry of Social Affairs and the WHO Regional Office for Europe, is conducting in 2009 an in-depth analysis of the Estonian health financing system's mid- and long-term sustainability.

The analysis will address: the foundations of health financing in Estonia; how basic principles and values have driven the development of the social health insurance (SHI) system in the country; how those are understood by different stakeholders and the relative weight they apply to different principles/values; whether the principles/values have changed over time, and what effect this could have on the SHI system's future development; the performance of the health financing system and its ability to cope with future challenges. The wider impact of EU policies on health financing in Estonia will be considered where relevant.

The workshop in April launched the process by facilitating discussion among invited stakeholders and experts on the value base of the health financing system and providing input to shape the next steps of the process. The participants received in advance three questions to prepare for the discussion.

Key messages from opening words

The importance and timeliness of the process was highlighted by all parties involved, as was the fact that long-term sustainability was already a concern before the current financial situation, but the issues are now higher up on the agenda than previously. The importance of taking a long-term approach was also emphasized, even in the current context of financial crisis and meeting Eurozone requirements. At the same time, the changes introduced in recent months (for example, an increase in VAT on medicines, a significant decline in funding of public health programmes, reduced health insurance expenditures (mainly for specialist care), the abolition of dental care reimbursement for the working age population, limiting the possibility of using accumulated health insurance reserves and changes to the sick leave system starting on 1 July). It is not yet clear what the long-term financial consequences of these decisions will be for the state, health insurance and providers' budgets or for population health.

In the longer term, the ageing of the Estonian population presents a challenge to the current health financing system, which relies heavily on employment-based contributions. A lower ratio of employed to non-working people in the future will decrease the revenue base. Analysis of health financing sustainability should take a broad approach, taking into account all health costs – insurance, services covered by the state budget, public programmes, the role of local government and user charges.

Key messages from presentations

It is important not to look at sustainability as an objective in its own right, as this diverts policy attention from the ultimate objectives of the health financing system, which have to be maximized within the constraints of the sustainability requirement. If sustainability were treated as an objective of the system, then a simple cost-cutting exercise would deliver achievement with potentially avoidable adverse effects for health, financial protection and responsiveness to needs. When looking for solutions we have to keep in mind the objectives and underlying values of the system but at the same time take into account the country's general context (tax and fiscal policy, public sector role, etc.).

European countries vary in their fiscal context, the public and private sources of finance available for health and their distribution. However, it is possible to identify some trends in recent years. First, the breadth of coverage has increased to cover whole populations, including in countries with SHI such as Germany, Belgium, the Netherlands, and France, where the basis for coverage is changing from employment to residence. In addition, this has been supported by a broadening of the revenue base to various income sources and structural changes favouring a single pool to purchase services. Second, private health insurance has a limited role in the European Union, mostly accounting for less than 5% of overall health expenditure. Third, population aging is a relatively minor cost driver when compared to others such as technological innovation and changes in medical practice. Fourth, countries are focusing on achieving better value from health spending, moving away from a singular focus on cost containment.

In discussion following the presentations, participants urged a cautious approach to looking at other countries' experience. We have to understand the context in which others have made their reforms and carefully assess their applicability to Estonia. At the same time many participants highlighted the opportunity to learn from others and avoid their mistakes.

It was also noted that smaller government, as measured by GDP share, does not automatically mean lower public sector financing of the health sector or overall health expenditure. Contrasting examples from the EU (e.g., the Czech Republic and Slovenia) show higher public sector investment than in Estonia in spite of government shrinkage. On the other hand, the level of health spending does not indicate what value the population receives from the system.

Participants' views on the sustainability of health system financing in Estonia

After sharing the international experience, the basic principles and value base, the current situation and further implications of demographic change for the Estonian health financing system were revisited. The presentation concluded with a number of potential ways to improve the health system revenue base and value. The participants were urged to express their views on health financing sustainability in Estonia.

All participants agreed that the present financing system is performing well and its organizational design has ensured stable financing. Nevertheless, the need to adapt the system in the mid- and long term was highly stressed. Sustainability can be understood in different ways but discussion showed that it is not purely about more money, but rather about the importance of having a stable financial basis in the long term to develop the sector and ensure services for the population while balancing revenues and expenditures and spending wisely.

It was emphasized that in good times (for example, economic growth in the past five years) Estonians did not think much about fundamental values such as solidarity and resources supported the attractiveness of the individualistic approach without significantly threatening financial protection and the level of redistribution in the system. Moderate signs of erosion of the solidarity principle have been detected without attracting significant policy attention. However, participants thought it highly likely that support for solidarity and redistribution of resources will increase in coming years. As many people lose their jobs (the first rise in unemployment in 15 years) and face the need for public support, the general population may start to favour the redistributive role of the state more and the meaning of solidarity will become clearer. It was also noted that since the development of the health insurance system, solidarity has been a central value supported by politicians and the general public, as reflected in general public satisfaction.

The current financing system has been relatively independent from political decision-making, and this was seen as a strength of the system, as trust in politicians' ability to make transparent and stable decisions is low. The latest example is capital cost financing mandated to come from the central government in the 2008 state budget but not provided in 2009. Similar examples have reduced trust in decision-making. Taking this into account, the earmarking principle was favoured, to ensure revenue stability.

In addition, the institutional structure (EHIF) was highlighted as an important precondition for sustainable health financing. The current structural form has allowed the health system to prepare itself for economic crises and fluctuations in the revenue base, as accumulating reserves can help overcome short-term problems. However, the decision not to allow the health sector to utilize reserves due to fiscal policy priorities highlights one weakness. The importance of having a public, independent body that can lead transparent discussions was supported. Further, the importance of having a single pool of funds to purchase health services for the population and avoid fragmentation was mentioned as a strength.

Potential sources of additional resources have to be considered carefully while looking at current arrangements funded mostly from direct taxes (e.g. the social tax) and less from indirect taxes. It was clearly felt that the revenue base of the health insurance system needs to be broadened and earmarked funding is favoured. At the same time, the potential ways of doing this need considering and weighting. Using broader income taxation, earmarking excise taxes on health-damaging consumption, allocations from general government revenues, etc. were mentioned.

Private insurance was not seen as an important source of additional funding as it has not developed even in the current enabling environment (regulatory and other conditions such as relatively high OOPs for pharmaceuticals and dental care). It was emphasized that potential buyers of private insurance have enough resources to pay directly out-of-pocket or have a supporting informal network that guarantees faster access to care. One idea was to develop voluntary health insurance for older people to cover the needs of long-term care.

Increasing the system's efficiency was seen as a very important task for the near future, as funding is not increasing and investment accountability is an issue. At the same time, participants noted that long-term sustainability needs to be addressed due to demographic change and other cost drivers. Some potential areas for improved efficiency were identified in the provider sector. First, full implementation of the hospital sector reform for acute care and development of sufficient long-term care with linkage to social support systems are needed. Second, a well-organized family medicine system should be put in the centre to coordinate care, to manage chronic diseases and emphasize health promotion and preventive services. Third, the prices of pharmaceuticals could be better controlled. Fourth, improved control and coordination of high-tech equipment procurement for hospitals are needed. The latter points were supported by a general consensus on the need to have stronger purchasing power of public sector agencies and creating proper incentives for providers. However, it was noted that reducing the benefit package (by service exclusion or cost-sharing) is not feasible.

Summary

The seminar provided a number of views on current health financing and options for sustainable health financing while addressing both revenue and expenditure issues. The health sector representatives and opinion leaders emphasized the need for clear analysis and vision for long-term health financing.

Annex 2. Summary of the workshop in Tallinn on 20 October 2009

Background

EHIF, in collaboration with the Ministry of Social Affairs and the WHO Regional Office for Europe, conducted an in-depth analysis of the Estonian health financing system's mid- and long-term sustainability.

The first workshop was held in April to launch the process by facilitating discussion among invited stakeholders and experts on the value base of the health financing system as well providing input to shape the next steps of the process. The second follow-up workshop took place in October where the preliminary results and recommendations of the draft report were presented and discussed with invited stakeholders, interviewed people and experts. The workshop was aimed to provide an opportunity to validate the results and conclusions of the analysis. The recommendations were discussed in detail to confirm common understanding.

Brief summary of the key recommendations in the draft report

The aims of the report under preparation are to assess the performance of current health financing policy, to identify key long-term challenges and to recommend options for strengthening health financing policy in light of the values underpinning the health system in Estonia. Presentations were given by the working group on:

- report aims, methods and content
- summary of stakeholders views
- assessment of health financing policy
- health expenditure projections
- developments in health finance, macroeconomic context and options to bridge the gap
- options for change
- recommendations.

The report's recommendations are based on a comprehensive assessment of financing policy and reflect current values and political feasibility. A vast amount of data was presented to logically reach key recommendations. The first recommendation in the report is to broaden the revenue base to bridge the revenue-expenditure gap and reduce reliance on mainly employment-related financing. This should be tackled by making contributions to the health insurance system on behalf of pensioners and applying the social tax to dividends. The second recommendation is to curb patient spending to enhance financial protection by capping out-of-pocket spending, as well improve targeting by exempting poor households and high users of health care. To address the main driver of OOPs, rational drug use should

be promoted. The third recommendation is to improve system efficiency with better control over investments (in hospital capacity, long-term care and high-tech equipment) and strengthened purchasing. Several approaches to improved purchasing need to be adopted including shifting from inpatient to outpatient care, enabling family doctors to steer patients through the health system, implementing schemes to coordinate care between levels and greater use of health technology assessment in decision-making. The fourth recommendation is to improve governance of the whole health system to ensure accountability, where the current single, autonomous purchaser system has been internationally recognized as an excellent example of a well-functioning system. The fifth recommendation is to invest in public health to contribute to healthy aging. The cost of doing nothing is high and analysis clearly confirms that decisions taken in now and coming years will affect health care spending in the long term.

Participants views on draft report results and recommendations

All participants agreed that current report with its assessment of the current policy and recommendations is quite valuable and an important milestone for further action. It was emphasized that it is important not to treat the health sector as part of the total social sector and use health insurance reserves to cover social sector gaps. International evidence shows that independent health insurance systems perform better than those integrated into other social sectors. Most social sector entities (e.g. pension systems) can cut expenditures during a crisis without demolishing the system for a longer period whereas the health sector is more fragile.

It was asked whether there is really need for extra funding or the spending cap can be met by increasing system efficiency. It was recognized that even if there is some room to tackle inefficiencies, that would not solve the long-term financial sustainability issue, and additional revenue sources must be found. The question is the size of the gap and not whether the gap exists. It was stressed that one area where efficiency gains can be achieved is the better central control over investments in infrastructure and expensive technologies. Providers are interested in increasing their market share by improving their competitiveness through capital investments, which will boost the demand for health care services.

Patients' views and expectations are important. There is pressing need to further develop approaches to steering patients through the system. In addition to core health care, the broader view of population health needs to be maintained. There are unmet needs (e.g., long term care) and continuing challenges such as HIV/AIDS and inequalities that need more attention.

The importance of solidarity as an intrinsic principle of the health financing system was stressed and several examples of solidarity bases from other European countries in this century were given (Belgium, the Czech Republic, France, Ireland and the Netherlands). Nevertheless, a silent erosion of solidarity can be seen in increasing OOPs, and is a matter of concern for the near future.

Broadening the revenue base by making contributions in the behalf of pensioners was recognized as a serious long-term solution to the financial sustainability issue, but the importance of carefully designing the contribution system was noted, since there have been instances where state contributions have remained fixed for years without adjustment or were stopped during difficult times. Therefore, the proposed contribution scheme on behalf of pensioners should be amenable to increases and earmarked to ensure stability. It was also mentioned that this scheme should not impose an additional tax on pensions.

Summary

It was acknowledged that Estonia has been able to use previous difficult periods to make hard decisions, thus enabling the use of favourable periods for development. In this respect, the current economic crisis can be an opportunity to provide a solid common basis for improved health system performance while preparing for future crises. The cost of doing nothing is very high and if there is no political will to increase public financing, there will be strong pressure for increased private spending, to the detriment of financial protection of the population.

Annex 3. Interview guide

The current system of financing health care

At present, the health system in Estonia is financed through a combination of payroll tax, general taxes, OOPs (user charges) and private health insurance.

1. What do you think are the main strengths and weaknesses of the way in which health care is financed?
2. Do you think the way in which the health system is currently financed works well?
3. What, if anything, needs to be changed?
4. Do you think the current financing system is fair?
5. About 5% of the population are not fully covered by EHIF and only have access to a limited range of ambulance and public health services. Is this acceptable? If NOT, how would you address this issue?
6. Do you think the current level of services provided to people who are not covered by EHIF is sufficient? If NOT, what else should be covered for all (by the state)?
7. Do you think that public health and preventive services like immunization should be covered by the government budget (rather than through earmarked tax or EHIF)?
8. Do you think the current level of health benefits should be changed in any way? Are there things that are not covered that you think SHOULD be covered? If YES, how should any additional services be financed? Are there some things that are covered that you think should NOT be covered? If YES, how would you decide what to cut?
9. In the last ten years, OOPs have grown from about 14% to about 22% of total health expenditure. Do OOPs prevent people from accessing health care? If YES, what do you think can be done to improve access to health care? If NO, why not?
10. Private health insurance currently plays a small role in Estonia. In your view, should the role of private health insurance be expanded? If YES, how (what role / benefits, how encouraged, tax relief)? If NO, why not?
11. Do you think the current balance between public and private spending on health is about right (75% public and 25% private)? Would you support a system that offers more benefits but for a higher copayment OR would you prefer a system that provides a lower level of benefits, but accessible for all?
12. How do you see the public-private health financing mix developing in future?
13. Do you think people are willing to spend more on health? If YES, how: publicly (through higher taxes) or privately (through OOPs/PHI)? If publicly, which form of additional taxation would you consider feasible: earmarked labour tax (social tax), income tax,

excise taxes on alcohol and tobacco, VAT, social tax on dividends, taxing pensions as income? What might be their impact on other areas of the economy?

14. If you think public spending on health should increase, would you leave it to the government to decide how much extra to allocate each year or would you prefer any extra revenue to be earmarked?

Challenges for health financing

15. Looking to the long term, what are the main challenges facing health financing in Estonia? Which of these is the most important?

16. Do you think the health financing system is equipped to meet these challenges?

17. Are these challenges related to challenges facing public finance more generally?

18. How should the health financing system change to meet these challenges?

19. What other changes are needed (i.e., outside the health sector)?

Values and goals

20. How would you describe the main values in Estonian society and are these values reflected in the way health care is financed?

21. Do you think the values inherent in the health financing system have changed over time?

22. Do you think broader societal values will change in future? If YES, what are the implications for the way in which the health system is financed?

23. How do you see people's commitment to the principle of solidarity in health financing? Has this remained stable over time? Is it likely to change in the future?

24. Do you think that the Estonian health system is efficient? If efficiency can be improved, where do you see efficiency reserves or waste in the system?

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World Health Organization Regional Office for Europe

Scherfigsvej 8, DK-2100 Copenhagen Ø, Denmark
Tel.: +45 39 17 17 17. Fax: +45 39 17 18 18. E-mail: postmaster@euro.who.int
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