

**QUALITY ASSURANCE
OF HEALTH SERVICES IN
ESTONIA**

Quality assurance of health services in Estonia
Ministry of Social Affairs, Estonia
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1. Terminology used in the document

Clinical practice guidelines – systematically developed statements to assist practitioners and consumer decisions about appropriate health care for specific clinical circumstances. (Field, MJ; Lohr, KN. (eds.) Institute of Medicine Committee to Advise the Public Health Service on Clinical Practice Guidelines. Clinical practice guideline: directions for a new program. Washington DC: National Academy Press; 1990.)

Emergency medical care – out-patient health services for the initial diagnosis and treatment of life-threatening diseases, injuries and intoxication and, if necessary, for the transportation of the person requiring care to a hospital. (Health Services Organisation Act [*hereinafter HSOA*]: <http://www.legaltext.ee/en/andmebaas/ava.asp?m=026>)

Family physician – a specialist who has acquired the corresponding speciality and who practises on the basis of a practice list of the family physician, or as a specialist without a practice list. (HSOA)

Formal education acquired within the adult education system provides the opportunity to acquire basic education and general secondary education in the form of evening courses, distance learning or as an external student, to acquire secondary vocational education on the basis of basic education in the form of evening courses or distance learning, to acquire secondary vocational education on the basis of secondary education in part-time study or as an external student and to acquire higher education in part-time study or as an external student. Completion of formal education acquired within the adult education system shall be certified by a certificate or diploma. (Adult Education Act: <http://www.legaltext.ee/en/andmebaas/ava.asp?m=022>)

General medical care – out-patient health services which are provided by family physicians and health care professionals working together with them. (HSOA)

Health care professionals – doctors, dentists, nurses and midwives if they are registered with the Health Care Board. (HSOA)

Health care providers – health care professionals or legal persons providing health services. (HSOA)

Health services – the activities of health care professionals for the prevention, diagnosis or treatment of diseases, injuries or intoxication in order to reduce the malaise of persons, prevent the deterioration of their state of health or development of the diseases, and restore their health. (HSOA)

Nursing – out-patient or in-patient health services which are provided by nurses and midwives together with family physicians, specialists or dentists, or independently. (HSOA)

Patient – user of health care services, whether healthy or sick. (Declaration on the Promotion of Patients' Rights in Europe, WHO, 1994)

Practice list of a family physician – a list of persons who are to be serviced by the family physician. (HSOA)

Professional education and training provides the opportunity to acquire and develop professional, occupational and/or vocational knowledge, skills and experience and the opportunity for retraining at the place of employment or at an educational institution. Completion of professional education and training shall be certified by a certificate. (Adult Education Act)

Quality – the degree to which a set of inherent characteristics fulfils requirements. (EN ISO 9000:2000)

Quality assurance – part of quality management focused on providing confidence that quality requirements will be fulfilled. (EN ISO 9000:2000)

Quality management – coordinated activities to direct and control an organization with regard to quality. (EN ISO 9000:2000)

Quality of health services – the body of health service features characterising the compliance of the service with set requirements, modern knowledge, existing resources, professional qualification requirements, and the requirements for the patient satisfaction and healthiness ([Quality assurance requirements for health services](#)).

Quality management system for health services – the organisational structure, resources, liability and planned activities of the healthcare provider in assuring quality ([Quality assurance requirements for health services](#)).

Specialised medical care – out-patient or in-patient health services which are provided by specialists or dentists and health care professionals working together with them. (HSOA)

2. Introduction

2.1. Development of quality assurance in healthcare in Estonia

Quality assurance has throughout times been an inseparable part of the provision of medical services to people; however, the focus has varied in various time periods. Like everywhere else in the world, much attention has been paid to professional quality issues of medical aid in Estonia for a long time. Up to the 1990s, professional quality assurance was based mostly on national clinical practice and diagnostic guidelines, physicians were accredited on the national level, and education physicians and nurses was based on uniform curricula. In addition, many statistical indicators were used which, in addition to volume, also allowed the quality of health services (mortality, surgical activity, occurrence of post-surgical complications and mortality, differences between referral and final diagnoses, differences between clinical and autopsy diagnoses, etc.) to be assessed. Professional quality was also ensured through the large percentage of autopsies.

Due to the centralised planning and managing of the healthcare system, healthcare providers did not actually have to deal with issues of management quality in Estonia until the year 1992. This is characteristic not only to Estonia – improvement of management quality in healthcare institutions became popular in Western European countries in the 80s and at the beginning of the 90s of the previous century. This was a period when the role of a patient increased and the concept of patients' rights was developed.

Since 1992, when the financing principles of the healthcare system were changed and compulsory health insurance was introduced, evaluation of the quality of medical care began as well in relation with the use of resources (Gross, 1994a and 1994b).

Changes in physicians' education began at the same time. In 1991, changes were made to the curriculum of the Medical Faculty of the University of Tartu as a result of which the early specialisation ceased and all the graduates received the vocation of general practitioner. In 1992, the Department of Polyclinics and Family Medicine was opened in the University of Tartu and education general practitioners began. Reorganisation of the Department of Public Health and modernisation of the public health curriculum according to international requirements also began in 1992.

The Estonian Healthcare Project, carried out in 1995-1998, was an important milestone in the quality assurance of health services. One subsection of the project was accreditation, licensing, and quality assurance in healthcare; compilation of a quality policy for Estonian healthcare also took place within that project. The project was financed by the World Bank and the government of the Netherlands. The quality policy document was drawn up in cooperation with experts from the Dutch Institute for Healthcare Improvement (CBO). During the preparation of the document, it was possible to learn from the experience of the Netherlands, which has definitely influenced the development of healthcare quality in Estonia (Sluijs & Wagner, 2003). The document on healthcare quality was submitted to the Government of the Republic for approval. It was reviewed by the government but was not approved. The reason for that was the suggestion of the authors to found a Centre for Healthcare Quality which would coordinate all quality-related activities, supervise and advise healthcare providers and carry out quality surveys. The financing of the centre was supposed to come from the state, healthcare providers, and the purchaser of services. Although the

quality paper was not approved, many Estonian healthcare institutions have used it in teaching and performing quality-related activities. It was in the second half of the 1990s when the intensive surveys on patient and employee satisfaction began.

The quality requirements were first worded in a legal act in 2001 when the Health Services Organisation Act was passed. According to that act, the Minister of Social Affairs shall set the requirements for the quality and accessibility of health services. Furthermore, it also established minimum requirements for healthcare professionals and healthcare providers. The act became effective as of the 1st of January 2002 and all healthcare professionals and healthcare providers were given three years (i.e. until the 31st of December 2004) to align their activities with the current requirements.

According to the Health Services Organisation Act, healthcare providers are persons in private law (both legal and physical persons), which has created the additional need for the development of management quality.

2.2. The aims and content of the paper

The aims of the present paper are the following:

- 1) To map existing legislation and other documents which are related to healthcare quality.
- 2) To identify the need for additional legislation and/or other documents, or problems with the existing ones (overlapping, not relevant to the existing situation, problems with applicability).
- 3) To analyse the responsibilities of state and non-state organisations in the field of healthcare quality assurance and to assess their ability to fulfil the responsibilities.
- 4) To present suggestions for planning the national strategy for healthcare quality and the time schedule for implementing the strategy to the Ministry of Social Affairs of Estonia.

The document consists of the following parts:

- 1) Terminology used in the document and outline of the document (chapter 1 and 2).
- 2) Quality assurance of healthcare at the national level (chapter 3 and 4).
This chapter discusses the existing structure of health services, their process and legislation, guidelines and other documents on the quality assurance for the outcome and the scope of the documents with descriptions of the indicators and implementation control system.
- 3) The criteria for the quality assessment of health services (chapter 5).
The chapter discusses the criteria applied for assessing the quality of health services depending on the quality of the structures, process and outcome. The document provides an assessment on
 - which of these criteria are suitable for use only within the organisation;
 - which of the criteria might be used for comparing the work of general and specialised medical care providers, *e.g. in accreditation of a family practice*;
 - which of the criteria the Health Insurance Fund might use for assessing the work quality of healthcare providers as contractual parties, and
- 4) Application of quality criteria for health services for the purposes of patient management on the example of diabetes (chapter 6).

A healthcare system functions well only if its parts are able to co-function and the system focuses on patients and their needs. In order to assess that, the chapter discusses possible quality criteria, on the example of diabetics' management guidelines, which could be used in the quality assessment of the management of diabetics. It is especially important to assess the various overlapping points of the various service providers: general practitioner – specialist (endocrinologist) – hospital.

5) Problems associated with the quality assurance of health services and possible solutions and suggestions for planning the strategy for the quality assurance of the healthcare system and health services (chapter 7).

The chapter discusses problems whose solution requires cooperation between all the stakeholders, in order to allow a healthcare provider to offer safe health services which meet the needs of patients. The chapter also presents suggestions for planning a national quality strategy for healthcare.

2.3. Authors of the document

Due to the aim of the document, the Ministry of Social Affairs summoned a task force whose responsibility was to draw up the working version of the document and, after a discussion with the stakeholders in the healthcare system, to draw up some proposals for planning the strategy for the quality of health services.

The task force that prepared the document included:

- 1) Marina Kaarna – head of the treatment quality service of the Northern Estonian Regional Hospital
- 2) Ruth Kalda – associate professor at the Department of Polyclinic and Family Medicine, University of Tartu
- 3) Kalev Karu – CEO, Lasnamäe Tervisekeskus Ltd.
- 4) Prof. Margus Lember – head of the Department of Internal Medicine, University of Tartu
- 5) Evi Lindmäe – head of the Registers and Licenses Department of the Health Care Board
- 6) Prof. Heidi-Ingrid Maaroo – chair of the Department of Polyclinic and Family Medicine, University of Tartu
- 7) Katrin Maiste – healthcare specialist of the Estonian Health Insurance Fund
- 8) Kaja Põlluste – lecturer of healthcare organisation, University of Tartu
- 9) Teele Raiend – quality manager of Pärnu Hospital
- 10) Anneli Rätsep – assistant at the Department of Polyclinic and Family Medicine, University of Tartu

The authors of the document were assisted by the lead team of the project, which included Katrin Saluvere, vice chancellor on healthcare; Ivi Normet, head of the Healthcare Department; and Alar Sepp, head of the Healthcare Policy Unit, from the Ministry of Social Affairs; Jarno Habicht, representative of the World Health Organisation; and Üllar Kaljumäe, general manager of the Health Care Board.

The first version of the document was discussed with the representatives of various stakeholders at the quality strategy seminar on the 17th of December 2004. Bruno Bouchet, an expert from the World Health Organisation, participated in the seminar as well and, after the workshop, presented an expert appraisal of the healthcare quality in Estonia and proposals for

planning the strategy for the quality of Estonian healthcare. The final version of the document also includes the outcome of the discussions at the seminar and the expert appraisal.

The paper was financed by the World Health Organisation with the purpose of supporting the development of the healthcare quality in Estonia and preparing a project for the Ministry of Social Affairs for devising a strategy for the quality of Estonian healthcare, which has been coordinated with all the stakeholders. The administration of the project was the responsibility of the Estonian College of Health Executives.

3. Quality assurance for healthcare at national level

This chapter discusses the existing structure of health services, their processes and legislation, guidelines and other documents on the quality assurance for the outcome and the scope of the documents.

Structural quality assurance, i.e. requirements for service providers (people, buildings, rooms, fixtures and fittings) have mostly been set out in the legal acts.

Procedural quality assurance, i.e. requirements for methods of service provision (diagnostics, management, nursing, rehabilitation, prevention) have mostly been included in guidelines and entail the following generally accepted principles. Legal acts are used for procedural quality assurance rather rarely.

Outcome quality has usually not been regulated by legal acts but is incorporated into agreements between healthcare providers and the purchaser.

3.1. Quality requirements for health services set out in legal acts

3.1.1. Structural quality assurance

A precondition for the competence of healthcare providers is the education that meets the present day requirements. The education of Estonian physicians and dentists takes place in the Faculty of Medicine, University of Tartu. Requirements for the education of healthcare providers have been set out in the following legal acts: [Universities Act](#), [University of Tartu Act](#)¹ and Government of the Republic Regulation No. 312 [Framework Requirements for Medical, Veterinary, Pharmacist, Dentistry, Midwives' and Nurses' Education, Architect and Civil Engineering Studies](#) (*in Estonian*) from the 25th October 2004. The [Higher Education Standard](#), enforced by the Government of the Republic regulation, specifies the general requirements for higher education in Estonia and is a basis for issuing education licenses to educational institutions offering higher education and for accreditation of their curricula. The standard applies to all levels and forms of higher education regardless of the legal status of

¹ The English versions of the acts are available on the website of the Estonian Legal Language Centre <http://www.legaltext.ee/en/andmebaas/ava.asp?m=022>

the educational institution. The education of nurses is regulated by the [Institutions of Professional Higher Education Act](#).

According to the Universities Act, medical education and dentistry education are studies based on the integrated curricula of bachelor's and master's studies. The standard period of medical education is six years and that of dentistry education five years. The clinical instruction of medical education shall be carried out at the University of Tartu Hospital. Medical education and dentistry education shall be followed by residency in a medical or dentistry specialty with a duration of three to five years. Residency shall be completed and financed under the conditions and pursuant to the procedures established by the University of Tartu Act. The standard period of midwives' education is 4.5 years and that of nursing education 3.5 years, 4.5 years with the additional specialisation (Government of the Republic regulation "*Framework requirements for medical, veterinary, pharmacist, dentistry, midwives' and nurses' education, architect and civil engineering studies*"). Since 1997, the curricula of medical education and dentistry education and, since 1996, those of nurses' and midwives' education have been aligned with the directives of the European Union that coordinate the content of various educations.

[The principles for nurses' education](#) (in Estonian) were devised by a working group summoned by the Ministry of Social Affairs in 2003.

[The Health Services Organisation Act](#) provides the organisation of and the requirements for the provision of health services; the establishment of the requirements for the accessibility and quality of health services is the responsibility of the Minister of Social Affairs.

- 1) Registration of a healthcare professional (*if the qualification was received either in Estonia or abroad*).
 - The Health Care Board as a representative of the state grants a healthcare professional the right to provide health services in a specialty set out in the document certifying his or her qualifications and the certificate issued upon registration. The registration is based on regulations which take into account the basic education of healthcare professionals, their acquisition of specialty, attestation and experience in order to allow only qualified specialists to be entered into the register. The list of specialties is given in the regulations of the Minister of Social Affairs: [the List of Specialties for Specialised Care](#) and [the List of Nursing Specialties](#) (in Estonian).
 - The Health Care Board shall revoke a registration certificate if a conviction by a court which deprives the person of the right to engage in the specialty, set out in the document certifying his or her qualifications and the registration certificate, has entered into force in respect of the healthcare professional.

According to the Health Services Organisation Act, healthcare professionals are doctors, dentists, nurses and midwives. Qualification requirements for all other professions are set out in [the Professions Act](#). Pursuant to the Professions Act, [the Estonian Qualification Authority](#) has been founded, one of the responsibilities of which is devising professional standards for specialists working in the healthcare system, e.g. physical therapists, speech therapists, optometrists, etc.

- 2) The right to practise as a general practitioner and deprivation thereof.

- The right granted to practice as a general practitioner (*determination of the practice list and the service area of a general practitioner*) and the deprivation thereof shall be based on the respective orders of the county governor.
 - The qualification of a general practitioner as a specialist shall be certified by the Healthcare Board, which issues a registration certificate to the general practitioner. A general practitioner without a practice list may also apply for an activity license.
- 3) Application for and issue of an activity license
- An activity license is required for the provision of emergency medical care and specialised medical care and for independent provision of nursing. The [List of Nursing Care Services Provided Independently](#) has been established by the regulation of the Minister of Social Affairs, and according to that list, a nurse may independently provide school health services and home nursing care services.
 - The Health Care Board issues an activity license for five years.

The requirements for **the structural quality** for the rooms and apparatuses used in the provision of health services have been established in the regulation of the Minister of Social Affairs²:

- 1) [Requirements for the Premises, Fixtures and Fittings, and Apparatuses Necessary for the Provision of Specialised Medical Services outside Hospitals](#) (*in Estonian*)
- 2) [Requirements for Hospital Types](#) (*in Estonian*)
- 3) [Standard Conditions for Hospital Accommodation](#) (*in Estonian*)

The regulation sets out the requirements for the wards, recreation rooms, catering rooms, and toilets in the inpatient departments of hospitals.

- 4) [Procedure for Approval of the Functional Development Plan of a Hospital and the Medical Technology Part of Building Design](#) (*in Estonian*)
- 5) [Requirements for the Premises, Fixtures and Fittings, and Apparatuses Necessary for the Independent Provision of Nursing Care Services](#) (*in Estonian*)
- 6) [Requirements for the Premises, Fixtures and Fittings, and Apparatuses Used by General practitioners](#) (*in Estonian*)
- 7) [Requirements for Rehabilitation Institutions](#) (*in Estonian*)

The requirements established by the regulation apply to institutions which:

- provide rehabilitation services to persons with a profound, severe, or moderate disability; and
 - draw up rehabilitation plans for people who request determination of a disability if that is necessary for determination of the severity of the disability or independent coping and social integration of the person.
- 8) [Requirements for the Staff and Equipment of Ambulance Crews and Their Work Instructions](#) (*in Estonian*)

The regulation of the Minister of Social Affairs that stipulates

- the staff and equipment of ambulance crews (structure);
- the rights and responsibilities of ambulance crews (structure);
- the activities (process) of ambulance crews before driving out to a call and while driving to the place of an accident, at the place of accident, while taking the patient to the hospital, at the hospital, during the drive back to the ambulance base and at the ambulance base.

² The regulations regulate fields of activity, which are reflected in the name of the regulation.

- 9) [The List and Format of Documents Certifying the Provision of Health Services and the Requirements for the Documentation of Health Services](#) *(in Estonian)*

The regulation of the Minister of Social Affairs that stipulates

- the list and format of documents certifying the provision of health services (structure),
- the requirements for the format of the documents, incl. the requirements for electronic documentation (process),
- requirements for establishment, maintenance, and liquidation of data banks (a process).

- 10) [Reforms in the Blood Service](#) *(in Estonian)*

A regulation of the Minister of the Social Affairs, which provides a development plan for the blood service, its structure, and basis for organisation of work.

On the 1st of December 2004, the [Medical Devices Act](#) *(in Estonian)* took effect in Estonia. This act sets the requirements for medical devices, production, entry into market and implementation thereof, for clinical assessment of medical devices and professional users of medical devices. Based on this Act, the Government of the Republic has issued the following regulations:

- 11) [Procedure for Conformity Assessment of Medical Devices](#) *(in Estonian)*
- 12) [Requirements for Designing, Production and Packaging of Medical Devices, and for Information Accompanying Medical Devices](#) *(in Estonian)*
- 13) [Rules for the Classification of Medical Devices](#) *(in Estonian)*

Circumstances relating to the use of medical devices are regulated by two regulations of the Minister of Social Affairs:

- 14) [Procedure for Allowing Medical Devices to Enter the Market and the Procedure and Conditions for Informing about any Relevant Changes Made to Medical Devices](#) *(in Estonian)*
- 15) [Procedure and Forms for Informing about Dangerous Situations](#) *(in Estonian)*

Factors relating to the education of an adequate number of employees who have adequate qualifications have been set in the following regulations:

- 16) [Development Plans for Medical Specialties](#)

This regulation establishes the estimated volume and optimum distribution of health services until the year 2015.

- 17) [Development Plans for Nursing Specialties](#) *(in Estonian)*

This regulation establishes the development directions for the education of nursing specialties and nurses, midwives' specialty and midwives until the year 2015.

- 18) The Medicinal Product Act and legal acts based on that act regulate the quality regulations related to medicinal products.

3.1.2. Procedural quality assurance

Requirements for procedural quality have been established in the following legal acts:

- 1) [General Practitioners' Work Instruction](#) (*in Estonian*)

A regulation of the Minister of Social Affairs establishing the fields of work for general practitioners and family nurses and requirements for general medical care (office hours of general practitioners, accessibility of general medical care outside office hours and maximum waiting periods for a general practitioner's appointment).

- 2) [Procedure for Cooperation in Emergency Medical Care between the Emergency Medical Staff, Hospitals, Rescue Service Agencies and Police Authorities](#) (*in Estonian*)

A regulation of the Government of the Republic establishing the procedure for cooperation in emergency medical care between the emergency medical staff, hospitals, rescue service agencies and police authorities.

- 3) [Requirements for the Staff and Equipment of Ambulance Crews and their Work Instructions](#) (*in Estonian*) (*See Structural quality assurance*)
- 4) [The List and Format of Documents Certifying the Provision of Health Services and the Requirements for the Documentation of Health Services](#) (*in Estonian*) (*See Structural quality assurance*)
- 5) [Reforms in the Blood Service](#) (*in Estonian*) (*See Structural quality assurance*)
- 6) [Accessibility Requirements for Health Services](#) (*in Estonian*)

A regulation of the Minister of Social Affairs which establishes the requirements for the accessibility of health services (general and specialised medical care, ambulance, emergency care and nursing care) and requirements for waiting lists.

- 7) [Quality assurance requirements for health services](#)

A regulation of the Minister of Social Affairs establishing the responsibilities of healthcare providers in quality assurance, requirements for the competence of healthcare professionals, requirements for quality management systems of healthcare professionals and their obligations in

- assurance of patient satisfaction and management of risks resulting from the provision of health services,
- assurance of professional quality, and
- assurance of quality of work arrangements in and management of organisation.

- 8) [Procedure for the Provision of Expert Analysis of the Quality of Healthcare Services](#) (*in Estonian*)

A regulation of the Minister of Social Affairs establishing the following requirements for the expert committee on the quality of healthcare, the Healthcare Board:

- the aim of their work, which is the provision of an independent expert analysis of health services provided to patients;
 - the duties of the committee;
 - the rights of the committee and the providers of expert analyses;
 - the composition of the committee and the duration of their powers;
 - committee meetings, the rules of procedure and decision-making;
 - the rules for secondary handling of a case.
- 9) The procedure for acquiring a second opinion has been set in the [Health Insurance Act](#), according to which the Estonian Health Insurance Fund shall compensate once for the costs incurred in obtaining a second opinion (*also when one has to turn abroad for the second opinion*).

Assurance of procedural quality is also related to the acknowledgment of patients' rights and ensuring these by legal acts. Patients' rights to quality health services have been ensured with the following legal acts:

10) [Law of Obligations Act](#) (Chapter 41 "Contract for Provision of Healthcare Services," §758-773) The Act establishes the duties of healthcare providers and patients, requirements for informing patients and obtaining their consent for the provision of health services, healthcare providers' duty to maintain confidentiality, and their liability.

11) [Communicable Diseases Prevention and Control Act](#)
The Act establishes the procedure for the provision of medical care for patients with communicable diseases on their consent, and the conditions of and procedure for involuntary treatment (§3-5).

12) [Mental Health Act](#)
The Act establishes the procedure and conditions for the provision of psychiatric care and persons' rights:

- voluntary nature of psychiatric care and rights of a person while receiving psychiatric care (§3-4)
- emergency psychiatric care and involuntary emergency psychiatric care (§10-14)

13) [Termination of Pregnancy and Sterilisation Act](#) (*in Estonian*)
The act establishes the conditions and procedure for termination of pregnancy and sterilisation:

- voluntary nature, due date and place of termination of pregnancy, sole right of gynecologists to terminate pregnancy, obligation of counselling;
- voluntary nature, allowability, and place of sterilisation, sole right of gynecologists to sterilise, obligation of counselling.

14) [Artificial Insemination and Embryo Protection Act](#)
This act establishes the conditions and procedures for artificial insemination, the voluntary nature of the procedures, the obligation of medical and legal counselling and the protection of embryos created *in vitro*.

15) [Transplantation of Organs and Tissues Act](#)
The act establishes the conditions and procedure for transplantation of organs and tissues, except transplantation of blood and blood derivatives, gametes, gonads and embryos. The act also regulates the aspects of informed consent and protection of personal data related to these procedures.

16) [Personal Data Protection Act](#)
The act establishes the definition of personal data (§4) and the procedure for processing sensitive personal data (§24-27).

3.1.3. Outcome quality assurance

Outcome quality characterises the compliance of outcome with the expectations of patients, service providers or financiers. Compared to structural and procedural quality, outcome quality has not been legally regulated and it is not expedient to do that as well. To some extent, the assessment of outcome quality can be carried out according to the [List of Health Services of the Estonian Health Insurance Fund](#) (*in Estonian*), which is a basis for the Estonian Health Insurance Fund in paying for health services provided to insured persons.

The payment obligation is transferred within the limits of the reference prices of health services, except in cases when the regulation states patients' own contributions.

The accessibility of health services can also be viewed as outcome and the accessibility requirements set for healthcare providers have been described in the following legal acts (which, however, mostly focus on the assurance of procedural quality):

- [General Practitioners' Work Instruction](#) (*in Estonian*): accessibility of general medical care – patients with an acute health problem have to be able to see their general practitioner on the day they seek help, others within three days.
- [Accessibility Requirements for Health Services](#) (*in Estonian*):
 - 1) accessibility of emergency medical care – there has to be at least one ambulance crew for each 35,000 people in areas with a population density exceeding 20 people per square kilometre, and one ambulance crew for 10,000-15,000 people in areas with a population density less than 20 people per square kilometre.
 - 2) accessibility of specialised medical care – accessibility of specialised medical care in the field of general surgery, internal diseases, pediatrics, obstetrics and gynecology must be within the limits of 70 km or a 60-minute drive.
- [Procedure for Cooperation in Emergency Medical Care between the Emergency Medical Staff, Hospitals, Rescue Service Agencies and Police Authorities](#) (*in Estonian*): priorities for emergency calls and the time for sending out ambulance crews.

3.2. Good practice and guidelines for the assurance of health service quality

3.2.1. Application of good practices and guidelines for ensuring structural quality

Principles for healthcare professionals' competency assessment have been devised for the purpose of ensuring structural quality. According to [the Health Services Organisation Act](#), healthcare professionals are doctors, dentists, nurses and midwives who are allowed to provide health services if the Healthcare Board has issued a registration certificate that certifies their qualification. The registration takes place once and the act does not provide for any obligatory regular re-registration. Doctors, dentists and midwives had to undergo national attestation until the end of 2001 but the system was cancelled as of the 1st of January 2002 and the Minister of Social Affairs, in his regulation "Quality Assurance Requirements for Health Services," authorised professional associations to arrange regular competency assessment for healthcare professionals. [The principles of and system for competency assessment of medical specialists](#) (*in Estonian*) were devised in 2002 and [the principles of and system for competency assessment of nurses and midwives](#) (*in Estonian*) in 2003. The competency assessment is voluntary for healthcare professionals.

The competency assessment of medical specialists is carried out by professional associations. The competency assessment period is five years and the assessment covers

- 1) further education courses completed (suggested volume: 300 additional credits within five years; 1 additional credit = 1 academic hour), and
- 2) practical work experience and efficiency.

The competency assessment period for nurses and midwives is also five years. Competency assessment of nurses is the responsibility of the Estonian Nurses Association and that of midwives is the responsibility of the Estonian Midwives Association. Competency assessment takes into account further education courses completed (suggested volume: 300 additional credits within five years) and practical activities in the profession. As the education of nurses and midwives has undergone reforms within the past five years, some of the healthcare professionals have vocational secondary education and some higher vocational education. Therefore, various levels are used in assessing the competency of nurses and midwives and the basis for the choice of a level is the fact whether the person has higher education or not.

By the end of 2004, the following associations had carried out certification: dentists, general practitioners, gynecologists, surgeons, radiologists, dermatologists, laboratory doctors and occupational health doctors.

3.2.2. Application of good practices and guidelines for ensuring procedural quality

Clinical practice guidelines

Compilation of clinical guidelines is lead by the Estonian Health Insurance Fund. Decisions on financing clinical practice guidelines and on their evidence-based nature are made by the Practice Guidelines Council. The following documents describe the principles of the Estonian Health Insurance Fund for compilation of guidelines: [The Concept of the Estonian Health Insurance Fund for Clinical Practice Guidelines](#) (*in Estonian*) and [The Manual for Compilation of Clinical Practice Guidelines](#) (*in Estonian*).

The following clinical practice guidelines were devised by the end of 2004:

1. [Clinical Practice guidelines approved by the Estonian Health Insurance Board](#) (10; *in Estonian*)
2. [Clinical Practice guidelines devised by professional associations](#) (84; *in Estonian*)

In addition to the existing guidelines, the Estonian Health Insurance Fund coordinates the [compilation of 11 clinical guidelines](#) (*in Estonian*). The Estonian Health Insurance Fund is planning to start devising [patient guidelines](#) (*in Estonian*) as well.

3. [Quality Requirements for the Contractual Partners of the Estonian Health Insurance Fund](#) (*in Estonian*)
 - Conditions for the accessibility and quality of health services (general conditions of treatment financing contracts, clauses 4 and 5)

3.3. Other documents concerning the quality of health services

1. The Quality Policy for Estonian Healthcare

The document was drawn up within the joint project of Estonia and the Netherlands “The Quality of Estonian Healthcare.” The project was financed by the Dutch Ministry of Foreign Affairs. The aim of the document was to familiarise the stakeholders in healthcare provision with the opportunities for quality assurance and with the importance of quality assurance in the future. The document also included the responsibilities and liabilities of various organisations and stakeholders in the quality assurance for health services.

2. [Compilation and application of a manual for organisational management and a quality manual for the provision of health services](#) (*in Estonian*) – recommendations for the compilation of manuals.

The manual was completed in 2003 and representatives of various healthcare providers, who had experience in the field of the quality assurance of health services, took part in the compilation.

The manual consists of two parts. The first part provides an overview of the principles of quality assurance and quality management and the second part describes the sample structure of an organisational management manual, based on which healthcare providers may compile their own manuals which meet their needs.

3.4. Development of the management quality of healthcare providers

Estonia has not considered it necessary to form a common position on the most suitable model for the development of quality management systems of healthcare providers. Some healthcare institutions plan to develop their quality management system on the basis of the ISO 9001 but the bigger healthcare providers have applied the organisational perfection model (the model of the Estonian Management Quality Award).

Some healthcare institutions have always participated in the Estonian Quality Award contests ([Estonian Management Quality Award Contest](#) since 2004), which have been organised since 2001. All Estonian regional hospitals (University of Tartu Clinics – 2003, Northern Estonian Regional Hospital and Tallinn Children's Hospital – 2004) and one central hospital (Pärnu Hospital – 2003) took part in the contest in 2003 and 2004 in order to improve their management systems.

4. Distribution of responsibilities related to quality assurance of health services

The chapter discusses the responsibilities of various organisations in the field of healthcare quality assurance. Most of the responsibilities are derived from the statutes of the organisation or established in legal acts. In addition to the list of activities, the possible problems with the division and execution of the responsibilities are also discussed.

4.1. The Ministry of Social Affairs

According to the [Statute of the Ministry of Social Affairs](#), one of the objectives of the activities of the Ministry is to ensure a balanced availability of health services and medicinal products; the main function of the Healthcare Department is to plan the health policy and organise its implementation with the aim of ensuring the availability of health services and

medicinal products, their quality and safety; the main function of the Health Information and Analysis Department is to plan the policy of health information and organise its implementation with the aim of ensuring necessary information with safe and user-friendly access to it for providing substantiated health services.

The following activities are directly related to the quality assurance of health services:

- preparation of draft legislation (including that which is related to the quality assurance of health services);
- preparation and approval of healthcare development plans;
- development of a national health policy;
- preparation of recommended guidance materials for healthcare providers (preparation of guidelines for the development of management quality in organisations);
- collection and analysis of statistical data characterising the volume of activities of healthcare providers and their economic indicators.

Currently, the Ministry is not directly coordinating any activities related to the quality assurance of health services and it does not collect or analyse any quality-related data. Therefore, it might be difficult to make respective evidence-based decisions on health policy to ensure the quality of health services.

4.2. The Health Care Board

According to its [Statutes](#), the Health Care Board is a government agency which operates within the area of government of the Ministry of Social Affairs, has a directing function within the scope of its authority, exercises state supervision and applies enforcement powers of the state to the extent and pursuant to the procedure prescribed by law.

The main function of the Health Care Board is quality assurance and supervision of the structure:

- issue of activity licenses for providers of specialised medical care, emergency medical care and nursing care;
- registration of healthcare professionals and healthcare providers;
- supervision over compliance with the quality requirements for the structure set in its activity licence,
- coordination and organisation of the activities of the competency board of healthcare professionals.

In addition to structural quality assurance, the Health Care Board organises the work of the expert committee on the quality of healthcare. The function of the committee is review of complaints from patients or their representatives and provision of expert appraisal of the quality of health services.

Today, assessment of healthcare quality is mostly reactive, i.e. discussion focuses on cases already occurred and their reasons. However, preventive actions, aiming at increasing the awareness of healthcare providers of the problems discussed in the committee and feedback on the solutions, are gradually increasing. It is important to analyse mistakes made not only from the medical aspect but also to discuss the importance of organisational management and work arrangements in prevention of mistakes.

The professional education and education of supervision workers of the Healthcare Board is also a problem – the requirements for supervisors of healthcare quality have not yet been determined.

4.3. The Estonian Health Insurance Fund

According to the [Estonian Health Insurance Fund Act](#) and [the Statutes of the Estonian Health Insurance Fund](#) (*in Estonian*), the Estonian health Insurance Fund has a right and obligation to check the expediency of the use of health insurance resources and the correctness of certificates of incapacity for work and discount prescriptions issued. One of the responsibilities of the Estonian Health Insurance Fund is to establish quality criteria for health insurance benefits³.

Being the main financer of health services, the Estonian Health Insurance Fund has established certain requirements for healthcare providers on the accessibility and quality of health services in the contracts concluded with them. The Estonian Health Insurance Fund has a right to check the compliance of the information on certificates for sick leave, prescriptions, invoices submitted to the Health Insurance Fund, case histories, and health cards, and thus check the expediency of the use of resources related to the provision of health services included in the invoices. Since 1999, surveys on the population's satisfaction with the accessibility and quality of health services have been carried out each year upon the request of the Estonian Health Insurance Fund.

In 1997, The Estonian Health Insurance Fund started checking treatment quality and since 2002, periodical checks on treatment quality have been carried out in various fields, e.g. internal diseases, surgery, intensive care, obstetrics and gynecology. Treatment quality is assessed by renowned specialists in the field.

Daily checks of compliance with the formal requirements set for the contractual partners, which have been set in the contracts on the purchase of health services, are carried out by trusted physicians of the Estonian Health Insurance Fund. There are some problems with the professional education, education and competency of the trusted physicians as the criteria for these have not yet been established, and the criteria for the extent to which trusted physicians can check the professional quality of the provision of health services have not been established either.

4.4. County governments

According to the Health Services Organisation Act, it is the responsibility of county governors to organise the provision of general medical care in the county and to ensure

³ **Health insurance benefit** is a high quality and timely health service, necessary medicinal product or medical device which is provided to an insured person under the conditions provided for in this Act by the health insurance fund or a person who has entered into a corresponding contract with the fund (benefit in kind), or a sum of money which the health insurance fund is required to pay to an insured person under the conditions provided for in this Act for the healthcare expenses incurred by the person or upon his or her temporary incapacity for work (benefit in cash). ([Health Insurance Act](#))

supervision over that. According to the act, county governors assess the volume of the activities and the economic activities of the providers of general medical care.

The responsibilities of county governors in assessing the quality of general medical care and the bases for the assessment have not yet been established, which causes differences in the governors' role between the counties.

4.5. Professional associations of healthcare professionals

In 2002, national attestation of healthcare professionals ceased and was transferred to the competence of professional associations. Common principles for competency assessment of physicians were established in 2002 and those for nurses and midwives were devised in 2003. By the end of 2004, more than half of the specialties applied competency assessment.

Another quality-related activity of the professional associations is compilation of clinical and nursing guidelines. Professional associations engage in peer review as well but there is no further data on that level.

4.6. Healthcare providers

Pursuant to the regulation of the Minister of Social Affairs “Quality Assurance Requirements for Health Services,” healthcare providers have to establish a quality management system and implement a list of activities which ensure safe and necessary services for patients. The Law of Obligations Act (Chapter 41: Contract for Provision of Healthcare Services), which took effect in the summer of 2003, provides for various patients' rights, e.g. informing patients and obtaining informed consent of patients for the provision of health services.

Many healthcare providers organise periodic surveys to find out their patients' satisfaction and analyse complaints. A number of practice guidelines have been compiled with the purpose of improving the professional quality, e.g. for checking hospital infection, assessing patients' state before surgery, blood transfusion, etc. Complications are documented and analysed, more complicated cases are analysed, treatment outcomes are assessed, and medical documentation is checked – this also includes checking the correctness of filing in the documentation on health insurance.

The responsibilities of healthcare providers also include preparation of job descriptions for their employees and implementation of various requirements for various positions, devising education plans for employees, assessment of employee satisfaction and assessment of activity indicators of the organisation. More and more attention is paid to putting management systems in order and implementation of management quality principles in organisations which provide health services.

In 2002, a survey was carried out within the Estonian Health Project 2015, the outcome of which indicated that about half of the hospitals dealt with the above-mentioned fields; thus, preconditions for the compliance with the requirements set in the regulation on quality assurance exist.

The availability of necessary equipment at family practices has been studied as well and the outcome of the 1998 survey indicated that more than half of the family practices have the required equipment (Kalda&Lember, 2000). At the moment, all family practices meet the requirements set in the regulation of the Minister of Social Affairs [Requirements for the Premises, Fixtures and Fittings, and Apparatuses used by General Practitioners](#) (in Estonian) issued in 2002.

However, many organisations providing health services have no systematic activities of quality assurance and there is no data on to what extent the data obtained in quality assessments is used for improving the activities. The lack of generally accepted quality indicators poses the main problem, thus making it difficult to compare the quality of the activities of healthcare providers at the national level.

4.7. Educational institutions

The function of educational institutions – the faculty of medicine of the University of Tartu, medical schools and providers of professional education and education – is to train healthcare professionals as required. The basic education of physicians, nurses and midwives and the residency of physicians comply with the requirements of the European Union and the quality of the education is ensured by accreditation of the curricula. The curricula of prospective physicians and nurses includes quality management and quality assurance, which are taught within the course of healthcare management, but these have also been integrated into the education on clinical specialties.

Professional education and education of healthcare professionals is somewhat more obscure as there are quite a lot of institutions which train them in Estonia. Professional education and education lacks generally accepted quality standards (also requirements for providers of the education) thus making it impossible to assess the quality of the education objectively.

The University of Tartu, upon the request of the Ministry of Social Affairs and the Estonian Health Insurance Fund, carries out various healthcare surveys, including applied research on quality assurance. However, it is clear that the research is much wider and the mentioned applied research is just a small part of the research carried out in the Faculty of Medicine.

Therefore, the lack of coordinated and systematic applied research on the quality assurance of health services poses a problem in Estonia. Such research would allow for making evidence-based decisions on healthcare quality and development of a health strategy, as well as analysing the quality of health information gathered.

5. Criteria for the quality of health services

5.1. The criteria and methods for quality assessment of health services

The description of the criteria for the quality of health services follows the principle of being patient-oriented. The following table describes only those quality criteria and methods which are currently used in Estonia according to the knowledge of the authors of this document. These criteria are used by healthcare providers mainly for assessing their activities from the point of patients' arrival to their institution to the point when they leave.

Patients' movement	Criteria for the quality assessment of the service	Method of assessment
1. Patient's request or need for a health service	<ul style="list-style-type: none"> • Accessibility of general or specialised medical care • Time accessibility (waiting period or the length of the waiting list) – the requirements are set and compliance is monitored by the Estonian Health Insurance Fund • Financial accessibility – the percentage of the price for the health services the patients have to cover themselves; established in the Health Insurance Act • Geographical accessibility – established in the development plan of the network of hospitals and the practice lists of general practitioners • Accessibility of emergency medical help 	<ul style="list-style-type: none"> • Population survey (Estonian Health Insurance Fund) • Analysis of waiting lists (Estonian Health Insurance Fund) • Analysis of emergency calls for paramedics (Healthcare Board) • Patients' survey (healthcare provider)
2. Patient enters the healthcare institution	<ul style="list-style-type: none"> • Accessibility of general or specialised medical care • Information on the office hours of the healthcare provider, possibilities for registration for consultation, the amount of visit fee and inpatient fee • Waiting time at reception • Waiting period behind the door of the physicians' office 	<ul style="list-style-type: none"> • Assessment of patient satisfaction • Measuring the waiting period
3. Contact with healthcare professionals	<ul style="list-style-type: none"> • Informing patients • Patients' consent for receiving the service • Ensuring the privacy of patients • Communication with patients 	<ul style="list-style-type: none"> • Assessment of patient satisfaction • Analysis of complaints • Analysis of case histories/health cards (informing a patient and receiving their consent; assessed by health service providers and the Estonian Health Insurance Fund)

4. Provision of health services	<ul style="list-style-type: none"> • Compilation of diagnostics, treatment, and nursing plans • Determination of treatment • Following activity guidelines implemented by the healthcare provider • Compliance of the activities to the existing treatment and diagnostics guidelines 	<ul style="list-style-type: none"> • Checks of filing in the case and nursing histories and health cards • Comparison of physicians' and nurses' activities with the accepted treatment guidelines • Individual assessment of treatment outcome • Clinical conferences, discussions • Expert appraisal of treatment outcome (on the basis of the decision of the expert committee on the quality of healthcare)
5. Availability of medicinal products (during the provision of general or ambulatory specialised medical care)	<ul style="list-style-type: none"> • Purchase of medicines prescribed by physicians (financial accessibility) 	<ul style="list-style-type: none"> • Analysis of the accessibility of medicinal products (investigated during a population survey requested by the Estonian Health Insurance Fund)
6. Patient leaves the provider of health services	<ul style="list-style-type: none"> • Timeliness of ending the treatment (clinical decision: the patient got well or needs referral to another healthcare provider) • Compliance of referrals with the requirements 	<ul style="list-style-type: none"> • Patient satisfaction • Percentage of re-hospitalisation • Analysis of referrals
7. Consistency in dealing with patients	<ul style="list-style-type: none"> • Referring patients from a provider of general medical care to a provider of specialised medical care • Feedback from a medical specialist • Provision of home nursing care • Determination of a disability and/or permanent incapacity for work • Referring a patient to a nursing hospital 	<ul style="list-style-type: none"> • Patient satisfaction (assessed by providers of health services) • Analysis of health cards and referrals

5.2. Fields for use of the criteria for quality assessment of health services

The following are proposals for various fields of use of the quality assessment criteria for healthcare services: use within the organisation only, benchmarking, assessment of the quality of contractual partners for the Health Insurance Fund, for the purposes of the supervision from the Health Care Board.

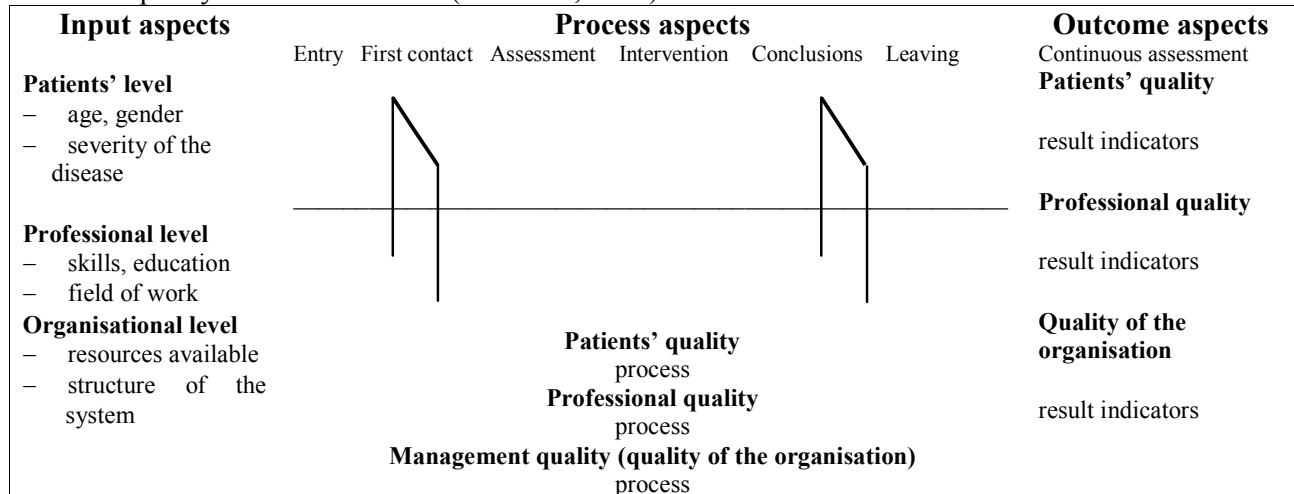
	Used only within the organisation	Benchmarking	Criteria assessed by the Health Insurance Fund/Health Care Board
Time and financial availability of health services	Could be analysed with the purpose of planning the activities of the organisation	Yes (the length of the waiting list of the healthcare provider, application of the patients' own contribution)	Yes
Patient satisfaction with the service provider	Yes	Yes, if there is a common methodology	Assessment of the level of implementation not specific indicators
Waiting period at the service provider (at reception, behind the doctor's door, admittance desk)	Yes	May be assessed	May be assessed
Availability of medicinal products	No	No	Yes
Compliance with the clinical guidelines	Yes	May be assessed	Yes
Quality of the treatment outcome (complications)	Yes	May be assessed	Assessment of the level of implementation not specific indicators

There are no quality criteria of health services used today which have been devised using a common methodology and accepted by all stakeholders. There is no consensus on the above table as well, one of the reasons for which is the lack of a reliable and explicit assessment methodology. In order to provide safe health services which meet the needs of patients, it is necessary to devise and implement suitable indicators for the assessment of diagnostics, treatment and nursing quality primarily within the organisation. In the longer perspective, it would also be possible to use the indicators calculated on the basis on a common methodology in benchmarking and for assessing the quality of health services at the national level.

6. Application of quality criteria for health services for the purposes of patient management on the example of type-two diabetes (DM2)

The assessment of the management of a patient with type-two diabetes is based on the quality of the structure, the process and the outcome at the level of the patient, the service provider (professional quality), and the organisation in the provision of both general and specialised medical care.

The quality dimensions model (Øvretveit, 1992)



6.1. Structure: prerequisites at the level of the patient, the service provider and the organisation before entry into the healthcare system

6.1.1. Patients' level

Patients' awareness

Patients' awareness depends on age, gender, education and health behaviour. People who are better informed and aware know their risk factors and consult a doctor rather early to prevent the disease from developing. As the severity of the disease and the occurrence of concomitant illnesses may differ, the amount of the service provided may vary.

For the purpose of informing patients and making them more aware, it is important to:

- 1) ensure the right and opportunity of each patient to choose a general practitioner and be registered in the practice list (nowadays it is ensured by legal acts but some restrictions may result from having no health insurance);
- 2) make society aware of diabetes as one of the important health problems in the 21st century, and the existence of respective national programmes (it depends on the planning of the national health policy and setting the priorities; there is not enough awareness of the problem yet).

6.1.2. Professional level

- 1) The education of physicians and nurses is conducted according to the accredited education programmes in Estonia.
- 2) Establishing the fields of work for general practitioners and family nurses.

Both of the fields of work have been determined in the general practitioners' work instruction established with the regulation of the Minister of Social Affairs. According to the general practitioners' work instruction, the fields of work for general practitioners include the following:

- promotion of health and prevention of diseases, including assessment of health risks, medical examination, individual health education, medical consultation, immunisation and screening;
- diagnosis and treatment of patients;
- referring to active treatment or nursing care in cooperation with specialists and nurses;
- team work – cooperation between general practitioners and family nurses.

- 3) Accessibility of general and specialised medical care – regulated by legal acts.

The results of the studies carried out by the Estonian Health Insurance Fund have indicated that the accessibility of general medical care is good and complies with the requirements set in the regulation. The accessibility of specialised medical care varies between different regions in Estonia. Endocrinologists work in bigger population centres and endocrinologists or internists work in the counties. The requirement of the Health Insurance Fund for the accessibility of specialised medical care is followed in general.

During the times outside the office hours of physicians, patients can turn to emergency departments at the hospitals or paramedics.

- 4) Continuity

Continuity in the monitoring of patients is ensured by the practice list principle. General practitioners have good opportunities for prevention as 50 to 60 percent of the people in their practice lists come to a consultation with them within a year.

6.1.3. Organisational level

1. The system of practice lists

In 2004, 757 general practitioners of the 783 who have concluded contracts with the Estonian Health Insurance Fund have a certificate of a general practitioner, i.e. 97%. 55 practice lists have not yet been opened, which does not mean that those patients have no access to family medical care, but that many practice lists exceed the allowed limits.

Each patient can choose a general practitioner and those who have not chosen a doctor are given one on a territorial principle but patients can always change their general practitioner as they wish.

2. Resources

Physicians with practice lists have concluded a contract with the Estonian Healthcare Fund, which guarantees all patients who have health insurance free consultations with doctors or nurses, and tests and analyses.

6.2. Process: patients entering the healthcare system and dealing with patients

6.2.1. Professional level

1. Registration for an appointment

Patients enter a healthcare institution when they register for an appointment and they are dealt with when they reach reception.

2. Communication

Communication with patients is an important part of dealing with patients and it starts at reception. In order to avoid any communication problems, the respective education has been introduced in the curricula of the basic education and residency of physicians.

3. Documenting the provision of health services

In most cases, electronic health cards are used which meet the requirements for documentation set in the regulation. The use of electronic health cards allows for analysing the number of patients with chronic diseases, including diabetes mellitus. In reality, there is no specific electronic protocol for monitoring diabetics.

4. Requirements for family practices

The minimum equipment required in family practices is set in the regulation of the Minister of Social Affairs. In order to conduct any tests or analyses necessary for diabetics, a family practice must have a sphygmomanometer, an ophthalmoscope, an ECG machine, a glucometer, urine test strips, a tuning fork for assessing vibration sensitivity, and accessories for taking blood analyses.

The accessibility of laboratory tests is generally good, many centres have their own labs and many regions use the services of a lab, the logistics of which includes all of Estonia.

5. Testing

According to the [Health Services Organisation Act](#), testing is financed by the Estonian Health Insurance Fund. Financing depends on the size of the practice list and the list of health services of the Estonian Health Insurance Fund. The following tests and procedures, which are important in the monitoring of diabetics, are included in the visit fee: checking vision and back of the eye, assessing ECG, blood sugar analysis, urine tests with strips, measuring creatinine and lipid profile. Tests for glycated hemoglobin and microalbuminuria are financed additionally.

6. Clinical practice guidelines for type-two diabetes

The practice guidelines for type-two diabetes were approved by the Estonian Society of General Practitioners and the Estonian Society of Endocrinologists, and these are based on the guidelines of International Diabetes Federation European region (IDF Europe). The guidelines include a description of diabetes risk groups, diagnostic criteria, principles for the

treatment and monitoring, and suggestions for referral to a specialist. There is a list of tests, analyses and procedures that need to be carried out at certain intervals. General practitioners make suggestions for treatment and renew prescriptions. Issue of prescriptions may take place after every six months at most, thus making it possible for general practitioners to see their diabetics at least twice a year.

Family nurses consult patients on diet and physical activities, take blood sugar analyses but these activities have not been specifically regulated and the professional level of family nurses is not similar from the aspect of diabetes monitoring in all family practices.

The clinical scheme for monitoring type-two diabetics during various appointments:

Review	Initial review /referral	Regular review	Annual review
Background history			
Social history/lifestyle	Yes	Yes	
Long-term/recent diabetes history	Yes	Yes	
Complications history/symptoms	Yes		Yes
Other diseases	Yes		
Diabetes and vascular diseases in the family	Yes		Yes
Drug history/current drugs	Yes	Yes	Yes
Current skills and well-being			
Diabetes self-management	Yes	Yes	Yes
Self- monitoring skills/results	Yes	Yes	Yes
Vascular risk factors			
HbA1c (glycated hemoglobin)	Yes	Yes	Yes
Lipid profile	Yes	If problem	Yes
Blood pressure	Yes	If problem	Yes
Smoking	Yes	If problem	Yes
* Urine albumin excretion	Yes	If problem	Yes
Examination/ complications			
General examination	Yes		
Weight/body mass index	Yes	Yes	Yes
Foot examination	Yes	If problem	Yes
Eye examination	Yes	If problem	Yes
Urine protein	Yes	Yes	Yes
Serum creatinine	Yes	If problem	Yes

* not required if proteinuria

7. Determination of incapacity for work or the severity of a disability

If indicated, the general practitioner fills in the documents required for awarding an incapacity for work and/or disability to a patient with a chronic disease, including diabetes, and sends these to the medical assessment committee. If the patient does not have health insurance, s/he will be deemed as insured if awarded an incapacity for work by the decision of the medical assessment committee.

6.2.2. Organisational level

1. Information exchange with the Health Insurance Fund

The Health Insurance Fund provides general information on analyses and examinations carried out, and issued and purchased prescriptions. General practitioners submit monthly invoices on patients' visits, examinations and analyses to the Health Insurance Fund. The Estonian Society of General Practitioners and the Health Insurance Fund are working on a quality bonus system, which assesses, in addition to other indicators, compliance of general practitioners' activities with the guidelines for the management of type-two diabetes.

2. The accessibility and prices of the medicines and self-checking equipment

Estonia has a system of reference prices. The main medicinal products used in the treatment of diabetes are preparations based on biguanides or sulphonylurea but the discount rates of these are not equivalent. Both groups of medicines are important and used by different groups of patients. It is not right to put one of them in a more favourable position as it might create a situation where a preparation is chosen on the basis of its price and that preparation might not suit the treatment. Insulin has a discount rate of 100%.

The Health Insurance Fund covers the expenditure incurred by patients on glucometers and test strips in the following cases and to the following extent:

- 300 test strips a year for children under 18 years of age and pregnant women
- 250 test strips a year for type-two diabetics who receive 3 insulin injections a day and for type-one diabetics

Patients' own contribution for one prescription is 20 EEK, and the price for a glucometer and the strips must be paid in full if the patient receives less than three insulin injections a day.

6.3. Possible further movement of patients in the healthcare system

1) Suggesting a follow-up visit

Follow-up and continuous help are regulated by the clinical practice guidelines for diabetes. Patients have a right to visit a family nurse for checking blood sugar, consultation and drug checks.

2) Referral to a specialist

General practitioners have the role of a "gatekeeper," i.e. patients need a general practitioner's referral for visiting an endocrinologist. The regulation establishes common requirements for the referral. The accessibility of endocrinologists varies between different regions in Estonia.

Diabetes is a multidisciplinary disease and diabetics may need to consult an endocrinologist or internist, a nephrologist, cardiologist, vascular surgeon, neurologist, ophthalmologist or stomatologist. There is no referral required for a stomatologist's or an ophthalmologist's appointment.

Patients must pay a visit fee when visiting specialists and for the whole appointment with and treatment from a stomatologist. It is possible to visit other specialists without a referral as well but then the visit fee is higher and all the medical investigations made must be paid by the patient.

3) Feedback

In the case of referrals, feedback from the specialists is sent to general practitioners, except in cases when patients can visit a specialist without a referral (stomatologist, ophthalmologist).

4) Purchase of medicines

The network of pharmacies is good and well-accessible but the prices for medicines vary a lot as these have not been regulated by the state.

5) Hospital

General practitioners refer patients to hospital in special cases only or patients are taken to hospital by ambulance. Type-two diabetes requires planned hospital treatment very rarely. Indications for hospital treatment have not been determined in the clinical practice guidelines. If patients need planned hospital treatment they will need a referral and approval from the department head.

6) Accessibility of diabetes nurse and foot treatment

The Health Insurance Fund pays for the foot treatment of diabetics. Thus, the financial accessibility of foot treatment is ensured but the number of places patients can receive foot treatment poses a problem – such facilities exist only in Tallinn, Tartu and Viljandi.

7) Home nursing

The accessibility of home nursing varies from region to region in Estonia. If necessary, general practitioners can refer patients to home nursing if such a service provider operates in the area. The service is paid for by the Health Insurance Fund – general practitioners do not pay for that.

8) Social sphere and helping devices

If required, a general practitioner contacts a social worker or informs him/her of a person who needs assistance and submits a notice for the application for helping devices, if a patient has a disability due to the disease.

9) Rehabilitation

Today, Estonia has no diabetes centres where people receive combined services. General practitioners have been given no resources for the rehabilitation of patients with chronic diseases, including diabetes patients.

10) Accessibility of medical care outside office hours of general practitioners

Patients can ask for help from emergency medical departments of hospitals or ambulance if they need it outside office hours of general practitioners.

6.4. Outcome

6.4.1. Outcome at patients' level

The most important outcome for a patient is improvements in their quality of life. In addition to quality of life, the following indicators may be used for assessing the outcome of the

treatment of diabetics: patient satisfaction with the service, lack of complications, ability to work, self-monitoring of blood sugar and compliance with treatment regime.

6.4.2. Outcome at professional level

At the professional level, several indicators reflecting the outcome and process of management may be chosen. After analysing the outcome, the data should be compared to official published data or valid standards or other providers of diabetes management. If required, further education sessions should be conducted in order to eliminate any shortcomings and specific plans should be made to improve the outcome.

- Screening of risk groups
- Improvement in diagnostics
- Possible quality indicators

Examples of quality improvement and monitoring indicators:

Measure	Calculate
Intermediate outcome	
HbA1c	Percentage of patients whose HbA1c is >7.5 and >6.5%
Excretion rate of albumin	Percentage of patients with abnormal rate of excretion
Retinopathy	Percentage of patients with retinopathy
Final outcome	
Amputations above the knee	No. of cases
Infarctions	No. of cases
Strokes	No. of cases
Ulcers on the feet	No. of cases
Checks on risk factors	
Hypertension	Percentage of patients whose blood pressure is >140/85 mmHg
Smoking	Percentage of patients who smoke
Care	
Eye examination	Percentage of patients examined within a year
Education	Percentage of patients who have received education within a year
Foot examination	Percentage of patients examined within a year

6.4.3. Outcome at organisational level

The following indicators are the most important outcome at the organisational level:

1. reduction in the prices/costs of services, especially for the treatment of vascular complications, and
2. reduction in costs incurred per patient

6.5. Opportunities for change in improving the quality of diabetes management

- 1) For the purposes of ensuring the monitoring and treatment quality for diabetics, family practices should have at least two nurses but the statistics indicate that there are just 0.8 nurses per general practitioner. Thus, the team helping general practitioners is small.
- 2) We have no information on the number and age structure of diabetes patients. We need a national diabetes programme, which would include prevention and respective calculations on the possible success of prevention methods.
- 3) The risk groups for DM2 are listed in the current practice guidelines and it would be necessary to register and analyse the outcome systematically. It would be possible to prevent the disease from developing if the risk groups were provided with thorough consultation and purposeful assessment but that would require large time and labour resources. Most of that could be done by a diabetes nurses but laying such a huge responsibility on the shoulders of a family nurse is impossible with the current work arrangements. Accessibility of services by a qualified diabetes nurse is a problem.
- 4) Specialised endocrinology centres exist in larger cities – Tallinn and Tartu. The development plan for the specialty of a diabetes nurse was approved by Regulation No. 99 of the Minister of Social Affairs from the 16th of July 2002 and according to that document, Estonia needs 15 diabetes nurses who have received special education.
- 5) Early diagnostics and treatment may increase the expenditure at first but the profit will be visible within 10 to 15 years.
- 6) It would be necessary to devise a structural electronic reminding and monitoring system for monitoring diabetes.
- 7) Calculations reveal that in reality, it is not possible to follow the practice guidelines for type-two diabetes due to the financing model currently in use.

Indications for referral to specialists are listed in the practice guidelines for DM2. Accessibility of specialists needs more specific assessment. General practitioners are of the opinion that patients need education on diabetes (diet, injections, foot care, physical activity) but that is not accessible. The population needs to be made more aware of the risk factors for diabetes, the nature of the disease and of the methods for prevention of the risk and disease.

7. Summary

7.1. Progress made so far in the quality assurance of health services

The chapters above described the situation in the field of the quality assurance of health services in Estonia. Since 1992, many legal acts have been prepared, including the requirements for the quality assurance of health services. The legal acts focus mostly on the quality requirements for the structure, and to some extent for the process. In 1996-1998, the Estonian Healthcare Quality Policy paper was drawn up and it has helped many healthcare providers implement quality assurance principles. Many healthcare providers have started systematic activities in the field of quality assurance by applying the principles of overall quality assurance in the management of the organisation. The prevailing part of healthcare providers has conducted patient satisfaction studies and more and more of them also survey employee satisfaction. Progress has been made in the development of professional quality – professional associations and the Estonian Health Insurance Fund have cooperated in the compilation and implementation of many diagnostic and clinical guidelines.

7.2. Problems related to quality assurance of health services

Still, there are many problems in need of a solution. The following problems were pointed out in the Estonian Healthcare Quality document in 1998: quality-related coordination at the national level, counselling and supervision of healthcare providers and promotion of international cooperation in the field of the quality assurance of health services. These problems are also current issues at the beginning of 2005.

The expert from the World Health Organisation is of the opinion that the Estonian Healthcare Quality Policy of 1998 needs to be improved as it lacks an overall conceptual framework. The document does not establish any objectives for quality assurance; there is no future vision or action plan. It pays little attention to patients' rights and their involvement in the development of healthcare quality, to the development of clinical quality and to quality education of the service providers. In the expert's opinion, the quality-related activities in the healthcare system of Estonia are unbalanced – regulatory and control mechanisms prevail but the development of the fields not regulated by legal acts is uneven and insufficiently coordinated.

The specialists who took part in the seminar on the creation of a quality strategy drew attention to the fact that many fields that are related to the development of the whole healthcare system are also related to the quality assurance of health services. Coordination of the development plans of the specialties and involvement of experts on certain specialties in making the decisions on the development of the healthcare system are examples of such fields. It is important for the Ministry of Social Affairs to enhance the cooperation between the specialists in the development of the quality assurance of health services and in devising suitable indicators for quality assessment.

There is also no solution to the question of what kind of provider-targeted motivational mechanisms, including financial ones, should be used in the quality assurance of health services. For that purpose it is advisable to implement a system of different prices for health services. Such a system would allow higher prices for service providers who can prove the better quality of their services. Implementation of such a motivational system has already

begun in paying for the work of general practitioners – general practitioners who use certain preventive methods in their work and provide more comprehensive care get additional remuneration for that.

Implementation of digital records is also one of the problems in the quality assurance of health services. It is not clear how much information is sufficient, nor is it clear to what extent patients can have a say in the amount of information they allow to be entered into the databases of the healthcare system. The latter problem is related to the Personal Data Protection Act.

Many problems arise in relation to monitoring patients with chronic diseases and ensuring their continuous treatment. The main problem is the inadequate number of nurses, especially those of the clinical specialties and family care. The shortage of nurses does not allow for compliance with all the recommendations incorporated in practice guidelines. Shortcomings in the information system of healthcare reflect in the management of chronic patients, e.g. there is no reliable data on the number of diabetics or their treatment, nor is there any data on the treatment outcome or efficiency of prevention. Problems in the management of diabetics pointed out in this document may also occur in the management of other chronic diseases.

Patients play an important role in the achievement of required quality of health services. So far, only the role of healthcare providers, financiers and administrators has been focused on but not enough attention has been paid to the patients' own role in shaping their quality of life. Much can be done in that respect both at the national level by implementation of health promotion programmes and projects and at the level of service providers by teaching patients to cope with their diseases.

7.3. Suggestions for planning the strategy for quality assurance of health services

The following recommendations are based on the outcome of the seminar on quality strategy development and the report “*Quality of Health System Policy and Strategy Development in Estonia. Trip report, 15-18 December, 2004. Tallinn, Estonia*” by the expert from the World Health Organisation, Bruno Bouchet.

The quality strategy for health services (*hereinafter: quality strategy*) is much a part of the whole healthcare policy and healthcare strategy and the quality strategy should be the main instrument in the development of the healthcare policy and strategy. Primary focus in the development of the quality strategy must be on the following areas:

- 1) devising a common development plan for the whole healthcare system, the objective of the plan being the accessibility of patient-oriented health services that should be ensured by the balanced development of general and specialised medical care and nursing care;
- 2) based on the development plan of the healthcare system, wording the quality strategy for the healthcare system and identifying the priorities from the various fields;
- 3) education of qualified nursing staff (family nurses and clinical nursing specialists) through the implementation of the development plans for the nursing specialties and the principles of the professional education of nurses in order to ensure accessibility of nursing care for patients with chronic diseases;
- 4) coordination of quality-related activities, including education and applied research on quality;

- 5) development of a common system of indicators for the quality assessment of health services, which would be generally accepted and integrated into the common information system of healthcare;
- 6) finding the resources necessary for the quality assurance of health services, education of healthcare professionals, and development of a motivational mechanism for healthcare providers;
- 7) enhancement of patients' role and responsibility in the quality assurance of health services.

Based on the quality policy of Estonian healthcare from 1998, a quality strategy for health services must be developed during the year 2005 and the strategy must establish

- 1) the fields of priority in the quality assurance of health services and the further action plan until the year 2010, and
- 2) responsibilities in the coordination of the development of the quality of health services.

The definition of the quality of health services – the body of health service features characterising the compliance of the service with set requirements, modern knowledge, existing resources, professional qualification requirements, and the requirements for the patients' satisfaction and healthiness – given in regulation No. 128 [The quality assurance requirements for health services](#) of the Minister of Social Affairs from the 15th of December 2004 is the basis for planning the framework of the quality strategy. **The quality strategy for health services is guided by being patient-oriented and the general objective of the quality strategy is the provision of safe health services that meet the patients' needs.** The following conditions need to be met in order to achieve the objective:

- 1) health service providers have to be adequately competent and motivated,
- 2) persons receiving health services need to take part in the process as much as possible,
- 3) financiers of health services have to help develop the motivational mechanism through allocation of required resources,
- 4) activities related to quality assurance are planned and coordinated and based on the use of reliable information and assessment of outcome.

The main trends of the quality strategy determine the activities at national level and at the level of service providers and patients:

1. National level:
 - coordination of quality-related activities,
 - development of a common system of quality indicators, and
 - development of a motivational mechanism for healthcare providers.
2. Service providers' level:
 - motivation and education of healthcare professionals,
 - implementation of the management of risk resulting from the provision of health services, and
 - involving patients in the process of the provision of health services (ensuring patients' rights, teaching them, health promotion)
3. Patients' level
 - Promotion of cooperation between patients' organisations, healthcare providers, the Estonian Health Insurance Fund, and the Ministry of Social Affairs.

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9. List of legal acts used in the document

Acts

- Artificial Insemination and Embryo Protection Act
- Communicable Diseases Prevention and Control Act
- Estonian Health Insurance Fund Act
- Health Insurance Act
- Health Services Organisation Act
- Higher Education Standard
- Institutions of Professional Higher Education Act
- Law of Obligations Act
- Medical Devices Act
- Medicinal Product Act
- Mental Health Act
- Personal Data Protection Act
- Professions Act
- Termination of Pregnancy and Sterilisation Act
- Transplantation of Organs and Tissues Act
- Universities Act
- University of Tartu Act

Regulations of the Government of the Republic

- Framework Requirements for medical, Veterinary, Pharmacist, Dentistry, Midwives' and Information Accompanying Medical Devices
- List of Health Services of the Estonian Health Insurance Fund
- Nurses' Education, Architect and Civil engineering Studies
- Procedure for Conformity Assessment of Medical Devices
- Procedure for Cooperation in Emergency Medical Care between the Emergency Medical Requirements for Designing, Production and Packaging of Medical Devices, and for
- Rules for the Classification of Medical Devices
- Staff, Hospitals, Rescue Service Agencies and Police Authorities
- Statute of the Estonian Health Insurance Fund
- Statute of the Ministry of Social Affairs

Regulations of the Minister of Social Affairs

- Accessibility Requirements for Health Services
- Conditions for Informing about any Relevant Changes Made to Medical Devices
- Development Plans for Medical Specialties
- Development Plans for Nursing Specialties
- General Practitioners' Work Instruction
- Independent Provision of Nursing Care Services
- List and Format of Documents Certifying the Provision of Health Services and the Requirements for the Documentation of Health Services
- List of Nursing Care Services Provided Independently
- List of Nursing Specialties

- List of Specialties for Specialised Care
- Procedure for Allowing Medical Devices to Enter the Market and the Procedure and Procedure and Forms for Informing about Dangerous Situations
- Procedure for Approval of the Functional Development Plan of a Hospital and the Medical Technology Part of Building Design
- Procedure for the Provision of Expert Analysis of the Quality of Healthcare Services
- Quality assurance requirements for health services
- Reforms in the Blood Service
- Requirements for Hospital Types
- Requirements for the Premises, Fixtures and Fittings, and Apparatuses Necessary for the Independent Provision of Nursing Care Services
- Requirements for the Premises, Fixtures and Fittings, and Apparatuses Necessary for the Provision of Specialised Medical Services outside Hospitals
- Requirements for the Premises, Fixtures and Fittings, and Apparatuses Used by General practitioners
- Requirements for Rehabilitation Institutions
- Requirements for the Staff and Equipment of Ambulance Crews and Their Work Instructions
- Standard Conditions for Hospital Accommodation
- Statue of the Health Care Board