EUROPE

WHO Mission to Estonia
Assessment of Hospital reforms

August 29 – September 2, 2005

Full Report

September 2005

WHO mission team

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Executive Summary

The Estonian health care system has undergone massive reform since independence. The pace of reform has been remarkable with substantial improvements that include the establishment and clarification of the legal status and types of hospitals, improved planning and contracting, the development of new models of hospital financing and the establishment of management structures like supervisory boards in addition to substantial reductions in hospital capacity. It has been five years since the introduction of the Hospital Master Plan 2015 that guides a number of these reforms.

The purpose of the mission was (1) to evaluate hospital sector restructuring, using the Estonian Hospital Master Plan 2015 as benchmark, (2) to evaluate current hospital sector planning and methods used, (3) to compare the Estonian hospital sector to old and new European Union countries, (4) to analyse the linkage between the hospital sector and other levels of care, (5) to analyse hospital care in the Tallinn geographical area, and (6) to provide recommendations on how to enhance hospital performance measurement for quality improvement and accountability purposes.

In order to achieve these objectives the mission completed a review of past reports on Estonian health reforms, legislation and annual reports that were available in English and met with a number of key stakeholder groups ranging from Members of Parliament, to Hospital Management and Supervisory Board members, to patient and professional associations. The mission visited several hospitals during the mission as well.

The Mission found that the pace and accomplishments of the reforms to date have been substantial and supports the further implementation of the Hospital Master Plan 2015. However, there are challenges to the reforms underway and the successful achievement of the goals of the reform will likely depend on rebalancing the system away from relatively costly locales of treatment like some hospitals towards more community based care, the development of new models for delivering care, and the integration of care across hospitals and across the continuum of care. In order to achieve this broad goal, the Ministry of Social Affairs, the Health Insurance Fund, the hospitals, and other stakeholders such as the professional association will have to work together to develop new capabilities in stewardship, governance, performance management, hospital financing, human resources development, and information management. This report contains a number of concrete recommendations for specific reforms and concludes with a low and a high-risk bundle of reforms that the Ministry may pursue depending on their appreciation of the Estonian health system.

Concrete recommendations presented in the full report include:

- Setting up a Ministry Strategic Planning Unit for the whole health system (Ministry)
- Integrating and updating information for needs based planning (Ministry & Fund)
- Describing and publishing hospital and health system strategies with specific output and outcome targets for the hospital system (Ministry)
- Clarifying the roles and responsibilities of different provider groups (Ministry)
- Benchmarking hospital boards performance and making supervisory boards responsible for contracts with the Fund (Fund)
- Clarifying expectations for all stakeholders about what goals have to be attained through hospital reforms (Ministry, Fund & Hospitals)
- Through the contracting process, reinforcing incentives and attaching consequences to the attainment or non-attainment of objectives (Fund and Hospitals)
- Creating an integrated approach to all service purchasing that includes both Fund capital and operational support (e.g. European Union Structural Funds) (Ministry & Fund)

The experts recommend that hospital care in Tallinn is further rationalized by streamlining the functions of Tallinn hospitals. It is advisable to reduce the number of providers in the mid-term.

Together the rebalancing of the provision function and the development of new capabilities will help ensure the sustainability of the hospital system and furthermore of the Estonian health system and maintain public confidence and key health human resources.

I. Introduction

1.1. Mission overview

A WHO Regional Office for Europe mission on hospital reforms in Estonia took place on 29 August to 2 September 2005 to respond to previously agreed terms of reference (see annex 1). Participants to the mission were Mr Jeremy Veillard (WHO Temporary Advisor, Hospital reforms expert, coordinator of the mission), Professor Adalsteinn Brown (WHO Temporary Advisor, Hospital reforms expert), Dr Alain Corvez (WHO Temporary Adviser, Hospital reforms expert) and Dr Jack Hutten (WHO Temporary Adviser, primary care and hospital reforms expert). The overview of experts profiles is available in annex 7. The team would like to acknowledge the valuable support of the Ministry of Social Affairs staff involved in this mission. The team is especially grateful to the WHO Country Office in Estonia for its invaluable support.

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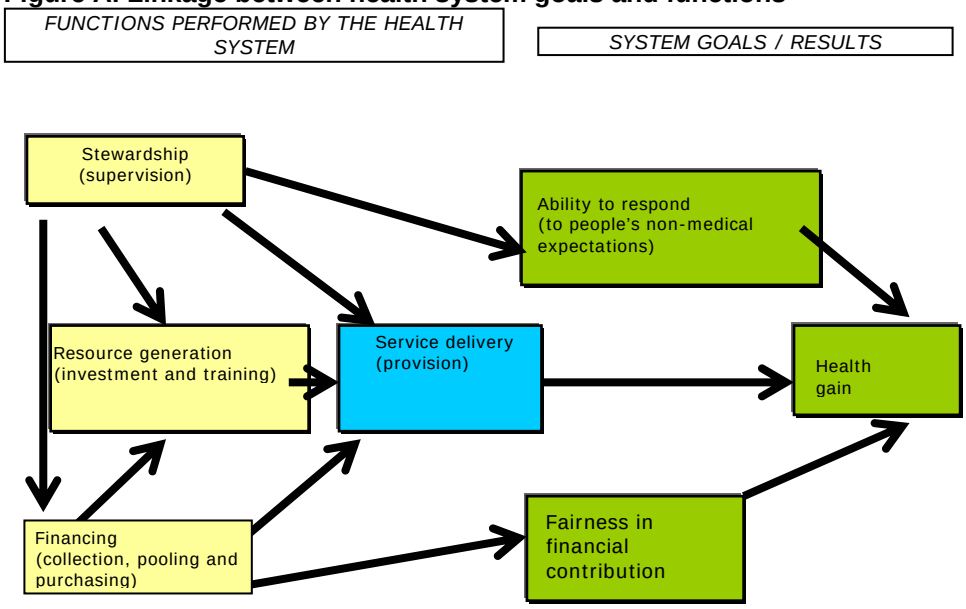
The mission met with representatives of most important stakeholders in Estonia: Minister of Social Affairs, Social Commission of the Parliament, Health Insurance Fund, Ministry of Finance, Health Care Board, Associations of patients, physicians, nurses and hospitals and geriatric and long-term care (see detailed agenda in annex 2). Site visits were carried out to Parnu (local authorities, family medicine centre, Parnu hospital) Parnu Jaagupi (primary care centre), Tartu (University hospital, local authorities), Paide (Jarvamaa Hospital), Tallinn (local authorities, North Estonian Regional Hospital Association, East Tallinn Central Hospital) and Rapla (County general hospital).

1.2. Hospital reforms assessment framework

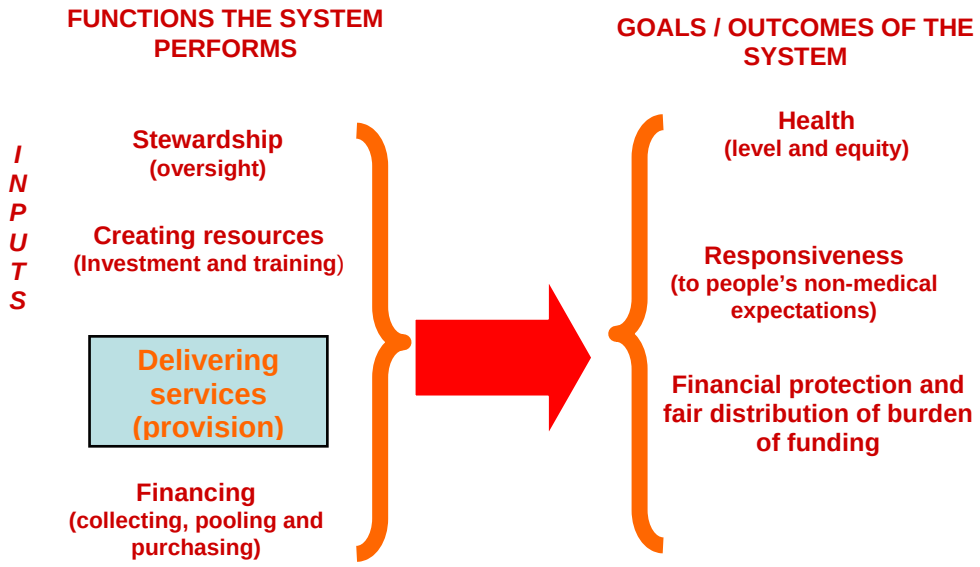
The experts used for the assessment of hospital reforms in Estonia the framework developed by the World Health Organization (Murray and Evans, 2003) and used as a baseline for the recent assessment of primary care reforms (Atun, 2004).

Figure A. Linkage between health system goals and functions



Commonly agreed objectives for health systems are health status improvement, responsiveness and people financial protection (WHO 2000, OECD 2001). In addition, broad functions carried out by health systems are usually defined as stewardship, resource generation, financing and service delivery and are linked to health systems objectives (Figure B, adapted from Travis et al).

Figure B. Health system objectives and functions



The combination of inputs into a service production process leads to the delivery of health interventions to individuals and/or to the community. The delivery function is not isolated from the other functions of the health system and should be considered as one component of a complex system contributing to the achievement of health system goals. It is important to consider how the hospital sector relates to the other types of health care delivery and how the provision function itself contributes to intermediary and ultimate goals of the health system. A balance has to be found between the different intermediate goals of the health system as access, equity, quality, efficiency and sustainability of the health system. This report strives to link the hospital sector to other types of health care services delivery, as well as to the intermediate and ultimate goals of the health system.

1 Substantial progress has been made on reforming hospital care in Estonia

In May 2000, the Estonian Hospital Master Plan 2015 (EHMP) was approved by the government. The objectives of this plan are to:

- Reduce the share of inpatient care: from 6500 acute beds in 2001 to 3200 in 2015
- Improve efficiency of inpatient care by reducing the average length of stay from 6.7 to 4.6 days and by increasing bed occupation rates (from 67% to 83%)
- Increase the share of outpatient, day care and nursing care facilities
- Concentrate hospital activity on more sophisticated and expensive special medical care

In a few years substantial progress has been achieved (see table 3 and Health Systems in Transition for Estonia, European Observatory on Health System and Policies, 2004 for further information):

- Organizational reforms have been implemented in a phased way, which has allowed substantial efficiency gains and the shift of Estonian hospitals from a public sector model to a corporatized model aligning diverse incentives (through increased autonomy, decision rights and accountability, as well as a residual claimant status which has allowed hospital managers to renew partly their medical equipment and undertake the renovation of hospitals (Habicht, 2004)
- Organizational reforms have been aligned with payment mechanisms and financial incentives (Jesse et al, 2004).
- Hospital merging has brought large efficiency gains, as shown by the results of a recent study funded by the World Bank (Jesse, 2004)
- The number of acute hospitals has been reduced from more than sixty to a positive list of 19.

Most recent data on acute hospital utilization and performance are presented in tables 1 and compared to other groups of European Union Countries in table 2.

Table 1: Inpatient utilization and performance in Estonian acute hospitals

	1990	1996	2000	2002
Hospital beds per 1000 population	9.2	6.1	5.5	4.5
Admissions per 1000 population	17.5	17.3	18.7	17.2
Average Length of Stay (days)	14.3	9.6	7.3	6.9
Occupancy Rate	74.2	71.9	66.1	64.6

Table 1 shows that between 1990 and 2002, Estonian acute care hospitals have been able to decrease substantially the average number of hospital beds for 1000 population, have maintained in the meantime the average number of admissions per 1000 population and have substantially decreased their average length of stay. The performance of acute hospitals has improved substantially. Nevertheless, even though the efficiency has improved, the average occupancy rate has declined substantially.

Table 2: Inpatient utilization and performance in Estonian acute hospitals compared to pre-accession European Union Countries (EU-15) and accession countries (EU-10) in 2002

	EST	EU-15	EU-10
Hospital beds per 1000 population	4.5	4.1	6.0
Admissions per 1000 population	17.2	18.1	20.1
Average Length of Stay (days)	6.9	7.1	7.7
Occupancy Rate	64.6	77.9	72.6

In relative terms, table 2 demonstrates that the performance of acute Estonian hospitals in terms of hospital beds per 1000 population and average length of stay is comparable to pre-accession European Union countries (EU-15) and is substantially better than accession countries (EU-10). The average number of admissions per 1000 population is slightly lower than pre-accession and accession European Union Countries. The average occupancy rate for acute hospitals is substantially lower than both groups of countries and demonstrates that in 2002 there was still room for further hospital reforms. Low occupancy rates can be a sign of difficulties for the population to access care, but can also indicate that the supply of health care services doesn't match the demand of the population. It can be the case when acute services are proposed instead of community services that may be needed by an ageing population.

Achievements of hospital reforms in Estonia over the last ten years are summarized in table 3 hereunder.

Table 3: Achievements of hospital reforms in Estonia (1994-2005)

	Old situation (mid-1990s)	**New situation (2005)**
Legal status	Not regulated by Law Mixture of types Diffuse rights, responsibilities and accountability	Legal status in law: foundation or joint-stock company
Planning	Decentralised (county, municipality)	Centralized: hospitals licensed; List of acute care hospitals to be approved by Gov't
Hospital financing	Limited funding of capital investments by state and municipalities	Capped Volume contracts Capital costs included in prices Mixture of FFS, daily fee, case-based payment mechanisms
Types of hospitals	Diffuse, lack of clarity in hospital role and function	Seven types of hospitals with clear legal requirements
Management structure	No delegated autonomy & little coordination	Clear structure between supervisory boards & management board Organizational reforms aligned

2 A number of limitations to hospital reforms and challenges push for further reforms

A number of issues still remain to be resolved to ensure the sustainability of the hospital system in Estonia:

- Even though the primary care reform has been largely successful and allows further restructuring of hospitals, an overall policy on health care delivery has not been developed, that would define what share of resources allocated to health care should be spent on primary care, hospital care, long-term care and other types of health care delivery
- Even though progress has been made on defining the different types of hospitals belonging to the "Estonian hospital network" (Health Care Services Organisation Act (2001)), the differentiation and specialization of hospital care to meet the needs of the population is still very little developed and puts other objectives of hospital reforms, like accessibility and quality, at risk.
- Progress needs to be made on making hospital governance more effective in order to make hospitals more accountable for outcomes
- The mix of health human resources and especially the ratio of nurses to doctors needs to be improved.

Overall, even if substantial achievements have stabilized the situation of hospitals in Estonia, major challenges will have to be faced by the hospital system and put the sustainability of the hospital system at question:

- There is no formalized hospital reform strategy neither action plan per se, which puts at question the right mix of goals pursued by the Government on what appears to be the key goals of the reforms: balancing efficiency, equity in access to key services and quality of services delivered to patients.
- A number of constraints (demographics of the population in general and of health human resources more specifically; financial resources required by a net of hospitals neither specialized or differentiated in terms of capital investment; incompleteness of the primary care reform (which could develop new models of primary care delivery through for instance multidisciplinary teams) and under capacities in the supply of home care and long-term care services) show that a hospital reform strategy should not only focus on short-term achievements but also on making the hospital system sustainable over the long run.
- Requirements of the population in terms of access, quality and safety of health care services are developing quickly as Estonia entered the European Union. The population requires standards of care closer to those of other European Union countries.
- Capacities of the Ministry in strategic planning and use of appropriate methods and tools are not enough developed to ensure that planning will lead to the achievement of major policy goals for the hospital sector.
- Major choices will have to be made regarding the role of hospitals in the health care delivery system in the long run.

The hospital sector has been largely consolidated over the last ten years and efficiency gains are obvious. Nevertheless, a number of challenges push for further hospital reforms. Hospital reforms rely on values and principles which we tried to identify during the mission and present in section 2. Recommendations to further consolidate the hospital sector and make it sustainable as well as better balanced between competing goals as quality, efficiency and accessibility, are discussed in section 3 of this report. As exposed earlier, major choices will have to be made. The possible consequences of such choices are discussed in section 4 of the report through a scenarios methodology.

II. Fundamentals for hospital reforms in Estonia

During the mission, stakeholders expressed a similar set of principles for how reform should unfold. The principle that reforms should continue was common to every meeting. Even when hospitals noted difficulty in meeting targets, they expressed clearly that they would manage to targets set centrally. However, the following four principles were also expressed at a large proportion of the meetings by a wide range of stakeholders.

1 Incremental change is preferred over radical changes in direction

Although the notion that reforms should continue was common to all meetings, a number of respondents also noted that reforms should not represent wholesale shifts in policy direction. For instance, given that annual strategic planning and construction are currently tied to the Hospital Master Plan, substantial additional reductions in capacity that exceed the Hospital Master Plan targets will create unused and wasted infrastructure. However, the need to maintain the direction and pace of reform is important so that the cultural changes started by the Master Plan have time to take root.

2 Obligation to treat everyone the same way

A major theme expressed at a number of meetings was the importance of treating everyone the same way. This theme may be partly rooted in the Law of Obligations but it may also be rooted in Estonian culture. It implies for hospital reforms that contracting options applied to one hospital should be applied to all hospitals and that all Estonians should be able to expect similar access and quality of care. In fact, this sort of standard around access to care was one of the few commonly noted and accepted targets for system performance: no Estonian more than 70 kilometres or one hour away from a hospital.

3 Importance of quality of care

Quality was noted as an important goal of the health system several times. However, the definition of quality varied in scope from meeting to meeting. In all meetings, an important component of quality of care stated was the resources available to provide care; that is the availability of both the human resources and technologies (buildings, machines, and other resources) that were compatible with the modern practice of medicine. In response to questions about the single best measure of quality, a number of respondents including both hospital executives and the Health Insurance Fund, suggested patient satisfaction and the quality audits conducted by the Health Insurance Fund. A much smaller number reported tracking or reviewing outcome measures such as mortality rates. No respondents suggested indicators of patient safety or other recent trends in monitoring performance.

4 Transparency

All respondents emphasized the importance of transparency and pointed to the public release of their annual reports and the contracted volumes of care by hospital through the Internet. However, there seems to be a strong relationship between the principle of transparency and the principle of the obligation to treat everyone the same way. This means that no hospital reported releasing information in addition to the information that was mandated for every hospital (annual reports) or that was released for every hospital by a third party (contracted volumes of care by the Health Insurance Fund).

The reconciliation of reform options against these principles will be critical to their successful implementation. For instance, expanding the definition of quality to include clinical outcomes or patient safety should be congruent with other principles such as transparency (e.g. including clinical outcome rates in the annual reports posted on the Internet by hospitals) and obligation to treat everyone the same way (e.g. setting standards for clinical outcome rates that apply to all hospitals regardless of their location or status).

III. Recommendations

1 Building capacities for stewardship and alignment of policies

Stewardship is defined by the World Health Organization as "a function of government responsible for the welfare of the population, and concerned with the trust and legitimacy with which its activities are viewed by the citizenry" (World Health Report, 2000). Good stewardship requires the implementation of a number of criteria, as described in annex 5: high quality of information should be ensured, strategic directions should be set and communicated, relevant mechanisms should be created and employed to steer the health system, health system goals and roles should be aligned, system-wide accountability should be ensured, as well as appropriate regulation of the health system, and the steward should be able to respond to the changing needs of the health care system.

Even though considerable progress has been made in the efficiency and sustainability of the hospital system, the goals of the hospital reforms do not seem clear to most of the stakeholders. It proved difficult to have an articulated idea of what the reforms were trying to achieve and for instance when hospital reforms could be considered having achieved expected goals. During the last five years, efficiency gains have been clearly made and rationalization has been introduced in the hospital sector.

Besides a number of policy documents striving for different goals, there is neither hospital reform strategy nor action plan. Having such policy documents would help clarify goals for the hospital reforms as well as how hospital care contributes to the achievement of health system goals. For instance, it appeared that striving towards a sustainable hospital system positioned in a well-balanced health system and providing high quality, safe, accessible and patient-centred care could be a reasonable goal shared by most stakeholders for hospital reforms in Estonia.

A number of other stewardship tools that could relay strongly hospital reforms are not in place yet:

- Even though coordination is ensured with the Health Insurance Fund through various committees to relay policy orientations through financial incentives, an active performance management of the hospital sector is not in place
- Even though important efforts have been put in information systems, most of the data used for decision-making is still input or output and not outcome oriented
- Lines of accountability can be simplified for hospitals, and would support the implementation of stronger performance management mechanisms
- Strategic choices like the place of hospitals and the financial burden it should take in the health system in the future have not been made
- As constraints on the hospital system are considerable and impact efforts put in developing other sectors (primary care and long-term care for instance), the reflection on Health System sustainability should be undertaken. A strategic plan on how to make the hospital sector sustainable and balance the provision function should be developed.

A number of recommendations can be made to better steer hospital reforms:

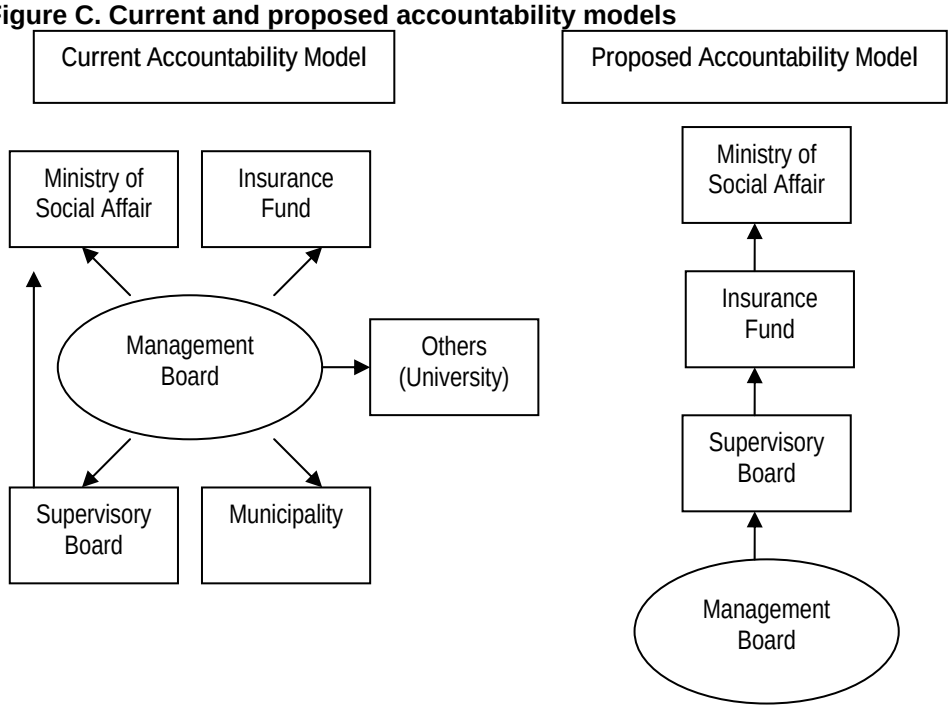
- Capacities are missing within the Ministry of Social Affairs to plan hospital and health care services in general strategically. It would be advisable to create a strategic planning unit within the Ministry of Social Affairs and develop capacities to plan health care services based on population needs. It will allow bringing evidence into the debate and better balance the efficient lobbying of biggest hospitals.
- It will be important to drive strategic planning from strong and updated evidence, especially epidemiological analysis. Planning of health care services should be driven from current and future needs of the population or population groups. To this purpose, currently available information should be used; if required, additional information should be gathered.
- A key priority would be to develop a comprehensive strategy for hospital reforms and to state what outcomes are expected to be met and how they contribute to the achievement of health system goals. Critical support from key stakeholders could be gained through well-balanced goals and a clear statement on targets to be achieved. A clear work plan and a financial plan should be attached to this strategy.

- The hospital system strategy has to be encompassed in a broader health system provision strategy, and especially be coordinated and aligned with reforms on primary care, long-term care and social care.
- It is advisable that the Ministry of Social Affairs would try to set up the tools to achieve this strategy. Developing a performance management system to be relayed by the Health Insurance Fund through its contracting policy would help achieving hospital system goals.
- Health system policies have to target the improvement of outcomes (how do new investments on hospitals contribute to the achievement of health system goals?) and of Health System sustainability (how do new investments contribute to make the hospital system more sustainable?). Additional resources should not be allocated without making sure that they create value for the health system, either in terms of outcomes or in terms of sustainability.
- As the pace of reforms is growing in many countries, evaluation becomes a key component of health policies, as they help taking mid-term corrective actions. It is advisable to further invest resources in the evaluation of a hospital reform strategy in its mid-term implementation.

2 Reinforcing governance and accountability of the hospital system

The relationship between management boards, supervisory boards, the Ministry of Social Affairs, and the Estonian Health Insurance Fund may lead to several limits on the accountability (see annex 6 for an accountability framework developed by the Ministry of Health and Long Term Care in Ontario) and on the ability of hospitals to meet performance and investment targets. In the current situation, hospital management boards (through the Chief Executive Officer, CEO) sign contracts with the Health Insurance Fund to provide certain volumes of care in exchange for certain levels of funding. At the same time, the management board prepares a strategic development plan that is submitted to the Ministry of Social Affairs for long-term development. The management board remains accountable to the supervisory board for both its tenure and compensation and is also required to obtain supervisory board approval for its budget, its strategic development plan, and other major issues it faces. The supervisory board in turn is accountable to the founders or owners of the hospital, who may have significant interests in expansion of the hospital capacity, for example because the hospital is the major employer in the community, that are in conflict with the contracted volumes or other decisions taken by the management board and approved by the supervisory board. Although the supervisory boards typically include representatives of different owners and foundations, they do not provide a vehicle for resolving conflicting and multiple accountabilities. (See Figure D) Not surprisingly, a number of hospital strategic plans call for expansion of hospital capacity while targets in the Hospital Master Plan call for reductions in costs and overall utilization.

Figure C. Current and proposed accountability models



However, in order to reap the benefits of better supervisory board governance and accountability, it is necessary to increase the capacities of the board. Two often repeated comments from the consultations with hospitals are that supervisory boards do not provide substantial value to hospital strategy setting and that they have become politicized. We also identified a number of potential conflicts of interest where supervisory board members enjoyed positions on the management board of one hospital and the supervisory board of another hospital or where individuals sat on more than one supervisory board of hospitals that are competing for the same contracts for volumes for their patients. Moreover, there may be substantial variations in the capacity of boards, with some working very well and others working less effectively. A cursory review of supervisory board agendas showed substantial variation in the types and scope of issues covered and in the organizational structures of supervisory boards; some boards had separate audit committees and some considered reports on the quality of care while other boards dealt only with the appointment of auditors and the approval of hospital budgets.

The first step in building supervisory board capacity will be to obtain a measure of board performance. This can be handled through the collection of a number of indicators such as the ones used in the review of corporate governance in the private sector or through qualitative reviews of items like board agendas and minutes by an independent third party. These reviews could be the basis for focused recommendations around improved board governance. Regardless, building board capacity will also require changes in board composition and board education. Boards should have capacity to review issues of strategic importance to the hospitals they serve including most notably financial, clinical quality, and legal expertise. A board should be selected based on these characteristics by its founders or owners. It may be advisable for boards to benchmark their performance against the private sector for instance. This sort of approach may require founders or owners to work more collaboratively in board development. However, given the relatively small size of the health care sector, it is unlikely that there will be sufficient numbers of individuals to fulfil these roles within the health care sector so board recruitment will have to include the private sector. Finally, boards with consistently poor performance on indicators of board performance or with difficulty attracting sufficiently skilled members, or with a desire to improve their own performance may seek training in governance. Given the relatively small size of supervisory boards, the Ministry of Social Affairs or the Health Insurance Fund may wish to investigate training board members in large groups and in conjunction with management board members to build consistent cultures and languages of board governance.

As capacity for governance increases in the system, policies can be developed to align accountabilities in the health care system. Chief among these alignments is the elimination of potential or perceived conflicts of interest where supervisory board members served multiple hospitals either through the supervisory board or through the management board. This will help stimulate more competition around contracts with the Health Insurance Fund and may support the emergency of competition based on quality for incremental volumes of care. The second of these alignments is a cascade of accountability from the Estonian Health Insurance Fund, to the supervisory board of a hospital, to the management board. Each party would have an accountability agreement with the party to whom it is responsible. This means that supervisory board of the Health Insurance Fund would sign an undertaking with its management board. The management board of the Fund would require a set of agreements with the supervisory boards that allowed it to reach its performance goals in its accountability agreement. Likewise, each supervisory board would require an accountability agreement from its management board. Integrating supervisory boards into the accountability process should also help to reduce charges of a political process around board appointment without changing the appointment process. Supervisory boards that are unable to deliver on their accountability agreements will be removed, likewise with management boards. This will encourage only qualified and capable individuals to let their name stand. In order to maintain a pool of capable individuals, however, it may also be necessary to standardize and improve supervisory board compensation.

For ease of implementation, these other accountability agreements can be modelled on the health examinations and health services contract currently used by the Health Insurance Fund. In fact, contract clauses such as 4.1.1 (2002 version of contract) that notes that the health care institution shall, “upon the provision of health services of high quality standards, opt for cost effective and patient sparing treatment methods” allows the integration of specification of what is meant by high quality and cost effective using performance indicators. Likewise, clause 7.3.2 (2002 version of contract) that requires the health care institution reimburse the Health Insurance Fund for “the cost of the treatment of complications suffered by an injured person as a result of a medical error from the Health Care Institution who has caused such complications if this has been verified by the Expert Committee on the Quality of Medical Care.” In order to enforce this clause, the Committee on Quality of Medical Care or some other independent body could produce monitoring or screening tests for medical error based on the billing data as used currently in the United States. These clauses and others allow significant conditionality to be built into current contract templates and the gradual refocusing of service contracts on both volume and quality. The reliance on the contract between the Health Insurance Fund and the Health Care Institution is not surprising since this contract is the dominant influence on hospitals’ planning. This contract, however, seems under-exploited as a method of transforming the Estonian health care system by the Estonian Health Insurance Fund.

These actions would provide clear accountability, would allow the different types of planning submissions and contracts to be aligned at different levels of the health care system and should provide greater ability to the Estonian health care system to reach sustainability. This cascade of responsibility will also be critical if the hospital is to become the hub of integration with different levels of care within each community.

In specific cases, where hospital mergers may lead to conflicts between supervisory boards, for example as it may happen in Tallinn, a useful first step may be to create a super board that includes all members and then begin the process of reducing the supervisory board membership of the merged organizations based on competencies required on the boards.

3 Making Hospital financing a stronger lever for hospital reforms

The WHO Regional Office for Europe reviewed comprehensively health system financing and provided the Ministry of Social Affairs with a core set of recommendations (Couffinhal and Kutzin, 2004 & 2005).

This mission supports the conclusions of this report. The way health system financing is structured in Estonia is sound and has allowed substantial progress in hospital reforms over the five past years. A number of accountability and incentive mechanisms have been put in place. They have to be pursued and further aligned with policy directions as set by the Ministry.

The contracting policy of the Health Insurance Fund appears as a powerful lever for further hospital restructuring and should be further developed. It is nevertheless advisable to avoid an excessive fragmentation of health care services funding and to create an integrated approach to all services purchasing that includes both Fund capital and operational support (as the European Union Structural Fund for instance).

Even though the payment system contracting system appears more and more sophisticated, there is a need to move from volume block contracts to performance contracts. In the current contracts, quality provisions are being made and even though they rely mainly on processes and inputs, they open the way for contracting on outcomes. Paying for outcomes will require building a culture of performance measurement among providers. Action is being taken by the Ministry of Social Affairs and the Health Insurance Fund and a number of central and regional hospitals are willing to participate to the WHO Regional PATH project (Performance Assessment for quality improvement in Hospitals, PATH). Such projects support the development of a culture of accountability and improved outcomes. In parallel, it is advisable for the Health Insurance Fund to start introducing simple indicators such as readmissions rates and attach consequences to the attainment of targets. Such indicators should promote key goals for the hospital reform, as health improvement, quality of care and patient centeredness. This shift towards purchasing outcomes rather than volumes should be made gradually (see Figueras et al, 2005).

The introduction of capital costs in the pricing model as well as aligned organizational and financial incentives have obviously allowed hospitals to generate surpluses which are invested mainly in hospital renovation and in purchasing medical equipment. Nevertheless, the absence of amortization of new medical equipments purchased through end-of-year surpluses will create difficulties when time will come to replace such equipments. As much as possible, amortization and capital costs should be further incorporated in prices calculation to allow hospitals to plan non-major investment and renovation plans over the mid and long term. Even if hospitals need to have the freedom to plan for non-strategic capital investment, the Ministry of Social Affairs should keep the right to define the field of strategic investments, which should be linked to the hospital reform strategy. A policy for long-term investments in hospital care seems necessary.

Repeatedly, hospitals expressed the ability to manage against volume contracts. It will be important to re-enforce this culture of managing towards targets and link payments to simple performance indicators that reflect both quality and efficiency (e.g. readmission rates).

The part of resources allocated to primary care and long-term care remains modest when compared to the hospital sector. The European Union structural funds will be an opportunity for the Ministry of Social Affairs to invest strategically on core facilities for the future, facilitate further restructuring and merging of hospitals (for instance for the two central hospitals in Tallinn) and develop the supply of long-term care beds across the country.

4 Linking performance measurement and strategy: towards performance management

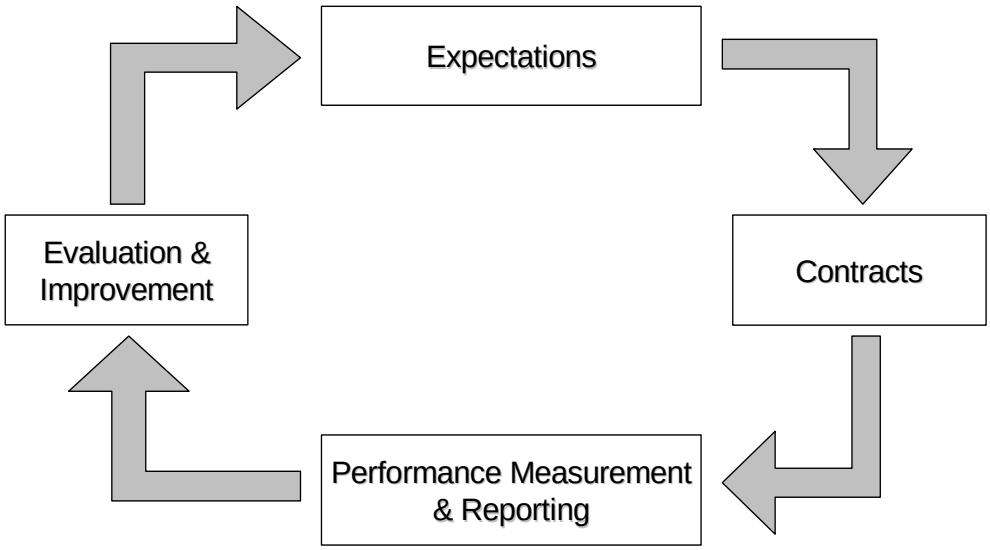
The positive experience of Estonian hospitals with contracting has allowed the introduction of a number of process and input quality indicators in volume contracts. It has created a positive momentum and a number of hospitals are now willing to measure their performance. The Estonian Health Insurance Fund has taken the initiative to create a working group to pilot the use of the WHO Regional Office for Europe Performance Assessment Tool for Hospitals. The Ministry of Social Affairs and four to six central and regional hospitals are willing to participate to this project, which aims at improving hospital performance and hospital quality but does not aim at releasing performance indicators or making them available to the public. It is advisable to pursue the participation to this project, as it can contribute to creating a positive culture of performance measurement and performance monitoring. It would be artificial to separate performance measurement for internal quality improvement purposes and measurement for external funding purposes. The use of performance indicators in contracts has to be pursued to shift progressively hospitals from a focus on inputs and outputs to a focus on outcomes.

Recommendations proposed in the section on governance should facilitate cascading targets from system to providers, either directly or through incentives set up by the Health Insurance Fund. It will allow managing more actively hospital system performance as well as the performance of individual providers. The implementation of outcome indicators should be phased carefully though. It is advisable to start the implementation of a tool like PATH and introduce outcome-oriented performance indicators in parallel.

Furthermore, recent research shows that performance measurement has to be linked to strategy to create a culture of accountability and improved outcomes. Linking the targets of a hospital reform strategy and outcome indicators could, through an aligned accountability structure, allow an active management of hospital system performance. Performance management can be defined as the activity of tracking performance against targets and identifying opportunities for improvement. It brings clarity for the different actors of the system on how they can create value for the health system as a whole.

To ensure that performance information becomes meaningful for accountability purposes and drives performance improvement, it must be situated in a comprehensive and coherent framework of management processes that includes contracting, monitoring, reporting and evaluation.

Figure D. Performance management cycle



An active management of hospital system performance could constitute a strong leverage point for reforms. Nevertheless, a number of principles have to be respected:

- Expectations have to be clarified for all stakeholders about what goals have to be attained
- Through the contracting process, incentives should be aligned and reinforced and consequences should be attached to the attainment or non-attainment of objectives
- Performance should be measured and communicated clearly between the Health Insurance Fund and providers for both parties.

5 Reinforcing the sustainability of the hospital sector

Measuring the sustainability of the hospital system is the first step towards maintaining it. However, there is relatively little long-term information on hospital system sustainability. The following proposals are intended to address this shortcoming and provide insight into sustainability. As noted above, in the section on principles for hospital reform, this initiative should also conform to the principles of transparency, that is, any of the types of information suggested below should also be made public.

Sustainability has a number of dimensions, but a key set of conditions for sustainability include the ability to meet current and future obligations, the ability to respond to challenges, investments in long-term value creation mechanisms such as information technology and human resources, the ability to increase and/or adjust productivity to changing demands and relatedly, the ability to increase value within the health care system (increase in outputs and outcomes as related to system cost-effectiveness). A program for developing measures of sustainability might progress through a series of increasingly sophisticated sets of measures. Wherever possible, these measures should be reported at the hospital level and at the system level: (i) current ratios, total margins, and net new numbers of physicians and net new numbers of nurses recruited; (ii) investment in information technology, investment in applied clinical research; investment in human resources recruitment and retention policies; (iii) weighted sum of inpatient visits, day surgeries, emergency room visits, ambulatory consultations, and long-term stays divided by expenditures (productivity); and (iv) estimates of productivity adjusted for quality as measured by critical clinical outcomes for each of the types of visits.

The measurement of sustainability by itself, however, will not be sufficient to develop responses to challenges to sustainability. These measurement tools should be integrated into decision support tools such as long-range forecasting methods that can model long-term (e.g. 15 years) changes in measures of sustainability. In particular, this sort of modelling should include comparisons of long-run expenditure and revenue growth. Two aspects to the process of long-range forecasting will be particularly useful in encouraging the uptake of the tool and helping Estonian society to weigh choices among different baskets of goods and services such as education and health care. The first aspect is the inclusion of the Ministry of Finance in the long-run modelling exercises. If the sorts of choices that might be confronted in health care are not to be made in vain, then other ministries will need to pursue similar modelling exercises. Thus, the techniques used by the Ministry of Social Affairs for long-run modelling should be applicable to other sectors as well. Because the Ministry of Finance is responsible for producing final budget estimates, they should also be the body responsible for producing long run estimates related to future budgets. This also means that the Ministry of Social Affairs should investigate using or adapting current Ministry of Finance techniques that may support long-run estimates. The second aspect is the process for setting assumptions about expenditure and revenue growth. Experience from the Netherlands suggests that these sorts of exercises are most acceptable when the assumption setting process involves representatives of all relevant stakeholder groups, including in the case of Estonia, the hospitals management and supervisory boards, the professional associations and unions, bureaucrats and politicians, and the Health Insurance Fund.

6 Sustaining Health Human resources

Besides financial resources, the sustainability of a health care system depends also on the available human resources. Materials presented during the mission showed that the Ministry of Social Affairs has been active in trying to address this issue. It was stressed in all meetings that it has become a major challenge for the country to attract a sufficient number of people to work in health care. Recent figures show a serious lack of balance in the mix of health human resources which might make the system unsustainable. There are in Estonia only two to three nurses to a medical doctor. Demographic issues as well as emigration of physicians and nurses to neighbouring countries threaten a balanced supply of health human resources in the future.

A natural reflex towards these trends is to increase the number of trainees or students and develop policies to increase attractiveness of health care jobs: e.g. taking into account the changing preferences of the new workers (e.g. more part-time jobs) and (financial) incentives: salaries, more emphasis on personal development etc.

However it will be difficult to attract enough new students or trainees. This is especially a problem in Estonia because the country is facing a declining population. Economical development might be at risk when too many people of the work force are employed in health care. Therefore other measures should be considered. It is important to realize that manpower problems are the reflection of the gap between demand and supply of health care services. Interventions should be found at both sides. In European Union countries, a range of possible solutions for such issues are currentlu under discussion.

Possible solutions for making health human resources more sustainable are:

On the supply side

- A more efficient organisation of health care services, which can lead to:
    - better and efficient division of tasks between professions (especially task delegation between physicians, nurses and allied health providers e.g. physiotherapists and midwifes)
    - less administrative tasks for physicians and nurses.
    - more cooperation and sharing of facilities and personnel in health care (both inside hospitals as well as between different levels of care and in Primary Health Care teams
    - more protocols and guidelines

- The introduction of new professionals (nurse practitioners, physical assistants)

- An emphasis on the function of ‘triage’ or ‘navigation’: providing care at the appropriate level: appropriate assessment tools for the needs of patient are needed for encouraging informal care or self-care, when possible; providing general medical care when needed; and referring to medical specialist care when necessary.

On the demand side

- Patient education and health promotion
- More opportunities to get information such as call centres (Estonian 24/7 General Practitioner call centre available from August 2005), website with patient information (e.g. when to go the doctors)
- More focus on prevention
- Improving self and informal care
- Improving awareness of costs of treatments

There will not be a simple solution. Therefore all stakeholders should join to discuss developments in human resources and develop a strategic plan. New techniques of manpower planning are required. They should not only take into account the current use of health care services or current working pattern but try to figure out the effects of the plans in reforming the use of health care services in the broader health system perspective. Information on supply and demand has to be put together in an analytic model that should be used for frequent monitoring and evaluation of manpower in health care.

7 Improving information management to support further hospital reforms

The Estonian Health Care system currently collects a large volume of information that can be turned into performance measures and useful information for policy development and planning quickly. During the mission, the Health Insurance Fund was able to calculate common measures of quality (readmissions) that had not been calculated before. However, there were two common issues in the use of information across hospitals.

The first is the relative absence of the use of information across hospitals and across the Ministry of Social Affairs when planning with the exception of information on historic trends in utilization within an institution. The second is potential problems with the accuracy of data.

The use of data may be limited by a number of issues including the fact that current contracts and strategic planning processes encourage hospitals to look only at a limited range of data that has a limited relationship to needs-based planning. It may also be due to problems in capacity: most hospitals do not have the staff or the time to create large analyses for planning or monitoring. It may also have to do with data privacy laws that limit the availability of electronic information about patients. In the latter two cases (capacity and legal restrictions), the problem with access to and use of data may be reduced by developing a dashboard with common measures and planning tools (such as linear trending) that could be published through the Internet for hospitals and their boards to use. As information becomes more available, management and supervisory boards are likely to develop their own capacities to use their information although again, some form of capacity building education, particularly in large groups to develop shared understandings and uses of data may be valuable.

A common finding during the hospital visits was a disconnect between reported occupancy rates and observed occupancies at a number of the smaller hospitals. Concerns about the quality and accuracy of data, however, should not be limited to occupancy rate. Virtually every country to begin using Diagnosis Related Groups (that now comprise 50% of hospital funding allocations) have experienced a phenomenon called DRG creep in which hospitals report less ill patients as being more ill or receiving more intensive services than actually was the case. This allows hospitals to claim for higher reimbursement than was actually merited. The simple solution to this problem is to expand the mandate of hospital auditors to include the reported statistics on quality or utilization and to support this work through a regular review of a random sample of charts by a quality committee composed of physicians in each hospital. This sort of audit process might also be supplemented by a close review of a representative sample of hospital charts as part of the activity based costing process undertaken on a regular basis by the Health Insurance Fund. The results of both processes should be reported to the National Expert Committee on Quality as part of the range of indicators that they should review every year on hospital performance.

Efforts to improve data through clinical audit should be buttressed by the Ministry of Social Affairs and the Health Insurance Fund.

8 Better balancing health system provision and improving the continuum of care

Since the beginning of the 1990s, Estonia started several very important reforms in health system provision.

Primary health care reform

Primary health care was introduced: professional development and training of general practitioners (GPs), fixed patients lists for general practitioners and a referral system (for most specialities).The system is comparable with other European Union countries such as the United Kingdom, Denmark and the Netherlands. Several international studies showed that primary care based health care systems perform better with regards to epidemiological outcomes, equity of access, patient satisfaction and cost-effectiveness. In 2004, the Dutch Health Council published a report on primary care in Europe. It stressed the importance of primary care for the sustainability of health care systems. However, changes in the organisation of Primary Health Care are necessary to meet the future needs of the population. These challenges are the same in most European Union countries including Estonia.

The WHO Regional office for Europe evaluated the primary care reform and highlighted key achievements, although important challenges remain (Atun, 2004). In several meeting, it was mentioned that the Primary Health Care reform was finished according to the targets set in the mid 1990s.

However, although the plan was indeed completed and the objectives (introducing general practices) were achieved, this can hardly be considered as an end, as primary care is a broader concept than simply introducing General Practitioners. Further development of the Primary Health Care sector needs to be considered in relation to the hospital reform. Now there is room to develop extended primary health care with new strategies and clear networks between providers. This would require broader primary care teams that would include in addition to family physicians and nurses other staff such as specialised nurses (including health promotion specialists), midwives, and social workers. The link with public health should be made as well.

Hospital reform

In May 2000, the Estonian Hospital Master Plan 2015 (EHMP) was approved by the government. The underlying rationale of the plan is that centralizing acute care in fewer hospitals will have a positive impact on the efficiency and quality of hospital services. This Hospital Master Plan proposes to reduce the number of hospitals to 13 and the number of beds to 3100 in 2015. The average length of stay will become shorter and a significant part of care will be transferred to outpatient setting and primary care. Therefore primary health care needs to be strengthened to respond to further hospital restructuring. Plans have been made for the establishment of long-term facilities, nursing homes and day surgery centres. At this point, reforms on primary health care, social services and hospital care should meet, which implies strategic decision making involving different stakeholders.

Towards integrated health care services?

It is remarkable that Estonia established these reforms much faster than in many other EU countries. At this stage of the reforms it is necessary to consider how the positive developments outlined in this report can be connected to meet the challenges of the health care system in the near future. Like in most EU countries, Estonia is confronted with an ageing population. It will have an impact on the health needs and demands of the population. An increase of chronic conditions is expected and the weight of co-morbidities (people suffering from several chronic diseases) will increase. As a consequence, more emphasis should be put on integrating health care services and better coordinating health care services. Different reports show that this can only be done when health care facilities are planned on a community-basis. This means that the responsibility of care provided to a well defined population is divided between different care providers. It requires cooperation and coordination between different actors, meaning that:

- A targeted population should be defined on a sufficient scale
- A clear assessment of population health needs should be carried out
- A definition of common goals and/or targets should be defined for each category of health care providers
- A clear division of responsibilities should be done and communicated to the patients
- Confidence and mutual trust should be developed: broadly accepted protocols and standards of care are necessary tools to improve the continuum of care.

The following tools can be used to attain these objectives:

- Organisational tools, like multidisciplinary teams (gathering General Practitioners, nurses, physiotherapists, social workers etc) should be introduced in PHC but also between sectors (so called ‘integrated teams’ focused on specific cases such as stroke, diabetes etc when coordination of care is essential).
- Professional tools could be implemented, such as joint training, education, development of integrated standards of care taking all aspects of the patients into account
- Information Communication Tools for communication and sharing relevant patient information
- Legal tools, such as a law on quality of care for instance

Patient centeredness

In many EU countries, politicians state that a shift must be made from a supply-oriented health care system towards a patient-oriented system. The European Union legislation emphasizes the autonomy of the patient and its own responsibilities. The actual needs of patients should therefore be the starting point for strategic planning.

The problem for strategic planning is that there are no outstanding instruments available yet. Differences sources of information have to be used to make informed decisions: epidemiological, social, demographical and economical data. Furthermore, it is important to include social characteristics in the assessment of the actual needs of patients (living conditions, housing, family sizes, level of education, etc). These are good indicators for opportunities for self care and informal care. Different patient groups should be defined and screened under these different sources of information: for instance acute patients, chronically ill patients, palliative patients, etc.

9 Hospital restructuring in the Tallinn area

One of the objectives of the mission was to consider specifically the situation of hospital care in the Tallinn area and provide recommendations for further restructuring. Previous reports on the same issue were reviewed (Development plan for health care in the city of Tallinn until 2015, Stockholm AB Care, 2003), two hospitals were visited (North Estonian Regional Hospital and East Tallinn Central Hospital), hospital Chief Executive Officerss and board members were met and a meeting was held with the Tallinn local government. There are currently four different hospitals providing care to the population of Tallinn: a regional hospital and a specialized paediatrics hospital are located on the same site and two other central hospitals are located on different geographical sites.

There is no evidence that further merging of existing hospitals should not be pursued. Reducing the number of hospitals to three in the mid-term (by merging the two central hospitals) and two in the longer term (by merging the regional hospital with the specialized paediatric hospital) is an option that should be thought through carefully. This reflection should build on existing studies (Stockholm AB Care 2003) and should involve the actors through the objective of improving the way care is delivered in the capital city. Therefore the reflection should not only deal with a structural and hospital-centred approach but should rather focus on clinical care pathways (approach by type of disease and degree of intervention) and try to integrate as much as possible primary care, hospital care, long-term care and home care. Reflections have been initiated and should be pursued.

As for any major transition, change management is crucial and therefore an incremental approach is preferable. Timing is key and an assessment of readiness of actors for further hospital merging should be undertaken. For instance, in specific cases, where hospital mergers may lead to conflicts between supervisory boards, for example as it may happen in Tallinn, a useful first step may be to create a super board that includes all members and then begin the process of reducing the supervisory board membership of the merged organizations based on competencies required on the boards.

In any case, organizational changes should target not only improvement in the efficiency of health care delivery, but should be patient-centred and should strive to attain better outcomes for the population of Tallinn. Such a project could generate support from most of the actors and limit resistance to change.

IV. Conclusion: creating a system

Towards strategic portfolio management

All recommendations presented in this report constitute an integrated set contributing to making the hospital system more sustainable over the long run and better integrating health care services over a continuum of care centred on the needs of the population. It requires the development of stewardship capacities from the Ministry of Social Affairs who will have to behave more and more as a strategic investor paying for outcomes and performance more than for inputs and structures.

A strategic investor has to manage risks related to strategic investments. In fact, the Ministry of Social Affairs could act more and more as a portfolio manager, who manages investments in health based on costs, expected returns on investments (benefits, or contribution to the attainment of health system goals) and risks. The risks related to our recommendations are analyzed and presented hereunder in table 4 and could help develop further portfolio management capacities within the Ministry of Social Affairs. The first row of strategic investments represents rather low risk investments when the second row focuses on higher risks investments.

Table 4: preferred choice portfolio of strategic investments

Strategy	Cost	Risks
Communicate health system strategies clearly	Low	Strategies focus on increasing amount, quality, and use of information leading to increased demands for resources.
Increase data on patient needs & health status, data quality, and long-term policies and strategies	Medium	
Increase supervisory board capacity	Low	Strategies increase Ministry and Fund capabilities without increasing hospital capabilities leading to impression of unfairness.
Educate providers together to plan	Low	
Use Structural funds for targeted investments	Medium	Strategies do not directly address fiscal and human resource pressures.
Clarify roles of providers	Low	
**Low risk strategies do not present substantial barriers or requirements except for Ministry*		
Increase board capability & accountabilities	Low	Increased board capability and accountability increases ability of boards to promote goals but also increases scrutiny of and advocacy for hospitals
Develop new models of care delivery and types of providers	High	
Develop incentive based funding more fully to integrate and encourage quality and efficiency	Medium	New Models may meet resistance from provider groups trying to maintain market share
Integrate capital costs fully into cost calculations	High	Capital costs will lead to short term increase in costs but this can be balanced against long-term reduction in capacity
Develop demand management functions	High	
**High risk strategies require implementation of low risk portfolio for risk mitigation*		

Towards scenario modelling

In addition to analyzing portfolios of strategic investments, it is crucial to develop long term strategies for reforms and understand dependencies between its different strategic components as well as consequences the different options under consideration can have on the hospital and the health system.

A possible tool is long-range scenario planning, which considers short and mid term consequences for a range of options for hospital reforms. In annex 4 we provide an example of scenarios building, which is limited as it was not developed with a group of national experts (hospital reform and planning experts as well as fiscal experts) but could be worth considering for further elaboration of a comprehensive and integrated hospital reform strategy.

Overview

Overall, Estonia has made considerable progress over the last ten years in reforming hospital care. As in many other developed countries, progress still has to be made on building a more integrated provision function where different sectors of care are better integrated along the continuum of care and where a right balance is found between primary care, secondary care and other levels of care (especially long-term care). To achieve this goal, progress has to be made in further restructuring hospital care (through further specializing and differentiating hospital care) and in the same time re-enforcing primary care and developing the long-term care sector. Further reforms will imply – as stated in our recommendations – enhancing stewardship, strengthening hospital governance, linking performance measurement and strategy, better linking payment systems and actual performance, as well as increasing information use and human resources. It will altogether contribute to a well-balanced provision function sustainable for the generations to come, and strengthening ultimately the performance of the health system in Estonia.

Appendix 1. Terms of reference for the hospital mission

Hospital sector restructuring, Estonia

(Agreed with Ministry of Social Affairs on 27.05.2005)

Ministry of Social Affairs is interested to have sound technical report to carry out further hospital restructuring in Estonia.

Objectives

- Evaluate hospital sector restructuring (with emphasis to acute care), where Estonian Hospital Master plan 2015 will be used as one possible benchmark. At the same time it is asked that HMP itself could be evaluated during the process. As for now over last 5 years several changes are introduced, Ministry of Social Affairs is interested how far is the change at system level, and what would be further suggestions (to facilitate better governance, accountability etc targets)
- Evaluate current hospital sector planning and methods used (different hospitals needed, staff requirements, availability of specialities in different locations etc) in Estonia (those used to develop HMP2015, and other tools developed during past years)
- Compare Estonian hospital sector to old (15) and new (10) EU countries and benchmark Estonian hospital sector against their system.
- Analyse links with other types of care as long term care, nursing, primary health care, emergency care etc to list strengths and weaknesses to general hospital network development.
- Analyse hospital care delivery system in capital area and develop suggestions about service provision structure in Tallinn sub-region, including division of services between regional and central hospitals.
- Develop suggestions from health system perspective how to restructure further acute care hospital sector and indicators to monitor performance.

Time

Ministry has proposed 29 August – 2 September 2005 to have one week mission to gather information for report development.
During mission WHO experts can meet different stakeholders (Ministry of Social Affairs, Health Care Board, Ministry of Finance, and Health Insurance Fund etc) and visit different hospitals. It is recommended that experts would visit at least two hospitals in all four regions to gain picture of hospital network. Special emphasis should be put to capital region Tallinn.

Background materials

Several materials will be translated and shared with experts. (a) Hospital Master plan 2015; (b) Estonian hospital sector planning tools; (c) local requirement s to hospitals; (d) draft further development plans in sub-regions (including Tallinn area); (e) long term care development plan; (f) legal framework and other regulation as contracts between health insurance fund and hospital(s); (g) material on performance indicators developed and implemented in some hospitals in Estonia; (h) regulation at hospital level, as examples from different legal entities; (i) latest case studies (5 hospitals) on hospital merging done by WB

Deliverables

(1) Feedback from mission at the end of mission in late August
(2) Full analytical report on hospital sector and health system with suggestions for further restructuring and indicators to monitor the process.

Appendix 2. Agenda of the mission and individuals met

	Topic	Attending
	Monday 29.08	
9.00-10.00	Briefing in the Ministry of Social Affairs (MoSA) about the mission and evaluation	Jaak Aab, Minister of Social Affairs Peeter Laasik, Deputy Minister Ivi Normet, Deputy Secretary general
10.00-13.00	Meeting with MoSA health care department planning hospital sector and current developments presentations in topics to facilitate further discussions * hospitals in Estonia, overview * hospital governance, different boards, strategic views * Financing hospitals, different sources (insurance, Government, international) * Planning hospital sector * Human resources in hospitals	Elen Ohov, Adviser, MoSA Tiia Arro, Analyst, MoSA Tiia Taevere, Chief Specialist Eveli Bauer, Chief Specialist, MoSA Laine Peedu, Chief Specialist, MoSA Alar Sepp, Head of Health Care Policy Unit, MoSA
14.00-16.00	Meeting with MoSA - Discussion cont...	Elen Ohov, Adviser, MoSA Tiia Arro, Analyst, MoSA Tiia Taevere, Chief Specialist, MoSA Eveli Bauer, Chief Specialist, MoSA Laine Peedu, Chief Specialist, MoSA Alar Sepp, Head of Health Care Policy Unit, MoSA
16.00-18.00	Meeting with health care board (licencing etc agencincy under MoSA) * overview of the functions of the board and special relations to hospital sector	Üllar Kaljumäe, Director General, Health Care Board Helen Trelin, Assistant to Director General, Health Care Board Nele Paluste, Chief Specialist, Health Care Board Erna Mering, Head of Bureau of Registries, Health Care Board Marek Seer, Head of Emergency Care Unit, Health Care Board
18.00-19.00	Overview of WB hospital merging study	Maris Jesse, senior health specialist, World Bank
	Tuesday 30.08	
9.00-10.00	Meeting EHF management board	Hannes Danilov, Chairman of Management Board, EHIF Arvi Vask, Member of Management Board, EHIF
10.00-13.00	meeting EHF specialists (planning and purcasing services from hospital sector) * health financing from insurance, planning services * contracting and financing providers * payment methods and cost models	Helvi Tarien, Head of Health Care Department, EHIF Reet Kadakmaa, Health Care specialist, EHIF Katrin Västra, Chief Specialist, EHIF Maie Thetloff, Head of Health Economics Department EHIF Linda Sassian, Specialist, EHIF
14.00-15.30	Meeting with Social Commission members (Parliament)	Mai Treial, Member of Estonian Parliament Urmo Kööbi, Member of Estonian Parliament Tõnis Kõiv, Member of Estonian Parliament Maarika Tuus, Member of Estonian Parliament

		Peeter Laasik, Deputy Minister, MoSA Aimi Kaldre, councellor of social commission
16.00-17.30	Meeting with Ministry of Finance	Karin Närep, Ministry of Finance Sirli Jurjev, Ministry of Finance Ivar Sikk, Ministry of Finance
	Wednesday 31.08 - Group 1	Jack Hutten / Alain Corvez
10.00-11.45	Meeting with municipality repr. and health specialists (Pärnu)	Ahti Kõo Ada Kraak Marika Laidna Raul Surandi Kuno Berkmann Tiia Arro
12.00-13.00	Visit to family medicine centre in Pärnu (OÜ Pärnu Perearstid)	Jaan Lemendik
13.45-16.15	Visit to Pärnu hospital	Inga Kuldmäe Tiia Taevere MoSA, Tiit Jürimäe Pärnu Hospital, Jaana Kikas Pärnu Hospital Urmas Suve Chairman of the Pärnu Hospital Board Veiko Vahula member of board, Margit Seppik head nurse Külvar Mand member of board of Pärnu Hospital
17.00-18.00	Visit to primary care centre in Pärnu Jaagupi	Marina Simm
	Wednesday 31.08 - Group 2	Jeremy Veillard
9.00-11.00	Visit to North Estonian Regional Hospital	Tõnis Allik, Chairman of Management Board, NERH Andres Ellamaa, Member of the Management Board, NERH Toomas Vilosius, Member of the Management Board, NERH Sergei Nazarenko, Head of Diagnostics Division, NERH
11.00-13.00	Visit to East Tallinn Central Hospital	Ralf Allikvee, Member of the Management Board Peeter Ross, Member of the Management Board
14.00-15.00	Meeting with local Government (Tallinn)	Vahur Keldrima, Social Welfare and Health Care Board Diana Ingerainen, Deputy Mayor Ene Tomberg, Social Welfare and Health Care Board Iiris Toots, Councellor of Deputy Mayor
16.00-17.30	Visit to Rapla County Hospital	Sulo Puusta Head of Hospital Aili Laasner Head Doctor
	Wednesday 31.08 - Group 3	Adalsteinn Brown
9.00-10.00	Meeting with Tartu University Hospital management board	Urmas Siigur, Chairman of the Executive Board Margus Ulst, Member of the Executive Board Malle Keis, Member of the Executive Board

10.00-12.00	Visit to Tartu University Hospital	Urmas Siigur, Chairman of the Executive Board
13.00-14.00	Meeting with municipality repr. and health specialists (Tartu)	Sirje Kree, City Medical officer Peep Pree, Member of Surgeons Association
15.00-16.30	Visit to Järvamaa Hospital	Andres Müürsepp, head of hospital

	Thursday 01.09	Attending
9.00-10.00	Doctors association	Andres Kork, President
10.00-11.00	Nurses association	Siret Läänelaid, Estonian Nurses Union Ülle Pant Tartu University Clinics Elle Ende East-Tallinn Central Hospital
11.00-12.00	Hospital association	Rain Sepping, Rakvere Hospital
12.00-13.00	Family Practitioners association	Madis Tiik, Estonian Society of Family Doctors
14.00-15.00	Long term and geriatric association	Miia Sultsman, Räpina Hospital Andres Arike, Otepää Hospital
15.00-18.00	Meeting on Performance Indicators * Lessons from the Ontario Hospital Report Research Collaborative: 1999-2005 (A Brown) * Measuring performance for internal quality improvement purposes: the WHO PATH project (J Veillard) * Discussion on internal and external	Tiia Arro MoSA Arvi Vask Estonian Health Insurance Fund Tõnis Allik North Estonian Regional Hospital Kelli Podosvilov East Tallinn Central Hospital Imbi Moks West Tallinn Central Hospital Tiia Taevere MoSA Jane Alop Estonian Health Insurance Fund Helvi Tarien Estonian Health Insurance Fund Ralf Allikvee East Tallinn Central Hospital Miia Sultsmann EGGA Andres Arike EGGA Alar Sepp MoSA Elen Ohov MoSA Peeter Laasik MoSA
	Friday 02.09	
9.00-10.00	Patient association	Pille Ilves
10.00-11.30	meeting with MoSA, presentation of results	Tiia Taevere Elen Ohov Tiia Arro Peeter Laasik Laine Peedu
15.00-16.00	reporting on the first results back to Ministry	Ivi Normet Elen Ohov Tiia Taevere Tiia Arro Ursel Kedras

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5. The requirements to the types of hospitals, Regulation (Health Services Organisation Act), enforced 2001
6. Law of Obligations Act, enforced 1 July 2002, latest amendments 01.05.2004
7. Health Examination and health services contract no …, Annexes to Resolution No. 132 of 19.12.2001 of the Management Board of the Estonian Health Insurance Fund (example of the year 2002 contract between Estonian Health Insurance Fund and individual health care provider)

Appendix 4. Example of scenario modelling for hospital reforms in Estonia

Introduction to scenario modelling

It is crucial to anticipate the consequences of strategic choices to be made on the pace and objectives of further reforming hospital care in Estonia. Choices have different sets of consequences. The Hospital Master Plan already insisted in 2000 on the necessity to make a clear choice between different options which don't carry the same consequences in the short and mid-term. Three possible scenarios can give a prospective view for the short, mid and long term consequences of reform orientations. This kind of extrapolation can be a useful exercise for decision-making support and participates to the stewardship capacities of the Ministry of Social Affairs.

Stakeholders will have to be convinced that the constraints of the Master Plan are also an opportunity to make the hospital system more sustainable.

It should be noticed that stakeholders might be tempted to choose two opposite directions leading to dangerous results on the long term:

- A first scenario where the actors, for individual or conflicting reasons, would want to make a pause in the progress of reform. It could lead to individual or categorial solutions that will in the mid term put a threat on maintaining a good healthcare supply level throughout Estonia with an increase of inequities in access to health care services.
- A second scenario could be an overheat of the hospital system by a growing demand that would seem affordable with a high growth rate and additional financial resources coming from the European Union Structural Funds. Financial sustainability could be a major problem in the mid-term and the lack of health human resources combined with the decreasing population should give enough prospective arguments not to go that way.

Besides these two possible scenarios, a third scenario which consists of strengthening the implementation of the Master Plan appears to us as a reasonable and effective way to pursue hospital reforms. Its goals must be explicit and fully accepted. It requires immediate efforts and has to be sustained on a longer time period in an integrated and systemic approach. The following three tables are an example of risks encountered and potential gains and/or losses for the three different scenarios. It is advisable for the Ministry of Social Affairs to work with a group of hospital reform, planning and fiscal experts on this method of scenarios modelling to better understand the full range of consequences of the policy directions taken.

Scenarios	Rationale for choosing this option	Short-term consequences	Mid-term consequences
Scenario 1: No further consolidation of hospital reforms Hospital organization reforms consolidated and aligned with hospital payment and financial incentives Still large number of providers whose functions are nor specialized neither differentiated Networking among providers and levels of care is very limited Hospital system is more efficient but quality and accessibility are not ensured for the population Choices are made on structures rather than on functions Health human resources mix does not seem sustainable in the long term Poor evidence of hospital system sustainability	Much progress made in the recent period Professionals willing to consolidate progress so far before further restructuring Effort on consolidating the Health Insurance Fund budget and maintaining reimbursement rates at the current level. Low consensus between stakeholders on priorities setting Lack of clarity on health system goals Master Plan not fully implemented yet as planned; further restructuring ahead seems more difficult General Practitioners feel that more severe diseases come to the primary care level due to hospital reforms Stewardship needs to be further developed and and there are insufficient indicators allowing a proper evaluation of progress made towards reform goals.	Lack of motivation of most of the actors More pressure on Ministry from different stakeholders focused on conflicting interests No clarification of roles of actors on hospital reforms Steering capacities of the Ministry weakened Growing dissatisfaction of most stakeholders. System centered on structures and stakeholders more than on patients Paradoxically, patients are not anxious about hospital reforms Inefficient use of resources	Inequity is worsening between different areas and poorest patients may be the most affected, leading to late and more costly hospitalization and a potential worsening of epidemiologic indicators. Major hospitals are doing their own lobbying, trying to attract doctors and patients from outside their natural area or for inappropriate cases. The Ministry can't control and guarantee basic principles such as accessibility, equity and sustainability. It may lead to a major threat for the Health Insurance Fund. Doctors are less and less attracted by remote areas and leave to large towns or even abroad. Young professionals (doctors or nurses) change their professional orientation, leading to a massive medical and paramedical desertification of the territory. Hospitals forced to close but the lack of strategic planning won't have allowed setting up alternative solutions to hospitalization, which will dramatically increase the inequity in the access to health care services. Old people who won't leave the rural areas will be mostly affected when their proportion in the population will have increased dramatically. No transportation policy is worsening situation for patients.

Scenarios	Rationale for choosing this option	Short-term consequences	Mid-term consequences
Scenario 2: : Growing and non coordinated demand from stakeholders More resources invested in the system with little focus on performance and outcomes Confidence due to growing economy and extra resources coming from the EU Margins to increase GDP rate to align with most EU countries "Winning" image for politicians Doctors always encouraging more supply of services Patients asking for more access to technology	Economy is flourishing with a high GDP growth which allows substantial investments in health Accession to the European Union implies additional budgets that could allow new investments in hospitals which are in a very poor state It will provide short-term gains to politicians Doctors and especially specialists will push to have similar conditions of exercise compared to what they have learnt at the University or to their colleagues in foreign countries. Patients will always take advantage of new equipment and supply of health care services	Where to settle new equipments should be the major problem with possible conflicts between stakeholders : ▪ Politicians pulling for a higher number of structures ▪ Insurance fund wanting to limit its spending and preserving its reimbursement rate ▪ Ministry of Social Affairs concerned about maintaining a good balance between primary and secondary care and ensuring equity in access to health care services Approach based on structures and supply where more functional solutions are needed (merging, networking, subsidiarity, activity rather than beds) Doctors lead the process to their own profit. Nurses who are already in insufficient number keep an auxiliary role. Quality of health care services does not focus on quality of practice and on improved outcomes.	Overcapacity: Difficulty to agree on a reasonable number of acute hospitals leading to an unavoidable excess of beds. Merging structures in larger towns will create acute conflicts in managing teams. Not enough graduation on hospital networking with evident redundancy. (every municipality trying to be attractive with best level of supplying instead of sharing) Most resources put on hospital with insufficient consolidation of primary care and long term capacity. Lack of doctors and nurses may lead to closing some renewed hospitals The Health Insurance Fund may be affected by rising costs and inappropriate hospital stays with the need of reinforcing supervision and possibly lowering the rate of reimbursement Patients need are not necessarily taken into account

Scenarios	Rationale for choosing this option	Short-term consequences	Mid-term consequences
Scenario 3 : Maintaining the pace of reform The Hospital Master Plan is pursued and consolidated by: ▪ Enhancing stewardship ▪ Strengthening governance ▪ Linking performance measurement and strategy ▪ Strengthening hospital financing ▪ Reinforcing hospital system sustainability ▪ Sustaining human resources ▪ Increasing information use ▪ Rebalancing the system	Governance and stewardship still has to improve Many indicators are not clearly used for strategy Increasing technology and ageing make hospital always costly with efficiency more and more needed Lack of doctors and nurses is a major threat within the next ten years Communication and implementation on evidence based arguments give better results. A good balance between primary care and secondary care is a major key point to implement hospitals reform.	Clear reform expectations increase motivation of most of the actors Easier for Ministry to align reform goals and respond to conflicting pressures of actors Clarification of roles of actors on hospital reforms Steering capacities of the Ministry increased System centered more on patients than on structures and stakeholders Increased confidence in health system from the public Efficient use of new available resources Approach based on functions and needs more than on structures and supply Quality of health care services focuses on quality of practice and on improved outcomes.	Better fulfilment of patients' needs with a better articulation with primary care and log term system Multi-year funding strengthened to support supervisory board capacity for strategy development in line with Master Plan Goals of hospital system better balanced and achievements are maximized not only with regards to efficiency goals but also with regards to quality and accessibility goals Sustainability of all parts of the system Better balance between primary care, secondary care, long-term care and home care with appropriate funding Hospital care is specialized and differentiated, which allows providing high quality of acute care in the centre but also high quality of long-term and social care for ageing populations in remote areas Health human resources are sustainable and doctors and nurses are retained; more efficient mix of health care workers is attained.

Appendix 5. Main criteria for stewardship
(***Developed by Ministry of Health and Long Term Care in Ontario, Canada)***

Roles of a Steward	**Components of good stewardship**
Ensure high quality of information	Accessible, timely, comprehensive, and usable information about the current health care system Information dissemination to support policy-making and regulation
Set and communicate strategic directions	Articulation of health system goals Defining the roles of the public and private sectors Identifying policy instruments and structures needed to achieve health system goals Identification and promotion of guidelines and best practices Appropriate emphasis on coordination, consultation, and evidence-based communication processes Ensuring evaluation is built into policy instruments to facilitate continuous improvement Providing guidance for health system spending Promoting other social system initiatives aimed at improving health
Create and employ mechanisms to steer the health system	Getting the right balance of powers, incentives, regulations/legislations and sanctions with which to steer the health system stakeholders in chosen directions Influence key stakeholders through negotiation, advocacy, and professional networks Mechanisms for monitoring and reporting performance and comparing it to expectations
Enable the alignment of health system goals and roles	Seeking a fit between policies and the organization through which they are implemented (e.g. avoiding duplication and fragmentation) Coordination of policies to support achievement of health system goals Provide incentives for superior performance
Ensure system-wide accountability	Ensuring accountability of all health system stakeholders, including stewards, for the roles for which they are responsible Set parameters for performance expectations and consequences
Ensure appropriate regulation of the health system	Set regulation for health care-related goods and services Making consumer protection a priority
Respond to the changing needs of the health care system	Capacity to respond to unexpected shifts in demand or supply Ability to adjust strategies to account for changing priorities

Appendix 6. Main criteria for strong accountability (Developed by Ministry of Health and Long Term Care in Ontario, Canada)

Clarity of Performance Expectations with Authority and Capacity to Act	Parties have authority for roles and responsibilities
	Parties have the resources to fulfill their roles and responsibilities
	Roles and reporting relationships are clear, explicit and aligned
Trust in Priority Setting and Negotiations	Goals and priorities are clear, limited and identified as short and long term
	Process for negotiating measures and contracts is transparent
Relevant, Credible and Effective Measurement Systems	Performance measurement is comprehensive and is linked to system strategies
	Performance expectations are clearly articulated
	Performance expectations are scalable across levels
	Reporting is comprehensible, efficient and aligned with audience needs and abilities
Clear Value of Data	The burden of data collection is not greater than the value of the data collected
	Data are of good quality
	Processes for data reporting requirements and data protection are effective
Results-Based Action	Consequences for performance are appropriate and based on system priorities
	Parties have the capacity to improve performance

Appendix 7. Experts participating to the mission

Jeremy Veillard

Jeremy Veillard is leading the Measuring Performance for Change stream of work for the Health Results Team on Information management, Ontario Ministry of Health and Long Term Care, Canada. He was previously employed by the WHO Regional Office for Europe, for which he was a policy adviser in charge of hospital reforms and hospital performance measurement & management. He was also coordinating WHO work in supporting Health System Reform in Slovakia. He was trained at the French National School of Public Health (ENSP) and was a former hospital manager in France before joining WHO. He is currently completing his PhD in Public Health at the Medical University of Amsterdam, The Netherlands. Jeremy Veillard was the coordinator of this mission.

Dr Adalsteinn D. Brown

Adalsteinn (Steini) D. Brown, is an Assistant Professor in the Department of Health Policy, Management and Evaluation (HPME), Faculty of Medicine, at the University of Toronto and the Principal Investigator for the Hospital Report Research Collaborative. This project develops balanced scorecards for acute care, emergency department care, chronic care, rehabilitation and mental health, and integrates women's health and nursing perspectives. In recognition of this work, he was named one of Canada's “Top 40 under 40” in 2003.

Steini is now seconded to the Ontario Ministry of Health and Long-term Care as Lead, Information Management, Health Results Team. This team is responsible for creating the systems to collect timely and accurate information that will drive informed decision making across the health care system.

He is a member of the Scientific Advisory Committee and an Instructor in the Department of Family Medicine, University of Western Ontario. Prior to joining the University of Toronto, Steini worked with a wide range of private sector clients in Canada, the U.S., Europe, and the Far East on strategy and performance measurement in health care. Steini graduated magna cum laude (government) from Harvard in 1993. He received his D.Phil from the Department of Public Health and Primary Care at the University of Oxford in 2002. He was a Harvard National Scholar and a Rhodes Scholar.

Dr Alain Corvez

Dr Alain Corvez was at first general practitioner in Brittany (France) for 15 years. From 1989 till now he occupied different functions in the French public health organisation:

- Development and research in the French National Social Security Insurance,
- Prospective advisor for medical strategy near the Regional Hospital Agency in Montpellier (South of France).
- National Medical Director of the National Insurance Company for the Agriculture patients.
- From September 2003, public health counsellor of the French Health Minister JF Mattei.

During, the last ten years, Doctor Corvez, specialized in the geographical aspects of Health, and was member of a prospective group working on health planning and local development for DATAR (French prime minister service for territorial development). He wrote many articles on rural health, elderly health-care, one-day surgery and hospital planning. Dr Alain Corvez is currently the advisor of the director of hospitals in France and the vice-president in charge of research, medical affairs and strategic development for the Montpellier University Hospital.

Dr Jack Hutten

Dr Jack Hutten is senior policy advisor, working at the Dutch Ministry of Health, Welfare and Sport. His main concern is the redesign of primary health care in the Netherlands. Previously he was research coordinator researcher at the NIVEL Institute (Netherlands Institute of Health Services Research) in Utrecht. His scope of research included primary care (workload of general practitioners and quality of care, organization and financing of home care, clinical outcomes in primary care settings), integrated care and substitution between secondary and primary care. He is also interested in hospital performance assessment. His background is medical sociologist. He has a Ph.D in social sciences.

Appendix 8. Presentation to Deputy-Minister of Social Affairs
(Tallinn, September 2, 2005)

Assessment of Hospital Reforms in Estonia

Tallinn, 2 September, 2005

Jeremy Veillard, Alain Corvez, Jack Hutten, & Adalsteinn Brown

Mission Objectives

- Evaluate hospital reforms in Estonia five years into the Hospital Master Plan 2000-2015
  - Benchmark hospital reforms with other European Union countries
  - Evaluate current hospital sector planning and methods in Estonia
- Recommend how to pursue hospital reforms to strengthen the hospital sector
  - Analyse links between hospitals and other levels of care to better support the the continuum of care in Estonia
  - Analyse the delivery of hospital care in Tallinn and develop recommendations about health care services in the Capital Area
- Suggest options for more comprehensive monitoring or hospital performance to develop accountability and improve health outcomes.

2

Mission Methods

- Reviews of previously developed materials on Estonian health care
  - Development plans for hospital sector, contracts for hospital services, reviews of policies (quality of care, primary care, financing), consultation papers for Estonian health sector, & HiT profile
  - Annual report for Health Insurance Fund & hospitals
  - Legislation on health care
- Reviews of health reform options from other countries
- Consultation with stakeholders and site visits
  - 6 hospitals (different levels), primary care practices, & 5 provider associations (doctors, nurses, hospitals, GP, long-term care)
  - Ministry of Social Affairs, Health Insurance Fund, Health Care Board, & Ministry of Finance
  - Parliamentary Committee on Social Affairs, Minister of Social Affairs, & Patients' Association

3

Strong hospital reforms in recent years

	Old situation (mid-1990s)	New situation (2005)
Legal status	Not regulated by Law Mixture of types Diffuse rights, responsibilities and accountability	Legal status in law: foundation or joint-stock company
Planning	Decentralised (county, municipality)	Centralized: hospitals licensed; List of acute care hospitals to be approved by Gov't
Hospital financing	Limited funding of capital investments by state and municipalities	Volume contracts Mixture of FFS, daily fee, case-based capital costs included in prices
Types of hospitals	Diffuse, lack of clarity in hospital role and function	Seven types of hospitals with clear legal requirements
Mgmnt structure	No delegated autonomy but little coordination	Clear structure between supervisory boards & management board Organizational reforms aligned

Recommendations
Enhancing Stewardship

Stewardship functions (strategy, standards, and planning) within the Ministry can progress further and better support hospital reforms. Potential options include:

- Create a Ministry Strategic Planning Unit for whole health system (Ministry)
- Integrate information and update information for needs based planning (Ministry & Fund)
- Describe and publish hospital and health system strategies with specific output and outcome targets for the hospital system (Ministry)

5

Recommendations
Strengthening Governance

Current governance (supervisory board) activity does not directly support hospital performance:

- Benchmark board performance against corporate standards in Estonia (Ministry)
- Recruit more private sector onto boards based on necessary (legal, financial) competencies (Hospitals)
- Standardize board supervisory compensation, composition, & meeting frequency (Ministry)
- Make supervisory boards responsible for contracts with Fund (Fund)
- Strengthen multi-year funding to support supervisory board capacity for strategy development in line with Master Plan (Fund)
- Promote supervisory and management board joint development of long-term (5 year) strategy

6

Recommendations
Linking Measurement & Strategy

It seems important and timely to measure more systematically hospital performance. Recent research shows that performance measurement has to be linked to strategy to create a culture of accountability and outcomes:

- Clarify expectations for all stakeholders about what goals have to be attained (Ministry, Fund, & Hospitals)
- Through the contracting process, reinforce incentives and attach consequences to the attainment or non-attainment of objectives (Fund and Hospitals)
- Measure and communicate performance clearly between payors and providers for both parties (Fund)

7

Recommendations
Strengthening Hospital Financing

The contracts with the Health Insurance Fund are one of the most powerful levers for change. Additional financing policies will strengthen reforms and the goals of the Hospital Master Plan 2015

- Include amortization and capital costs in the calculation of costs using a standardized methodology to control facility growth (Fund)
- Create integrated approach to all service purchasing that includes both Fund capital and operational support (e.g. European Union Structural Funds) (Ministry & Fund)
- Link payment to simple indicators that reflect both quality and efficiency (e.g. readmission rates) (Fund)
- Link any increased spending to create improved outcomes and increase value within the health system and link to long-term capital strategy based on Master Plan 2015 (Ministry)

8

Recommendations
Re-enforcing Sustainability

Sustainability remains a major concern bewithin the Estonian health care system, but there is little ability to track and project sustainability and the impact of reforms. :

- Develop measures of sustainability (Fund & Ministry)
- Develop predictive models of long-term sustainability (Ministry of Social Affairs & Ministry of Finance)

9

Recommendations
Increasing Human Resources 1

Migration, population decline, and an aging population combine to create pressures on Estonia's health human resources. Strategies to use current human resources efficiently will be as important as strategies to recruit and retain new physicians and nurses:

- Clarify the roles and responsibilities of different provider groups (doctors vs. nurses) & different specialties (family medicine vs. internal medicine) (Ministry)
- Begin to train new professionals to substitute lower cost human resources for physicians such as nurse practitioners and physiotherapists (Ministry of Social Affairs, Tartu University, Medical Schools & Ministry of Education)

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Recommendations
Increasing Human Resources 2

Strategies to use current human resources efficiently will be as important as strategies to recruit and retain new physicians and nurses (continued from previous page) :

- Define and communicate processes and policies for triaging patients to the appropriate level of care (Fund)
- Invest in demand management strategies like patient education on when to consult a physician and what to expect from the system (Ministry)
- Develop new techniques for human resources planning based on the long-range forecasting models described earlier and link these to expert consensus panels to define future need for human resources (Ministry)

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Recommendations
Increasing Information Use

Use and accuracy of data for monitoring and managing the hospital system remain limited. Moreover, variation in data quality limits hospitals' ability to plan together:

- Develop web-based dashboard and planning tool to help hospitals trend data and plan (Ministry or Fund)
- Use financial experts on audit committees (Hospitals)
- Include clinical data audit in external audit (Hospitals)
- Use activity-based costing to study data accuracy and increase use of cost data for management (Fund)
- Report data quality results to Expert Committee on Quality of Care (Health Care Board)

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Recommendations
Rebalancing the System 1

The system remains focused on the development of hospital capacity. Rebalancing the system towards community based care may take pressure off of hospitals, particularly smaller hospitals:

- Collect data on health and social needs of specific patient groups as a foundation for patient-centred planning (Ministry)
- Develop primary health care teams that leverage physician supply (Fund)
- Link geographically dispersed providers with secure messaging and build on secure channels currently in place (Ministry)

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Recommendations
Rebalancing the System 2

Create incentives for providers to work collaboratively across sectors:

- Find financial incentives that support integrated care and reduce unnecessary hospital use (e.g. low chronic disease readmission rate bonus for hospitals) (Fund)
- Joint educational sessions for different provider groups within a central hospital referral area (Ministry & Fund)
- Share primary care management challenges in international groups (e.g. www.euprimarycare.org) (General Practitioner & Nurse Association)

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Potential Investment Portfolio (Low Risk,* Limited Return)

Strategy	Cost	Risks
Communicate health system strategies clearly	Low	Strategies focus on increasing amount, quality, and use of information leading to increased demands for resources.
Increase data on patient needs & health status, data quality, and long-term policies and strategies	Medium	
Increase supervisory board capacity	Low	Strategies increase Ministry and Fund capabilities without increasing hospital capabilities leading to impression of unfairness.
Educate providers together to plan	Low	
Use Structural funds for targeted investments	Medium	
Clarify roles of providers	Low	Strategies do not directly address fiscal and human resource pressures.

**Low risk strategies do not present substantial barriers or requirements except for Ministry*

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Potential Investment Portfolio (Higher Risk,* Greater Return)

Strategy	Cost	Risks
Increase board capability & accountabilities	Low	Increased board capability and accountability increases ability of boards to promote goals but also increases scrutiny of and advocacy for hospitals
Develop new models of care delivery and types of providers	High	
Develop incentive based funding more fully to integrate and encourage quality and efficiency	Medium	New Models may meet resistance from provider groups trying to maintain market share
Integrate capital costs fully into cost calculations	High	Capital costs will lead to short term increase in costs but this can be balanced against long-term reduction in capacity
Develop demand management functions	High	

**High risk strategies require implementation of low risk portfolio for risk mitigation*

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Maintaining the pace of reform

- The Estonian health care system is in the middle of massive reform. However, there are risks to maintaining the pace of reform that result from:
  - Fatigue, conflicting interests across the system, and increasingly poorly distributed capacity across the system
  - Over-confidence and retreat from the Master Plan because of strong economic performance, European Union Structural Funds, and accomplishments to date
- In order to maintain the momentum of reform, the Minister should make sure that:
  - Estonians have confidence in the soundness of the reforms
  - The justifications for reform are well understood and communicated
  - The directions and goals for reform are explicit and accepted

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Key Benefits of Strengthening Hospital Reforms

- Rebalancing of the system is the key goal to ensure a sustainable system with good accessibility, quality, and efficiency
- Stewardship, governance, performance management, financing, human resources policy, and information use are the methods to rebalance the system
- Key benefits of the rebalancing include:
  - Better specialization and differentiation of hospital network
  - Stronger integration across the continuum of care and more efficient financing across sectors
  - Increased retention and mix of health human resources
  - Strategic investments that create value within the health system
  - Public confidence in the sustainability of the system

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