

National Health Information System in Estonia

Country: Estonia

Partner Institute: PRAXIS Center for Policy Studies, Tallinn

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Health Policy Issues: New Technology, System Organisation/ Integration

Current Process Stages



Featured in half-yearly report: Health Policy Developments 11

1. Abstract

The Estonian Health Information System (EHIS) has developed remarkably since 2005. New broad-base legal entity has been founded to manage the project and the whole system, initial legal basis has been approved by parliament. Technical piloting of the first four projects is in last phase and public launch is scheduled for Sept. 2008. Support among important stakeholders is not universal. Challenges remain regarding sustainable financing, overall implementation capacity and some legal uncertainty.

2. Recent developments

As planned, the Estonian eHealth Foundation (EHF) was established at the end of 2008. This organization of activities by the ministry separated the legislative (Ministry of Social Affairs) and technical/managerial development (EHF) of the Estonian Health Information System (EHIS), while also directly engaging important stakeholders into the development process as board members of the Foundation.

An amendment to the Health Services Organization Act with a new chapter on the Health Information System was approved by the Estonian parliament in December 2007. The amended act has legally defined the need for a health information system, but by-laws defining the actual content and operating principles have not been drafted for public discussion yet. The 2002 regulation of the Minister of Social Affairs defining any such content will expire on August 31, 2008. The integration of the above-mentioned chapter into the Health Services Organization Act is a clear deviation from the initial plan to adopt a separate act on e-health by the legislators.

The main challenge of EHIS remains the future financing of the initiative and the whole operation of EHIS. Currently it is foreseen that all service providers will pay a mandatory fee to the system operator, which is reimbursed to them by the Estonian Health Insurance Fund (EHIF) within the regular price of health services. The service providers oppose this solution and wish to see the state directly covering all costs incurring from the use or implementation of the EHIS.

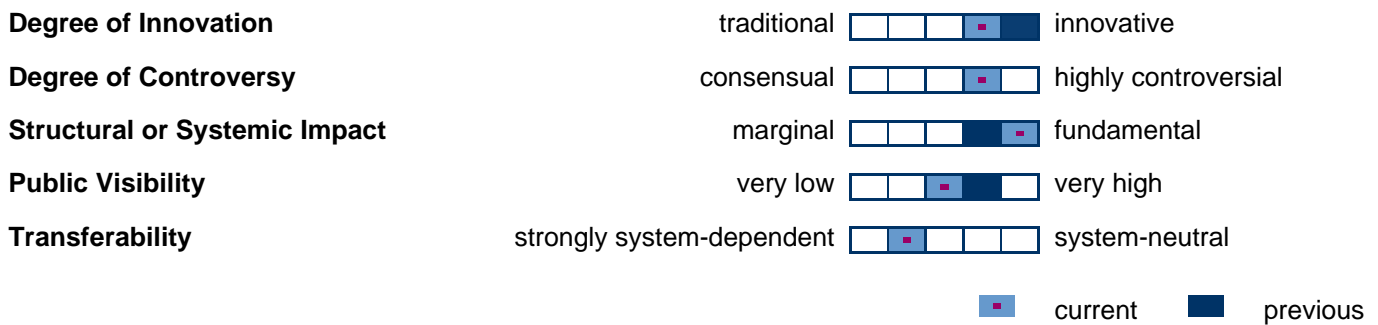
Except for the legal foundation of the EHIS (see below), the policy course has followed the planned track. Currently the plan still is to implement the first four major e-health projects:

1. **Electronic Health Record** - the backbone for all other projects where all other elements of the health information system come together;

- 2. **Digital Image database** - all digital snapshots or video material of the patient will be stored and available online through single portal;
- 3. **Digital Registration** - an online tool that can be used both by the patients and the providers. A central database will store the referral notes and manage the appointment booking, changing and reminders. It is also planned to be used for the central supervision of the waiting lists;
- 4. **Digital prescription** - a single national database for exchanging and storing prescription information between doctors, pharmacies, the individual and the EHIF.

These four projects shall be technically and legally ready for implementation by September 1, 2008. According to the amended Health Services Organization Act, the full implementation is planned for January 2013. The Minister of Social Affairs has to propose a respective implementation plan for the whole EHIS.

3. Characteristics of this policy



The whole national health information system project together with the side-projects was rather innovative in 2001 when the initial ideas were first discussed. It was intended to bring about a leap forward in quality and expense control as more things get documented in standardized and provable way in writing and type-writing. The hope was that EHIS saves time and thus resources for everybody.

However, the scale of the plan, administrative delays and challenges to get it financed, have diminished both overall potential and success probabilities of the undertaking. So far a general positive attitude towards e-solutions and an economically very favorable period in Estonia have kept the hopes high and the general course unchanged. Yet, the lack of hard evidence on actual achievements and signs of poor consensus on critical matters (public and parliamentary debate, agreement on sustainable financing, measurable outcome indicators etc) raises increasing doubts about the final result of the project.

While Estonia used to have a relatively strong position in eHealth development as compared to other countries, it has probably lost some of its lead in the last years.

4. Purpose and process analysis



Initiators of idea/main actors

- **Government:** Establishing the Estonian eHealth Foundation
- **Providers:** Health care service providers are cautious but supportive as on one hand the new tools provide solid evidence of their staffs' work and on the other hand the necessary control and checks system. There are clear advocates of the project, cautious skeptics and opponents. On the one hand they are cautious as there is a perceived threat that some third party might be able to access the personal delicate information. On the other hand, a well documented and transparent system can help in providing better, more complex treatment. The majority of people trust e-solutions in Estonia and therefore support the e-health project as well.
- **Patients, Consumers:** On one hand they are cautious as there is a perceived threat that some third party might be able to access the personal delicate information. On the other hand, a well documented and transparent system can help providing a better, more complex treatment.
- **Media:** Has analyzed the pros and cons of the perspective system

Stakeholder positions

The fact that Estonia will have electronic health information system (EHIS) has been recognized by all parties involved and mentioned above: policy makers, service providers, administrative organizations and beneficiaries. The interests and drivers for action are different, though.

The government wants a transparent and controllable secure system to have control over the health care spending and service quality. EHIS in politicians' view would help hold the health sector accountable.

Service providers would like to see just some benefits of the system to be implemented (like the cross-usage and availability of the digital images) but do not want to give any particular institution the option of checking their work online. Neither do they want patients to have too much free choice or information - which seems to be why there is a clause in the new legislation, that the attending doctor can restrict patients' access to the information for up to 6 months in case the information is deemed as a "threat to patients' life and well-being".

The media is usually very supportive as EHIS is generally believed to improve transparency, raise convenience for the beneficiaries and save time for all. Nevertheless, the media holds a safe distance from the issues and is not taking any sides. They recognize that a comprehensive system involves a high risk if implemented carelessly.

Beneficiaries/patients would like to have more choices and might be supportive or opposing, depending on the age or experience or personal attitudes - there is no one good representative organization speaking out loud for the patients' interests, which leaves the rights and interests of the end beneficiaries of the whole system almost unheard during the development.

Most recently, the **Estonian Ministry of Social Affairs (MoSA)** has started training health care workers to be able to use the newly developed and implemented systems. From April to August 2008 at least 9000 potential users (health care workers, pharmacists, etc) have to pass that training countrywide. The training is financed by the European Social Fund with about 640 000 Euro, which is part of the reason for the rush - the eligible financing period is about to end and any trainings carried out / expenses occurred after August 2008 are ineligible for funding. The ministry is still optimistic about the implementation process.

The main funding agency of Estonian Health Care - the **Estonian Health Insurance Fund**, also a board member of the EHIS - is supportive of the implementation of the health information system due to expectations of increased transparency and control options over health care providers and thus expenditure and payments.

The **Estonian Hospitals Association** (a member of the EHF board) is also supportive of the new ICT solutions in health care. Their criticism is directed towards the rapid implementation of the system and the short training period lasting only for a couple of months and expectedly involving 100% of medical staff in Estonia.

The **Estonian Medical Association** (EMA), which is the trade union of Estonian doctors, is not involved as a board member of the Estonian eHealth Foundation. On their website and in numerous articles, EMA has expressed the skepticism of their members towards the Digital Health Record project, which is the backbone of the whole EHIS. The

criticism is based on the assumption that the Digital Health Record will be an exhaustive central database which will have to be updated by the doctors. They also stipulate that the positive effect of saving time and resources therefore has not been proven scientifically. They predict a decrease in health services quality due to the implementation of DHR and a conflict of interest with patients' rights. Doctors also fear that as all information will be available online and viewable also for patients, the number of lawsuits against medical institutions will increase dramatically. Also they suggest that exactly due to that reason the diagnosis or results of the surveys will be written into the system in more general terms and wording than currently on paper - due to the fear of being wrong and getting sued by patients, which will again decrease the quality of health care in Estonia. The support is lower among doctors and higher among pharmacists (Faktum & Ariko 2007).

The consumers/individual patients/beneficiaries have high confidence in the DHR. According to a nation-wide survey (Turu-uuringute AS, 2006), 75% of respondents deemed the DHR necessary for increasing inter-institutional and inter-doctoral communication, decreasing time-consumption and lessening treatment errors.

Actors and positions

Description of actors and their positions

Government

Ministry of Social Affairs very supportive  strongly opposed

Providers

Insurer (Estonian Health Insurance Fund) very supportive  strongly opposed

Health care institutions, service providers very supportive  strongly opposed

Family doctors very supportive  strongly opposed

Patients, Consumers

Individual patients very supportive  strongly opposed

Media

Broadsheets very supportive  strongly opposed

 current  previous

Influences in policy making and legislation

The amendment to the Health Care Organisation Act with a new chapter on the Health Information System is a significant deviation from the initial plan to pass an extra act on e-health. The amended act was approved by the Government in October 2007. Parliament approved the amendments in December 2007 - brief 2 months after it was introduced for legislative discussion.

- The act defines that a national registry called Health Information System will be established by the regulation of the Government (i.e. legal foundation has not been laid down, yet, but only a mandate to the executive branch to establish the system). This is a clear deviation from initial plan to adopt a separate act on e-health.
- The act stipulates the obligation to join the system (i.e. mandatory transfer of relevant data electronically) for any health care provider in Estonia.
- The act does not define the content of transferable data, which will be defined by regulation of the Minister of Social Affairs, and the draft of which has not been introduced even though it should be enforced by September 1, 2008.
- The act defines the patient's right to close access to the data (i.e. default condition is that information is accessible to a doctor that the patient has a treatment relationship with in the first place)

However - none of the necessary additional regulations have been approved by the Minister of Social Affairs or the Government.

Legislative outcome

Enactment

Actors and influence

Description of actors and their influence

Government

Ministry of Social Affairs



Providers

Insurer (Estonian Health Insurance Fund)



Health care institutions, service providers



Family doctors



Patients, Consumers

Individual patients



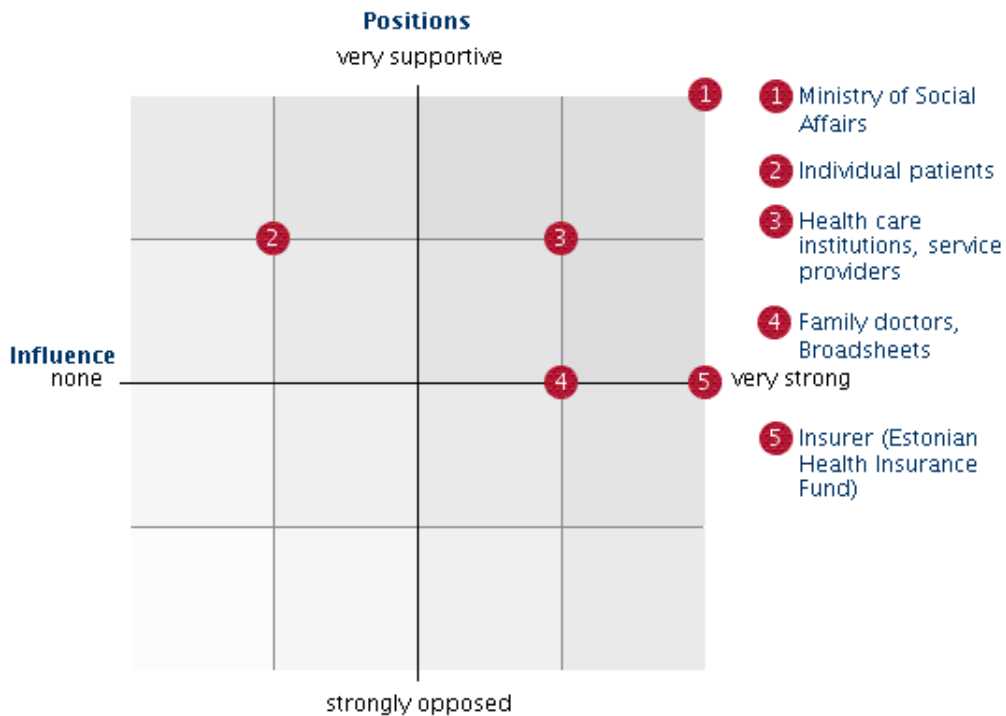
Media

Broadsheets



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Positions and Influences at a glance



Adoption and implementation

Delays and problems with national financing of the project caused tensions among the operative management of the two institutions. In March 2007 the CEO of EHF left and the head of the Health Information and Analysis Department in the MoSA was degraded to lead the Department of E-Health. In April 2007 a new government and minister came into power and in August 2008 a new Secretary General of the MoSA was nominated. In February 2008 the Department of E-Health (separated from the Health Information Department) was newly established in the MoSA, and it continues under the same leadership as in March 2007.

Pilot exchange of data in the Digital Health Record project started in November 2007. The pilot trial involved project partner institutions only. Both the functionality, technical details and security of the system has been analyzed in parallel.

On April 1, 2008 the E-Health Foundation has introduced the state-of-art of the project:

- **Pilot trials in six participating institutions and compatibility issues September 2007 - March 2008**
- **Publication of national standards February 29, 2008**
- **Central system ready to launch in March 2008**
- **National implementation of the EHIS starts in September 2008**
- - **Digital Health Record**
- **Digital Imaging**
- **Digital Referral**
- **Digital Perscription**

Recently news by EHF have confirmed the finalization of technical testing of the systems, but no official data has been released if and what are the main challenges to be tested among the pilot hospitals.

Another obstacle - the delay in training health care providers (individuals) - has decreased the speed of implementation. The training was contracted out to private companies through public tender, but a court case between the contenders of public procurement suspended the procurement and thus also trainings until the court decided upon the winner of the procurement. Trainings started in April 2008 and have to be convened by August 2008. The training will cover basic computer and office software skills as well as an overview of how to fill in Digital Health Record documents.

Monitoring and evaluation

In April 2008 a separate large-scale project for the monitoring and evaluation of E-Health impact was approved by the State Chancellors Office. Until now no formal evaluation has been conducted.

5. Expected outcome

The system is being currently implemented in the six lead institutions. The legislative (ministry, parliament) and regulative (ministry, eHealth Foundation) framework development is in process, parallel to the end-user training. It is therefore to be seen if the launch of the Estonian Health Information System will be on time as scheduled or not.

According to a former general manager of the Estonian eHealth Foundation and based on U.S. surveys, the DHR shall save Estonia ca 12 lives per annum.

Quality of Health Care Services

marginal  fundamental

current previous

The fundamental impact lies in the compulsory element of the policy - no service provider can avoid it. All people can see their health record type-written online and can analyse it on their own if they wish to. Registration is online and availability is clearer. The system is time-efficient. Cost efficiency and level of equity are yet to be surveyed.

6. References

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Reform formerly reported in

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