The State of Health Care Integration in Estonia

A Review of Estonia's Quality Assurance System for Health Care
The World Bank Group
February 2015

Table of Contents

I. Objectives and Analytical Framework

This paper provides an overview of the various policies and mechanisms currently in place in Estonia to assure and improve the quality of health care. This updated analysis of the quality assurance system was conducted as part of a joint research study between the Estonian Health Insurance fund (EHIF) and the World Bank Group (WBG) on the state of health care integration in Estonia to provide further insight on how to strengthen integration of care.

This analysis of Estonia's quality assurance system draws on: a) information from previous quality of care reviews and studies in Estonia, b) document reviews and c) interviews conducted in October 2014 by the WBG with various Estonian health sector stakeholders. The stakeholders interviewed include: the Family Physicians Association, the Faculty of Family Medicine at the University of Tartu, the Ministry of Social Affairs, the Health Board, the EHIF, Tartu University Hospital, East Tallinn Central Hospital, North Estonia Medical Centre, and Rapla County Hospital.

The analysis builds on analytical frameworks previously developed by the OECD and WHO for the assessment of country quality assurance systems (OECD 2014; Shaw & Kalo 2002; Legido-Quigley et al. 2008). These frameworks classify quality assurance policies and mechanisms along dimensions such as their type, objective and compliance requirement (i.e., whether they are voluntary, mandated by law, or incentivized with pay-for-performance schemes). The analysis has adapted these frameworks, taking into account the priority areas indicated by interviewed stakeholders. The resulting framework is organized around five key components of quality assurance systems:

i) a governance system for quality assurance,
ii) mechanisms to ensure the quality of inputs into the health care system, namely, human resources and physical infrastructure,[1]
iii) health care practice standards and guidelines
iv) monitoring and reporting procedures for ensuring adherence to these standards, and
v) quality improvement initiatives at the national, local and organizational levels.

Each of these elements plays a key role in sustaining the quality improvement and assurance cycle for health care (Figure 1). All elements of this cycle are governed by a system that includes a legal framework and various health sector institutions with designated responsibilities for carrying out these quality assurance activities. The cycle begins with health system inputs, standards and guidelines, which set the foundation for the delivery of high quality health care. This is followed by monitoring and reporting of quality to assess adherence to health system standards and guidelines, and to identify any deficiencies in health system inputs. Finally, targeted improvement initiatives and activities are implemented in response to any weaknesses in the quality of care identified through monitoring and reporting, which may lead to modifications in inputs, standards and guidelines, thereby "closing the quality loop."

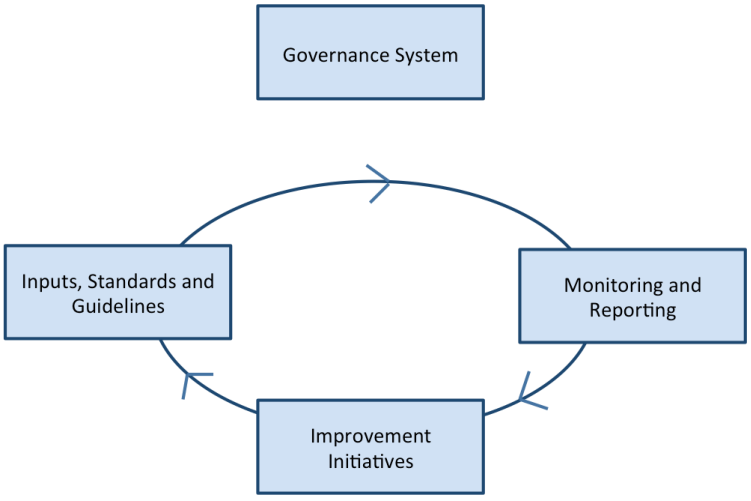

Figure 1: The Quality Assurance and Improvement Cycle for Service Delivery
Source: Adapted from Shaw & Kalo 2002 and OECD 2014

This following section reviews the status and developments under each of these key components in Estonia. Finally, the paper concludes with a brief analysis of the strengths and weaknesses of Estonia's quality assurance system, and thus potential areas for improvement.

[1] Due to its complexity, it was decided that a review of quality assurance mechanisms for pharmaceuticals and medical devices would be outside the scope of the current study, but could be conducted at a later stage.

II. Key Components of Quality Assurance Systems

1. Governance system for quality assurance

Governance systems for quality assurance involve the designation of roles and responsibilities for performing and overseeing quality assurance to various health sector institutions, ideally with one institution, such as the Ministry of Health or an independent institution, having a clear leadership function. The foundation for these governance systems consists of a legal framework and policies that specify the requirements for these activities as well any sanctions for non-compliance. An important factor in the success of governance systems for quality assurance, however, is the societal culture in which the various health sector institutions operate, as well as the culture within these institutions themselves.

Roles and responsibilities for quality assurance

Prior analyses of Estonia's quality assurance system highlight a lack of clear leadership in this area (Põlluste et al. 2006). Recent interviews with health sector stakeholders have indicated that this situation has not changed. The different health stakeholders in Estonia carry out specific quality assurance activities within the purview of their respective responsibilities in the sector (Box 1). However, there is no single national institution in Estonia that is responsible for coordinating and assessing the quality assurance activities carried out by these various health sector institutions and associations. In many countries, this responsibility is typically relegated to the Ministry of Health or one of its agencies. The Estonian Ministry of Social Affairs, which acts as the main steward for the Estonian health sector, does not, however, carry out any coordination or assessment of quality assurance activities across sector institutions, although it is responsible for preparing legislation, policies and healthcare development plans that are related to quality assurance. In turn, aside from its main role as purchaser, the EHIF has assumed a lead on various quality assurance activities.

Legal framework for quality assurance

The principal law addressing quality of care in Estonia is the Health Services Organization Act of 2002. This law evolved from the Quality Policy of Estonian Health Care, which was developed in 1998. However, it was not comprehensive enough, as key roles and incentives for quality improvement were not clearly defined (Põlluste et al. 2006). The Health Services Organization Act specifies the requirements for the provision of health care services and their organization. The act specifically discusses requirements for the registration of health care professionals, the issuing of activity licenses and the right to practice as a general practitioner, as well as sanctions for non-compliance with these requirements.

The Health Services Organization Act also designates the responsibility for specifying the requirements for the accessibility and quality of health care services to the Ministry of Social Affairs. As a result, the Ministry has passed several acts and regulations which establish, for example, the structural quality requirements of facilities, installations and equipment; quality requirements for specific medical procedures; designation of provider responsibilities in ensuring the accessibility and quality of health services, including the requirement for every provider to develop their own quality management system; patients' legal rights and national procedures for managing patient complaints as well as development plans for medical and nursing specialties and their general work instruction.

Box 1. Quality Assurance Responsibilities of Health Sector Stakeholders

The Ministry of Social Affairs

- Preparation of draft of legislation, including those which are related to quality assurance
- Preparation and approval of health care development plans
- Development of national health policy
- Collection and analysis of statistical data on the volume of activities and economic indicators of health care providers

The Health Board, Health Care Department

- Licensing of providers of medical care
- Registration of health care professionals
- Supervision of compliance with quality requirements for structure in activity licenses
- Organization of ambulance services and occupational health care
- Organization of primary health care

Health Care Quality Expert Commission

- Management of official patient safety complaints and provision of official counseling to patients

Estonian Health Insurance Fund

- Establishment of requirements for health care providers on accessibility and quality of health services in contracts
- Development and compilation of clinical guidelines and corresponding patient education materials
- Performance of periodic clinical audits

Health Professional Associations

- Certification of health professionals
- Compilation of clinical and nursing guidelines

Health Care Providers

- Administration of regular patient satisfaction surveys
- Management patient complaints
- Management risk of medical procedures
- Development and coordination of education plans for employees

Educational Institutions

- Provision of undergraduate, postgraduate and continuous professional training of health professionals
- Performance of health care surveys, including applied research on quality assurance.

Sources: Põlluste et al. 2006, Personal Communication.

Cultural factors

Without a culture of accountability and openness to implementation of organizational change, effective governance of quality assurance and improvement practices may be compromised (Martinez 2001). In Estonia, there is some indication that this culture of accountability and openness is still lacking in many healthcare institutions, which may be attributed in large part to the country's history as a former

member of the Soviet Union.[2] Developing this culture in the long run will require introducing more explicit training in healthcare quality assurance and improvement at all levels of education for health care professionals and administrators.

2. Quality assurance of inputs

A second key component of a quality assurance system consists of developing mechanisms for the quality assurance for health care system inputs (i.e., human resources and physical infrastructure). These mechanisms include registration of health care professionals with periodic re-certification, licensing and re-licensing of health care facilities. Licensing and re-licensing of health care facilities are typically required by law. Registration of health care professionals is also typically required by law, although re-certification is often done a voluntary basis.

Registration of health care professionals (Mandatory)

As specified by the Health Services Organization Act, the Health Board is responsible for registering and certifying health care professionals including doctors, dentists, nurses, allied practitioners (e.g. midwives), and pharmacists. Prospective health care professionals can apply for registration with the Health Board within five years of graduation from a health care professional training program. If applying for registration after five years post-graduation, prospective professionals must take a qualification exam administered by the medical faculty at the University of Tartu.

Prospective professionals who received qualifications in Member States of the European Union (EU), Member States of the European Economic Area (EEA) and Switzerland may also apply for registration with the Health Board. In most cases, specialty training of applicants from the EU, EEA or Switzerland are automatically recognized. In cases when they are not automatically recognized, the Health Board may require the applicant to complete an aptitude test. Prospective professionals who received qualifications from other foreign states, but have been recognized by other members of the EU, EEA, or Switzerland and have at least three years of work experience are also accepted in most cases. For all other foreign applicants, the Health Board will compare qualifications with those required for Estonian applicants, and may require an aptitude test.

Once registered by the Health Board, all professionals receive a certificate. Professionals are only required to register once, after which the certificate of registration remains valid for the remainder of the professional's working life. Professional re-certification is voluntary for all health professionals in Estonia, with the exception of a few medical specialties (e.g. anesthesiology). The Medical Faculty at the University of Tartu conducts the re-certification process for family physicians. Re-certification for all other medical specialties is done by health professional organizations.

The Health Board reserves the right to suspend registration if these requirements are violated and, in cases where a court conviction deprives the professional of the right to practice, the Health Board may permanently delete a professional from the register.

[2] This issue was alluded to in WBG interviews with health sector stakeholders and also discussed in previous studies of Estonia and other post-Soviet countries (Guisset et al. 2009; Chowleka 2001).

Facility licensing (Mandatory)

The Health Board is also responsible for granting facility licenses to all health care providers in Estonia to certify that the staff, facilities, installations, equipment and medicinal products for the provision of medical care comply with the requirements specified in the Health Services Organization Act. The Health Board maintains a national register of all licensed facilities. Since 2013, the Health Board also licenses family practices.

Prior to 2014, the health board required all providers to be re-licensed every five years. However, as in other sectors, health care facilities no longer need to re-licensed (i.e., licenses are now granted one time only). Nevertheless, if a complaint is made, the Health Board may perform a check in order to ensure compliance with quality standards. All licensed health care providers are also required to report regularly on health care statistics and economic activities to the Health Board.

3. Health system standards and guidelines

Health system standards and guidelines are fundamental requirements for good quality assurance systems. These typically consist of comprehensive, evidence-based clinical guidelines and pathways, which serve as the criteria for quality monitoring activities. Having an established function of conducting health technology assessments and consistently updating guidelines and pathways are essential to ensuring that health system standards and guidelines reflect evidence-based practice.

Clinical guidelines

Coordination of clinical guidelines development is currently led by the EHIF. Although several institutions and professional organizations within the health care sector have supported or carried out the development of clinical guidelines since 2003, there was no uniformly accepted national approach to guideline development, resulting in wide range of guideline formats and quality. Over 90 guidelines developed since 2003 and spanning several medical areas are available on the public website for health care workers (http://www.ravijuhend.ee/yldinfo/). Nevertheless, a comprehensive set of guidelines comparable to those of other OECD countries is still lacking, and, moreover, some guidelines do not to reflect the latest evidence for diagnosis and treatment of diseases or omit key phases of care.

A World Health Organization (WHO) project, in collaboration with the EHIF, the Faculty of Medicine at the University of Tartu and various national and international experts, was started in 2010 to harmonize clinical guideline development in Estonia and increase the use of evidence-based practices. A major result of this effort was the Estonian Handbook for Guidelines Development, which was officially launched by the EHIF in 2011. This handbook features an updated guideline development process endorsed by the Ministry of Social Affairs and the Medical Faculty at the University of Tartu, which establishes the various steps and procedures to be followed from the identification of the guideline topic through to the distribution and implementation of the final guidelines (Figure 2).

Figure 2: Estonian Guideline Development Process
Source: (World Health Organization 2011)

The guideline development process involves a Guideline Advisory Board (GAB), which annually selects potential guidelines from proposed topics, defines the scope of the guidelines, selects a Guidelines Panel to oversee the guideline development process, approves all finalized guidelines and their respective implementation plans and assesses performance of guideline implementation. A Guidelines Secretariat, whose members are selected by Tartu University Medical Faculty and EHIF, provides technical support for the development of each guideline. Furthermore, the handbook stipulates that all guidelines prepared through this process should be updated every five years to reflect new evidence, granted that no important new evidence becomes available earlier.

Health technology assessment (HTA) results are also taken into account when developing new clinical guidelines or updating existing ones to reflect evidence-based practice. The Centre for Health Technology Assessment was established in 2012 in the University of Tartu's Department of Public Health, funded by a Ministry of Education grant; prior to this there was no standardized program for conducting health technology assessments. The results of the HTAs conducted by this Centre are used by the EHIF in decisions regarding new diagnostic and treatment options to fund, as well as by the Ministry of Social Affairs for the implementation of public health initiatives and reimbursement of pharmaceuticals. Moreover, The Centre has published 10 HTAs to date, and is expected to complete an additional 10 HTAs by May 2015 (University of Tartu Department of Public Health n.d.). Beyond this, there has been no decision on whether a separate agency or institution will assume the responsibility of conducting future HTAs.

Clinical Pathways

Clinical pathways are disease-specific routes that patients should follow from first contact with the health care system across levels of care through to the completion of treatment. They also specify what services should be provided in each care setting, as well as the appropriate time frame in which services should be received. Pathways are of particular importance in countries attempting to strengthen care integration, since they help ensure that care is being provided in the appropriate setting. In Estonia, clinical pathways are in place for patients suffering from gynecological, prostate, breast, kidney and colorectal cancers, but are generally underdeveloped for other diseases and conditions. Given the country's disease burden, clinical pathways may be needed in particular for heart, cerebral and peripheral vascular disorders as well as for mental and behavioral disorders.

4. Monitoring and reporting on quality

Monitoring quality of care can be performed either by external entities or by providers themselves. Participation in external quality assessments (i.e., audits, random checks, etc.) and the performance of some quality monitoring activities by providers are typically mandated either by law or in purchaser contracts. Monitoring typically consists of monitoring adherence to quality standards for clinical practice and medical facilities.

External quality assessment of providers

Clinical audits (Mandatory)

As part of its role to ensure quality of care for its beneficiaries, the EHIF has conducted five clinical audits per year since 2002. Participation in these audits is required as part of the EHIFs contracts with providers. The audit department within the EHIF selects topics from those proposed by persons engaged in the field, service providers, professional associations or state agencies that wish to improve the quality of health services. Topics are selected on the basis of criteria such as impact on expenses and service volumes, risk to patients, availability of established standards, and viability of change based on audit results. Audits generally last up to one year, during which a team of nominated auditors evaluate selected topic areas in a sample of providers (hospitals, primary care physician practices, other outpatient facilities, etc.) against established standards (e.g., clinical guidelines). The methods used include analysis of medical records, observation and interviews and surveys of patients.

The results of the audits are shared with all participants, however, until recently, providers were not required to develop improvement plans based on these audits. Since 2013, the EHIF included a contractual requirement for providers to develop improvement plans based on audit results as well as reports on the implementation of these plans at agreed intervals. The EHIF is still developing a process of how best to evaluate the improvement plans and include any financial sanctions or rewards as incentives for compliance. In the event that the reports submitted do not present satisfactory indications of improvement, a follow-up audit may be conducted.

To date there has been no systematic evaluation of the impact of the audits on improvements in quality of care. The EHIF is currently finalizing a handbook for publication to standardize the methods used in carrying out the clinical audits and assist in training future auditors.

Monitoring of waiting times (Mandatory)

The EHIF sets maximum waiting times for all care settings (Table 2), on which it regularly collects data. For hospitals, the EHIF uses both prospective and retrospective monitoring methods. With the prospective method, it monitors waiting times in all hospitals by determining whether a specialized outpatient visit, day care and acute inpatient care admission would be available within the respective maximum waiting time. With the retrospective method, which it uses in only a few select hospitals, it collects data on actual waiting times for specialized outpatient care (Box 2).

According to the EHIF's 2013 annual report, with the exception specialized outpatient care where appointments within the recommended waiting period are available for only about 50% of patients (Table 2), appointments are available within the maximum waiting period for close to 100% of patients for all other types of care (Estonian Health Insurance Fund 2012). In select hospitals, results for specialized outpatient care vary significantly according to the monitoring method used. According to the prospective method only 36% of patients were able to get appointments within the maximum waiting time, whereas according to the retrospective method, 74% of patients were seen within the maximum waiting time period. The monitoring system, however, encourages hospitals to provide patients with appointments only if they are available within the maximum waiting times (i.e., otherwise patients may be simply turned away). At the same time, hospitals find it difficult to manage appointments effectively, as patients seek bookings with multiple facilities to increase their chances of getting seen quickly.

For primary care facilities, the EHIF monitors actual waiting times during inspection visits with almost all patients receiving care within the maximum period. The maximum waiting time for acute cases is 1 working day, while the waiting time for non-acute cases is 5 working days. Adherence to these waiting times appears to be adequate, with 2/3 of non-acute cases experiencing waiting times of less than 3 days.

Monitoring of structural quality

As specified by the Health Services Organization Act, the Health Board is responsible for supervising the structural requirements of health care facilities including room sizing and medical equipment, as well as family practice opening and visiting hours. Documentation on structural quality is reviewed once, prior to granting facility licenses. Subsequently, further reviews or physical inspections of quality are only done when there is indication of that further supervision is needed (such as through patient complaints and/or satisfaction scores).

Monitoring use of online prescription system

The Health Board also conducts periodic audits to check factors such as adherence to recommended criteria for correct prescribing practices according to guidelines as well as provider use of the online prescription system.

Box 2. Hospital Waiting Time Monitoring Methods

Prospective Method (all care types, all hospitals)

- Providers report the first available slot as of the first day of the month.
- Select hospitals submit these reports on a monthly basis, while other contractual partners submit the reports on a quarterly basis.

Retrospective Method (specialized outpatient care only, acute care hospitals only)

- Providers account for the appointments held during the previous month, including the times each patient spent on the waiting list.

Source: EHIF 2013 Annual Report; Personal Communication.

Table 2. EHIF Maximum Waiting Times

Type of Care	Maximum Waiting Time	% of Patients with Appointment within Maximum Waiting Time
Primary care: acute cases	1 working day	100
Primary care: non-acute cases	5 working days	98
Specialized outpatient care	6 weeks	49.5 *(prospective method, all hospitals)* 36.3 *(prospective method, acute care hospitals only)* 74 *(retrospective method, acute care hospitals only)*
Day care	8 months	97.5
Acute inpatient care	8 months	89.8

Source: EHIF 2013 Annual Report

Internal quality assessment

As part of contractual requirements with the EHIF, hospitals are required to develop their own quality management systems with codes of practice, documentation forms and performance standards together with regular compliance control and analysis. With the exception of patient satisfaction surveys, the EHIF contracts do not, however, specify which performance standards hospitals are required to assess, nor provide any guidance for how to conduct the performance assessments. The EHIF is currently in the process of developing a similar contractual requirement for family physicians.

Hospital quality departments coordinate patient satisfaction surveys and alternate between conducting them in inpatient and outpatient settings each year. The family physician's association includes a sample patient satisfaction survey that family physicians can emulate in their Quality Guideline for Family Doctor Practices. Providers include analyses of their patient satisfaction surveys in their annual reports, which have tended to reveal generally positive results. Since 2013, as part of a change in contractual requirements with the EHIF, hospitals are now required to disclose the results of their patient

satisfaction survey analysis and a summary of their quality measurement and assessment activities at least once per year both on-site and on their websites.

Aside from these satisfaction surveys, there is little information about other internal quality monitoring and assessment activities within family physician practices. Although all hospitals have quality management departments, there is lack of strategic frameworks and action plans for quality monitoring and assessment as well as limited data to evaluate their activities. In addition, responsibilities for measuring clinical and non-clinical aspects of quality are often separated, with quality departments tending to focus on non-clinical aspects of quality, including financial indicators and patient satisfaction, while individual hospital departments monitor clinical effectiveness according to established standards and guidelines.

The most common quality management activities performed in hospitals include: i) responding to patient complaints, ii) monitoring of complications and adverse events and iii) internal audits. In addition, six of Estonia's largest hospitals participate in an international performance assessment project known as the WHO performance assessment tool for quality improvement in hospitals (PATH) project.

i) Patient complaint system (Mandatory)

All hospitals are required by law to have a system in place to address patient complaints. These can either be resolved within the hospital or, in more serious cases, through the Expert Commission of Patient Safety organized by the Ministry of Social Affairs. After initial negotiations with the patients submitting complaints, hospitals may choose to provide financial compensation for any harm that was caused. Since hospitals are not required to report patient complaints resolved within the hospital to the Ministry, there is no national registry of the number of these cases and their results. On average, about 150 cases are referred to the Expert Commission per year, which are then evaluated by a panel of medical experts. Patients can either re-negotiate with providers on the basis of the Commission's evaluation or settle their cases in court.

ii) Monitoring complications and adverse events (Mandatory)

All hospitals are required by law to report hospital infections, side effects of pharmaceuticals and side effects of blood transfusions to the Health Board. Many hospitals monitor other complications and adverse events, however, most maintain this information internally, as there is no requirement to report these to any authority, let alone make them publicly available. Nevertheless, hospital representatives have indicated a potential underreporting in these areas due to fears about litigation.

iii) Internal audits (Voluntary)

In addition to the external audits conducted by the EHIF, clinical departments within some hospitals also periodically conduct voluntary, internal audits. Typically, clinical managers form a working within the hospital, which discusses potential audit topics based on available data, and evaluates them according to local and/or international standards and guidelines. The frequency of these audits, the methodologies used and how the results have influenced future practices, however, have not been studied.

iv) PATH project (Voluntary)

A few Estonian hospitals participate in a quality-monitoring project developed by the WHO Regional Office for Europe in 2003, known as the performance assessment tool for quality improvement in hospitals (PATH) project. PATH indicators assess several areas of quality in hospitals including clinical effectiveness, efficiency, staff orientation, responsive governance, safety and patient-centeredness. This tool allows hospitals to comprehensively assess their performance for quality improvement activities, compare and interpret the results at the country-level and international level, based on characteristics such as hospital specialties or geographical location. The EHIF coordinates the involvement of two of Estonia's three regional hospitals and its four central hospitals in this project, which they first joined for the second wave of data collection in 2007.

Prior evaluations of the PATH project revealed that it had several limitations, although it brought several stakeholders together and initiated a dialogue on the issue of monitoring quality (Guisset et al. 2009). These limitations included a heavy focus on international comparison, difficulty of translating the PATH indicator definitions to the Estonian context, and transparency issues. The latter was associated with discomfort with the EHIF being the main coordinator of the project, which conflicts with its role as purchaser. As a result, there was some reluctance among hospitals to reveal a complete picture of performance due to fears about financial repercussions.

5. Quality improvement initiatives (examples)

Quality improvement initiatives may include national policies and programs as well as initiatives carried out by providers themselves. Some examples of quality improvement initiatives at the national level include disease management programs, continuous medical education, accreditation of provider organizations, use of e-health systems and pay-for-performance schemes. Provider quality improvement initiatives may include staff trainings, use of checklists, and discharge planning in hospitals. Estonia has a number of quality improvement initiatives in place at the national level as well as some examples of provider-led initiatives.

<u>National quality improvement initiatives</u>

Continuing medical education (Voluntary)

Participation in continuing medical education (CME) courses ensures that providers are kept up to date on the latest evidence-based practices and changes in national and international quality standards. The Medical Faculty at the University of Tartu administers CME courses for health care professionals. Participation in official CME programs for family physicians was initially high, but has declined in recent years. This trend may be due to an ageing workforce with decreased interest in re-certification as well as competing, but unrecognized, CME programs, such as those offered by pharmaceutical companies. Limited time due to heavy workloads combined with a lack of resources for participation in these courses may also contribute to this challenge.

Accreditation for health care providers (Voluntary)

Accreditation is the process of certifying providers' compliance with established standards, including those required by law. This process sets standards at a maximum achievable level to stimulate

improvement over time. In turn, granting institutions recognition for adhering to these standards serves as a market signal to increase consumer demand for these high quality services. While there is no national accreditation system for hospitals in Estonia, the Family Physician's Association runs a voluntary, annual accreditation program for family practices. Interviewed stakeholders have attributed the lack of an accreditation system for hospitals to limited opportunity for competition due to the small number of hospitals in the country.

This program is based on the criteria listed in the Association's "Quality Guideline for Family Doctor Practices in Estonia," which was developed in 2009. This guidebook provides a collection of standards, criteria and indicators on which to base assessments of quality regarding access and organization of practices, the quality of medical treatment, and also whether the practices can provide a learning environment for medical students and intermediate medical staff, as well as serve as a base for conducting scientific work. Every year, practices participating in the accreditation program can submit data based on a set of specified indicators for which they receive points. Based on this point system, practices are classified into A, B, or C – level practices, with the A-level practices representing those of the highest quality. Prior to awarding the accreditation, members of a board created by the FPA audit those classified as A-level practices to verify the information that is provided. In turn, B and C level practices are awarded their classifications without an audit.

In the 2009-2010 cycle, 79 practices participated in the accreditation program, of which 18 were awarded A-level status. This number increased slightly in the 2010-2011 cycle, when 24 of 109 participating practices were awarded A-level status (Martinson 2011). Given that there are about 450 family practices in Estonia, the low participation rate of family practices in the accreditation program has been subject of recent discussions between the family physicians' association and the EHIF on whether to provide a financial incentive for participation.

Despite the lack of a national accreditation system for hospitals, some hospitals participate in or follow international accreditation programs such as the International Organization for Standardization (ISO), European Foundation for Quality Management (EFQM), and Joint Commission International (JCI) for their own quality management purposes. In addition, specific specialty departments in some hospitals are also accredited according to international standards, such as those set by the Organization of European Cancer Institutes (OECI).

Quality Bonus Scheme

To encourage adherence to preventative care guidelines in primary care, the EHIF introduced a voluntary Quality Bonus Scheme in 2006. This scheme, which is based on a point system, awards a pro-rated lump sum based on the achievement of performance targets for chronic disease prevention and management, including the provision of recommended annual diagnostic tests and nurse counseling for diabetes and hypertension.

The scheme, however, has a number of limitations. For example, it rewards the provision of individual procedures or services rather than for coordinating the provision of a full set of recommended services for patients with a specific condition. It also lowers the bar by awarding the bonus to family physicians when only 80% of all possible points are reached and does not monitor the type of physicians that provide the services – that is, family physicians benefit from the marginal increase in preventive services provided by specialists. The size of the bonus payment is small, constituting only about 2% of the

average family physician's annual revenues in 2011. Furthermore, there is some indication that family physicians find the scheme patronizing, which may be further compromising compliance.

E-Health Systems for Quality Improvement

A major achievement in quality of care in Estonia has been the development of a comprehensive, national e-health system. This includes electronic medical records (EMR), e-prescription and e-imaging systems, which allows vital patient health information to be accessed and shared between physicians and health care professionals in all health care settings as well as with patients. Nevertheless, some improvements to this system can still be made. In particular, several of Estonia's large hospitals have also developed their own EMR systems, which have had some compatibility issues with the national system resulting in delays in the transfer of information or the transfer of incomplete information.

To improve quality in primary care, all family physician practices are equipped with a computer decision support system, which contains instructions on caring for patients with specific disease conditions according to clinical guidelines. However, although the system covers guidelines comprehensively for most pediatric conditions, it is lacking considerably in guidelines for other diseases. To improve the problem solving capacity in primary care, an e-consultation system has been developed. Through this system specialists are reimbursed to provide consultation services to family physicians, which allows them to make diagnoses at the primary care level, and determine if further specialist care is needed. So far, this system has been implemented in one major Estonian hospital. Broader implementation of this system could substantially reduce the number of avoidable specialist visits by increasing problem-solving capacity at the primary care level.

Advisory Board for the Development of Quality Indicators

In March 2014, the Dean of Medical Faculty of the University of Tartu established the Advisory Board for Development of Quality Indicators (ABDQI). The objective of the ABDQI is to develop a system of quality monitoring indicators, and is the first initiative in which clinicians are playing a leading role in developing quality-monitoring indicators. In November 2014, five medical specialist associations (neurology, oncology, intensive care, gynecology and surgery) presented the first indicator proposals to the ABDQI.

<u>Provider quality improvement initiatives</u>

Family Medicine Nurse Bonus Program (Voluntary, Incentivized)

A local family medicine practice has implemented a bonus program for to improve family practice nurse performance. The creation of the program was inspired by the results of patient satisfaction surveys, indicating a need for improvement in the quality of interactions with nurses. In this program nurses, are monitored over a period of two months based on criteria for the quality of documentation, the extent to which they answer phone calls and their attitude and behavior towards patients. Nurses that perform well based on these criteria can receive a 50-euro bonus after the two-month observation period.

Hospital Quality Initiatives (Voluntary)

Quality improvement activities vary across hospitals. Representatives interviewed suggested additional quality improvement activities include regular health professional staff trainings and support systems in

a variety of areas as well as periodic staff meetings to discuss issues such as difficult patient cases or complications arising during certain procedures in order to promote further learning and improvement. One hospital also cited their participation in the WHO baby friendly hospital initiative, which implements practices to promote, protect and support breastfeeding in health-care facilities.

III. Conclusions

As demonstrated in the above analysis, Estonia has already established various key elements of a good quality assurance system. Nevertheless, there continues to be room for improvement in all five key component areas of these systems. Most importantly, there is a need for the development of clear leadership and a national vision for quality assurance, a culture of accountability and openness to change, as well as comprehensive quality indicator monitoring and reporting systems at the national level.

Governance system

Estonia has components of a good governance system for quality assurance. Namely, several health sector stakeholders perform quality assurance and improvement activities and a number of laws are in place to ensure quality of care. Nevertheless, there is a lack of strong leadership and clear national strategic framework for quality assurance in the health sector, resulting in weak accountability for encouraging or enforcing adherence to quality standards. In the meantime, the EHIF has assumed a lead role in number of quality assurance activities (clinical guideline coordination, clinical audits, patient satisfaction survey coordination, PATH project coordination etc.), although some providers have expressed uneasiness with this due to its conflicting role as purchaser. In contrast, in Norway, for example, the Ministry of Health and Care Services is the main actor responsible for healthcare quality policy and first developed its national strategic framework for quality improvement in 1995. This was updated with the publication of a more recent national strategy for quality improvement in health and social services for 2005-2015 (OECD 2014).

As such, Estonia would benefit greatly from an in-depth analysis of its quality assurance and improvement system and identify key weaknesses to inform a national strategy that aligns the responsibilities of the various health sector stakeholders according to national priorities and possibilities. Devising a body either within the Ministry or an independent executive agency that is responsible for coordinating quality assurance activities would enhance accountability of the various actors involved. Moreover, this body could also serve as a technical resource center to collect and disseminate information on domestic and international experiences with quality improvement initiatives.

However, a much more fundamental change may be needed in Estonia to create a culture that is open to acknowledging errors and failures, and willing to make the necessary modifications in practice to achieve quality improvement. Clinicians will have to be well trained in the principles of performance measurement, quality improvement and risk management that are specific to their practice specialties. Indeed, technological improvements alone, without this fundamental behavioral change, will do very little to assure and improve quality. Thus, in the long run, training and education on quality in healthcare will need to be more explicitly incorporated into undergraduate, specialty and CME courses. This will allow future healthcare professionals and administrators to develop the knowledge, attitudes and skills necessary to ensure the proper functioning and success of quality assurance and improvement systems.

Quality assurance of inputs and development of standards and guidelines

While Estonia does have a system for assuring the quality of inputs such as human resources and facilities it is lacking in terms of self-regulatory mechanisms – that is, mandatory re-licensing of health care facilities and re-certification of health care professionals – as in other OECD countries. Incentives for participation in re-certification are low, which results in limited assessment of the qualifications of health professionals on a regular basis, which contrasts with practices in the UK and the Netherlands, for example (OECD 2013). Since the re-licensing requirement was recently eliminated, re-instituting this self-regulatory mechanism may be politically challenging.

Estonia has also made substantial progress in recent years to establish adequate health care standards and guidelines, including streamlining the process for guideline development and making all guidelines available to providers on a central website, conducting health technology assessments and developing pathways for some cancers. While this has been a good start, the country still lacks a comprehensive set of updated clinical guidelines and pathways similar to other OECD countries. In addition, although the pathways for cancers have been developed it is unclear to which extent they have been implemented. Moreover, the availability of health technology assessments to inform guideline development in the future is still uncertain.

Monitoring and reporting on quality

One area that could benefit from substantial improvement in Estonia, especially considering its developed health information technology infrastructure, is its quality monitoring and reporting system. While providers participate in and conduct some important quality monitoring and reporting activities including clinical audits by the EHIF, and reporting on some adverse events and patient satisfaction, the country is lacking a mechanism for the systematic collection of data on clinical effectiveness on par with countries such as Denmark, Sweden and the UK which have national quality registries and clinical quality indicator systems (Shaw & Kalo 2002; OECD 2013). The establishment of the Advisory Board for the Development of Quality Indicators is an important first step in this addressing this gap. Agreement on a minimum quality indicator data set on which providers are required to publicly report would allow for increased transparency in the system as well as an opportunity for national comparisons and international benchmarking. Although publishing periodic national assessments of performance could serve as an incentive for quality improvement in itself, linking payment to patient-based data could also greatly improve quality.

Quality Improvement

Finally, there are several initiatives for quality improvement currently in place both at the national and provider levels. Nevertheless, further improvements to these initiatives could be made such as increasing resources and incentives for participating in CME and accreditation programs, strengthening the quality bonus scheme and further streamlining e-health systems for quality improvement. While strengthening the quality monitoring and reporting system is an important first step in inciting change, clearly defining expectations as well as providing technical support, on-site training and incentives will help ensure that necessary actions are taken.

IV. References

Chowleka, P.A., 2001. Challenges to institutionalizing sustainable total quality management programs in healthcare systems of post-Soviet countries. *International journal of economic development*.

Estonian Health Insurance Fund, 2012. *Estonian Health Insurance Fund Annual Report*, Tallinn, Estonia.

Guisset, B.A., Kjaergaard, J. & Habicht, J., 2009. *Performance management, developing a culture of measurement and continuous quality improvement in Estonian hospitals: Recommendations on alternative entry points and ways forward*,

Lai, T. et al., 2013. Health Systems in Transition - Estonia Health system review. *Health systems in transition*, 15(6).

Legido-Quigley, H. et al., 2008. *Assuring the quality of health care in the European Union. A case for action*, Available at: <http://scholar.google.com/scholar?hl=en&btnG=Search&q=intitle:Assuring+the+quality+of+health+care+in+the+european+union#7> [Accessed February 5, 2015].

Martinez, J., 2001. *Assessing Quality, Outcome and Performance Management*, Available at: <http://www.who.int/hrh/documents/en/Assessing_quality.pdf> [Accessed February 5, 2015].

Martinson, K., 2011. Building the Quality System in Family Medicine -Estonian Experience [PowerPoint Slides]. Available at: European Society for Quality and Safety in Family Practice site. <http://www.equip.ch/flx/events/40th_equip_assembly_meeting_in_zagreb_3_5_november_2011/programme_slides/> [Accessed February 5, 2015].

OECD, 2014. Quality of health care in Norway. In *OECD Reviews of Health Care Quality: Norway*. OECD.

OECD, 2013. Quality of health care in Sweden. In *OECD Reviews of Health Care Quality: Sweden*.

Põlluste, K. et al., 2006. Quality improvement in the Estonian health system - Assessment of progress using an international tool. *International Journal for Quality in Health Care*, 18, pp.403–413.

Shaw, C., 2013. Mission report : EHIF and quality of healthcare in Estonia, pp.1–9.

Shaw, C.D. & Kalo, I., 2002. *A background for national quality policies in health systems*,

University of Tartu Department of Public Health, Health Technology Assessment in Estonia. Available at: http://www.arth.ut.ee/en/hta/health-technology-assessment-estonia [Accessed February 5, 2015].

World Health Organization, 2011. *Estonian handbook for guidelines development*,

World Health Organization, 2014. European health for all database (HFA-DB). Available at: http://www.euro.who.int/en/data-and-evidence/databases/european-health-for-all-database-hfa-db [Accessed February 5, 2015].