Family Medicine & Primary Care Review 2016; 18, 1: 74–77 doi: 10.5114/fmpcr/58608

REVIEWS • PRACE POGLĄDOWE

© Copyright by Wydawnictwo Continuo

ISSN 1734-3402, eISSN 2449-8580

Primary health care in Estonia

Podstawowa opieka zdrowotna w Estonii

KAJA PÕLLUSTE[E, F], MARGUS LEMBER[E, F]

Department of Internal Medicine University of Tartu, Estonia

A – Study Design, **B** – Data Collection, **C** – Statistical Analysis, **D** – Data Interpretation, **E** – Manuscript Preparation, **F** – Literature Search, **G** – Funds Collection

Summary This article represents an overview about the development and current status of primary health care (PHC) system in Estonia. Since the beginning of 1990s the Estonian health system has undergone comprehensive health reforms, but the introduction of a new health care system based on family medicine was recognised as a priority of health care policymakers. The reorganisation of existing PHC in Estonia started with re-training of practicing PHC doctors and introduction of the residency training family medicine. The legal basis for the organisation of PHC was established in 1997 to create a list system and to introduce of partial gate-keeping system as well as new financing principles. Today, most of family doctors are self-employed contractors with the national health insurance fund. The payment for family doctors includes age-weighted capitation fee per registered insured person, funding for lab tests and investigation, basic practice allowance and some additional components, e.g. payment for performance. The evaluations of the Estonian PHC system have demonstrated rather high patient satisfaction and acceptability of the system, first of all in patients living outside the capital, in older patients and in patients with multimorbidity. However, due to increasing number of the people with chronic diseases the continuous strengthening of the PHC and introduction of chronic disease management models based would be in the focus of future developments in Estonian PHC.
Key words: primary health care, patient satisfaction, family medicine, health care reform, primary health care financing, Estonia.

Streszczenie Praca opisuje rozwój i stan obecny systemu podstawowej opieki zdrowotnej (POZ) w Estonii. Na początku lat 90. XX w. estoński system opieki zdrowotnej przeszedł kompleksowe reformy, a wprowadzenie nowego systemu opieki zdrowotnej opartej na medycynie rodzinnej zostało uznane za priorytet przez polityków zajmujących się opieką zdrowotną. Reorganizacja istniejących POZ w Estonii rozpoczęła się od ponownego szkolenia praktykujących lekarzy POZ i wprowadzenia szkoleń dla rezydentów medycyny rodzinnej. Podstawa prawna organizacji POZ powstała w 1997 r. w celu stworzenia systemu list oraz wprowadzenia częściowego systemu "gatekeepingu" oraz nowych zasad finansowania. Obecnie większość lekarzy rodzinnych jest samozatrudnionymi pracującymi na własny rachunek w ramach kontraktu z krajowym funduszem ubezpieczeń zdrowotnych. Pensja lekarzy rodzinnych obejmuje zależną od wieku stawkę kapitacyjną za każdego zarejestrowanego ubezpieczonego, finansowanie badań laboratoryjnych i badań podstawowych, dodatek za prowadzenie praktyki i inne składniki, m.in. wycenę wydajności. Ocena estońskiego systemu opieki zdrowotnej wykazała dość wysoki poziom zadowolenia i akceptacji systemu przez pacjenta, przede wszystkim u pacjentów mieszkających poza stolicą, u osób w wieku podeszłym oraz u pacjentów z wielochorobowością. Ze względu na rosnącą liczbę osób z chorobami przewlekłymi ciągłe wzmocnienie systemu POZ i wprowadzenie modeli zarządzania leczeniem chorób przewlekłych będzie w centrum uwagi przyszłych zmian estońskiego POZ.
Słowa kluczowe: podstawowa opieka zdrowotna, satysfakcja pacjenta, medycyna rodzinna, reforma systemu opieki zdrowotnej, finansowanie podstawowej opieki zdrowotnej, Estonia.

Fam Med Prim Care Rev 2016; 18(1): 74–77

Demographic background

Estonia is the smallest of the Baltic countries, covering an area of 45 227 km^2. In January 2015, the population of Estonia was 1 313 271 with 47% men and 53% women. 69% of the population are Estonians and 31% is made up of Russians and other ethnic groups. The average population density is 29 inhabitants per km^2. The urban population accounts for 68% of the total population. In recent years, ageing of the population has been observed. The proportion of children (aged 0–14 years) has decreased (from 22% in 1990 to 16% in 2015) and the proportion of people aged 65+ has increased (from 12% in 1990 to 19% in 2015). In 2013, the life expectancy at birth was 72.7 years for males and 81.3 for females [1].

Historical perspective of health care organization and health care reforms

In the independent Estonian Republic during 1918–1940, the health care system was based on a principle of decentralisation. The organisation and management of the health services, including public health and pharmaceutical services, was the responsibility of the Directorate of Health and Social Welfare which belonged to the Ministry of Education and Social Affairs. The direct responsibility for the health care of population was delegated to the local municipalities. Municipality and district doctors were in charge of prevention of disease as well as of treating socially disadvantaged people. However, outpatient medical services were mostly provided

This is an Open Access article distributed under the terms of the Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International (CC BY-NC-SA 4.0). License (http://creativecommons.org/licenses/by-nc-sa/4.0/).

by private practitioners. There were three types of hospitals, which provided inpatient care: state-owned, municipal and private hospitals. Clinics for mothers and children, sanatoria and mental institutions were state-owned as well. To finance the health care, sickness funds were established in 1920. The sickness funds covered civil servants and employees and were organised on a regional basis [2, 3].

After the Second World War the Semashko system of health care replaced the previous system. The organisation of health care was a responsibility of the state, the physicians were employed by the state, and the health services were funded from the state budget. Primary health care (PHC) was fragmented and the services were provided by district doctors and paediatricians in separate polyclinics for adults, children and women, as well as by specialists in specialized dispensaries. The institutions providing PHC included village clinics (ambulatories) in rural areas and policlinics for adults, children and adolescents, women's clinics, psychiatric and dermato-venerological dispensaries in towns. The health care delivery system focused mainly on curative care and development of excessive hospital network. Thus, the service profile of the PHC doctors were limited, as specialised doctors were directly accessible within PHC (e.g. district doctors for adults and district paediatricians) and, consequently, certain problems almost never reached the PHC doctor [4, 5].

Introduction of new health care system

The planning of reforms in the health sector started already before the restoration of independence in the country. Since the beginning of the 1990s, the Estonian health system has undergone three major reforms. The first and most comprehensive reform was the change of financing principles for the health services by introducing a social health insurance, which was accompanied by establishing a new system of sickness funds and defining a basic package of services covered by the health insurance. The health insurance reform facilitated a decentralisation of the health system and the following PHC reform. The introduction of a new concept of public health and the implementation of a PHC reform in the middle of the 1990s, as well as a restructuring the hospital system in the early 2000s, continued the transformation of the Estonian health system. With the Health Care Organisation Act of 1994, the principles of decentralisation were established and the responsibilities of the national government, the regions and the municipalities in the planning and organising of health services were defined. The ministerial regulations of 1997 established the legal status of family doctors (FD), the financing principles and the package of services provided by the FDs. The goals of the following hospital reform were defined in the Estonian Hospital Master Plan of 2000, and the main regulatory tool for the implementation of the reform was a governmental decree in 2003 [6].

Implementation of PHC reform

Although the health reforms in Estonia have been comprehensive, the introduction of a new health care system based on family medicine (FM) was recognised as a priority of health care policymakers and has received strong support from the government [5, 7]. It was expected to build up the system, which could provide continuing and comprehensive health care for individuals of all ages and both sexes. The reform work started in 1998, after regulations on the organisation of PHC had been issued and endorsed by the Minister of Social Affairs. The basic tasks of the reform were formulated as follows [5]:

- To create a list system so that the population could register with a primary care doctor;
- To introduce a partial gate-keeping system;
- To introduce a combined payment system for the FDs;
- To give the FDs the status of independent contractors.

Thus, the implementation of a new PHC system in Estonia included the following components [7]:

- training of staff by establishing a postgraduate training program for FM as well as retraining of doctors;
- changing the financing and remuneration system of FDs to motivate PHC doctors as well as implementation of the gate-keeping function of FDs and creating the patient lists;
- separating PHC and secondary care services;
- increasing the responsibilities of the PHC system; and
- changing the whole funding system of health care.

Training of family doctors

The first step in the reorganisation of existing PHC in Estonia was the re-training of practicing PHC doctors, which started in 1991 and took place until 2004; the residency training in FM started in 1993 when the FM was recognized as a medical specialty. The training of FDs in Estonia was organized in two ways: three-year in-service individually tailored retraining courses for the existing PHC physicians (paediatricians and physicians of internal medicine) until 2003 and three-year full-time residency training for the physicians who had graduated from the medical faculty and finished their internship [7–9]. Since 2004, all physicians working in PHC as FDs have been trained in FM [9]. Residency training conforms to the principles of the EU Doctors Directive 93/16 and to other EU consensus documents in the training and core competencies of FDs [9, 10]. Today, 25–30 students start annually their residency training in FM.

Organization of PHC services

The legal status of the FDs was defined by law in 2002. According to this law, all FDs are private practitioners and independent contractors with the Estonian Health Insurance Fund (EHIF). They provide comprehensive care irrespective of the patients' age, gender and health problems. According to the regulation the FD practice should have at least eight working hours per day on working days (Monday to Friday between 08:00 and 18:00 hours) and FDs are required to 20 visiting hours a week. The independent reception hours of a family nurse have been increased since 2010 from 10 to 20 hours in 2013 per week [11]. Since the implementation of new PHC system, the out-of-hours service was not stipulated in the FDs' contract, it has been provided by medical emergency service. However, the population survey conducted in 2013 revealed that slightly over 40% of the population would like to visit the FD or nurse outside of today's working hours – before 8 a.m., after 6 p.m. or in the weekend. Thus, the EHIF started to finance FD's appointments outside the working hours in 2014 to expand the possibilities of the family physician's organisation of work [12].

Until 2013, the provision of PHC services was organized on the county level. At present, the organization of PHC is recentralized and belongs to the responsibility of the national Health Board. About half of the FDs have solo practices and in rural areas they usually work alone. In urban areas most of the FDs work in groups, but all FDs have a personal patient list [7]. Currently, the number of FDs with personal patient list is 805 [13].

For the population, the most important changes were the introduction of a patient list and the possibility to choose their FD who would be the first contact for health problems, but also the gate-keeping function of the FDs [4]. The patients could register personally at the doctor's office, at the registration desk of the outpatient clinic, or be registered by a family

member. Citizens who did not register with family doctors, could enter their names on a patient list according to their place of residence, or to any patient list still incomplete. The average size of the patient list is 1600 ± 400 persons. The size of the patient lists has stabilised, but it can still vary between different counties and between the countryside and the towns because of variations in the density of the population in different areas. Still, if the number of persons enrolled the list exceeds 2000, the FD is expected to hire an assistant doctor [11]. All FDs are required to work with at least one family nurse and since 2013; the EHIF pays for a second family nurse if the nurse has a separate room for independent work [13].

With the reorganisation of the PHC, the work of the FDs became more comprehensive. The tasks of FDs as well of the family nurse working together with the FD were defined and established in 1997; also, the national standard of practice equipment for family practices was created in 1997 [14]. Their workload of FDs increased as well: since 2002, almost half of the total outpatient visits were made to FDs [15, 16]. Currently, the FD is the first person to consult with in case of an illness. The FD gives advice concerning the prevention of diseases, takes preventive measures and issues health certificates, certificates of incapacity for work and prescriptions, but sends the person to a medical specialist as well. Since the beginning of 2015 the FDs can refer their patients also to the services of non-clinical specialists, e.g. clinical psychologist and speech therapist. In case of acute illness the family physician must see the patient the same day, otherwise within five working days. Since 2013, the FDs can refer their patients to the e-consultation as well [13].

Financing of PHC services and remuneration system of family doctors

The PHC services are financed by EHIF, and all insured persons (94% of the Estonian population, including all children and retired persons) are covered with PHC services. The budget of PHC services in 2014 was 85.4 million euros which is 12.9% of the total budget of health services financed by EHIF [12]. The visit to FD is always for free for the insured person registered with that doctor, but the FD can ask a fee for home visit up to five EUR. Also, the FD may demand a reasonable charge for the issue of documents, e.g. health certificate for driver licence, but not for certificates of incapacity for work and prescriptions [7, 12].

Most FDs are self-employed contractors to the EHIF, less than tenth of FDs are salaried employees of private companies owned by FDs or local municipalities [7]. Salaried FDs are mostly paid a flat salary. For the self-employed FDs, payment includes age-weighted capitation fee per registered insured person, fixed components and additional components. The fixed components for payment include funding for lab tests and investigation and basic practice allowance. Additional components of payment in Estonia include payment for performance indicators (e.g., care for chronically ill patients and immunisation of children) as well as for the distance to the hospital (for FDs who are working more than 20 km from the nearest hospital); since 2014 also the payment for appointments outside the working hours. All fees are fixed by the regulation of the Government of Estonian Republic. In 2014, the average gross income per practice per month was about 8500 EUR [11, 12].

Quality of PHC services

A number of quality-related initiatives in PHC are required by specific legislation, such as registration of physicians and nurses as well developing a set of requirements for the premises and practice equipment. In addition to that, the Estonian Family Physician's Association runs a voluntary, annual accreditation programme for family practices. This programme is based on the criteria listed in the Association's "Quality Guideline for Family Doctor Practices in Estonia", which was developed in 2009. The standards, criteria and indicators cover the following areas: access and organization of practices, the quality of medical treatment, and also whether the practices can provide a learning environment for medical students and intermediate medical staff, as well as serve as a base for conducting scientific work. Until now, the participation rate of family practices in the accreditation programme has been about 25%. Thus, it has been a subject of recent discussions between the family physicians' association and the EHIF on whether to provide a financial incentive for participation [17].

An important step to improve the performance of family practices was the implementation of the FD quality bonus system (QBS) in 2006. The QBS is a joint initiative of the EHIF and the Estonian Family Physicians Association to increase the quality and effectiveness of preventive services, as well as to improve monitoring of chronic diseases. The QBS is based on a pay-for-performance scheme, rewarding FDs for the quality of provided care and it includes three domains: disease prevention, chronic disease management and additional activities [11]. The results of recent studies demonstrated that the FDs who participate in the QBS provide more preventive activities, e.g. immunization [18] and systematic monitoring of chronic illnesses as hypertension and type 2 diabetes mellitus [19], Thus, the implementation of the QBS in PHC reduces the load in specialized medical care [19], but on the other side, the workload of the PHC team has been increased [20].

Patient satisfaction and acceptability of PHC system

The patient satisfaction has been studied since the implementation of new PHC system. The first study was conducted in October 1998, ten months after the formal implementation of list system and gate-keeping principles [21, 22]. The results of this study demonstrated that about half of respondents were sufficiently informed about the transition to the new PHC system and about two thirds of respondents were registered on the patient list of a FD. 68% of the respondents were satisfied with their primary care doctor [21], and the satisfaction with care was associated with personal choice of FD [22]. Further studies demonstrated a rather high satisfaction as well. For example, in 2002 the satisfaction rate with the FDs was 87% [23] and most of the patients were admitted within two days [24]. Today, further evaluations of the Estonian PHC system have demonstrated rather high patient satisfaction and acceptability of the new system, however, the satisfaction with and acceptability of PHC services and FDs has been higher in patients living outside the capital, in older patients and in patients with multimorbidity [21, 23, 25–27].

The PHC reform has been the most studied reform in Estonian health sector [6]; still, the role of the development of family medicine in Estonia in improvement of health outcomes has not been studied. It is expected that paying more attention to detecting chronic diseases in their early stages and immunising children may have an effect on health status of the population, but this evidence could be provided in future studies.

Future challenges

All healthcare systems are faced with new challenges in the 21st century. One of the greatest challenges is the increasing number of the people with chronic diseases and the healthcare system has to response to these challenges. In 2014 the Estonian health care system, including PHC system, was evaluated by the experts from World Bank (WB)

as well by the experts from WHO [28, 29]. The progress of PHC system was recognized, however, some shortcomings of the healthcare system were highlighted as well. The results showed that the healthcare system in Estonia is still hospital- and specialised medical care-centred and the coordination of patient management between the healthcare levels as well between the health and social care systems could be improved. A number of visits to the specialists could be avoided by more effective coordination of treatment of patients with chronic diseases in PHC level and by providing them more preventive services. Thus, the continuous strengthening of the PHC and introduction of chronic disease management systems and models based on PHC would be in the focus of future developments in health care.

Source of funding: The work was funded by institutional research grant IUT 2–8.
Conflict of interest: The authors declare no conflict of interests.

References

1. Statistical Office of Estonia 2015 [cited 29.05.2015]. Available from URL: http://www.stat.ee/en.
2. Kaiv J. Seadused ja määrused tervishoiu ja arstlikul alal ühes ringkirjadega ja sisujuhtidega (*Laws and regulation in the field of health care and medicine with circulars and contents*). Kohtu- ja Siseministeerium, Tallinn 1931.
3. Koppel A, Kahur K, Habicht T, et al. Estonia: Health system review. *Health Syst Trans* 2008; 10(1): 1–230.
4. Lember M, Kosunen E, Boerma W. Task profiles of district doctors in Estonia and general practitioners in Finland. *Scand J Prim Health Care* 1998; 16(1): 56–62.
5. Lember M. A policy of introducing a new contract and funding system of general practice in Estonia. *Int J Health Plann Mgmt* 2002; 17: 41–53.
6. Põlluste K. *Health reforms in Estonia. Acceptability. Satisfaction and impact.* Saarbrücken: Lambert Academic Publishing; 2010.
7. Põlluste K, Kasiulevičius V, Veide S, et al. Primary care in Baltic countries: a comparison of progress and present systems. *Health Policy* 2013; 109(2): 122–130.
8. Lember M. Family practice training in Estonia. *Fam Med* 1996; 28(4): 282–286.
9. Maaroos HI. Family medicine as a model of transition from academic medicine to academic health care: Estonia's experience. *Croat Med J* 2004; 45(5): 563–566.
10. Maaroos HI, Lember M. Specialist training of family physicians in non-UEMO countries: an Estonian experience. *Eur J Gen Pract* 2007; 13(4): 246–247.
11. Lai T, Habicht T, Kahur K, et al. Estonia: health system review. *Health Syst Trans* 2013; 15(6): 1–196.
12. Estonian Health Insurance Fund Yearbook 2014 [cited 29.05. 2015]. Available from URL: https://www.haigekassa.ee/sites/default/files/uuringud_aruanded/haigekassa_aastaraamat_2014_eng.pdf.
13. Estonian Health Insurance Fund [cited 29.05. 2015]. Available from URL: https://haigekassa.ee/en.
14. Kalda R, Lember M. Setting national standards for practice equipment. Presence of practice equipment in Estonian practices before and after introduction of guidelines with feedback. *Int J Qual Health Care* 2000; 12(1): 59–63.
15. Maaroos HI, Meiesaar K. Does equal availability of geographical and human resources guarantee access to family doctors in Estonia? *Croat Med J* 2004; 45(5): 567–572.
16. Health Statistics and Health Research Database. National Institute for Health Development [cited 29.05. 2015]. Available from URL: http://pxweb.tai.ee/esf/pxweb2008/dialog/statfile1.asp.
17. A Review of Estonia's Quality Assurance System for Health Care. The World Bank Group. January 2015.
18. Merilind E, Salupere R, Västra K, et al. The influence of performance-based payment on childhood immunisation coverage. *Health Policy* 2015; 119(6): 770–777.
19. Kalda R, Västra K. The effect of continuous monitoring of hypertension and type 2 diabetes mellitus on the number of visits to medical specialists and hospitalization: a retrospective study. *Medicina (Kaunas)* 2013; 49(11): 490–496.
20. Merilind E, Västra K, Salupere R, et al. The impact of pay-for-performance on the workload of family practices in Estonia. *Qual Prim Care* 2014; 22(2): 109–114.
21. Põlluste K, Kalda R, Lember M. Primary health care system in transition: patients' experience. *Int J Qual Health Care* 2000; 12(6): 503–509.
22. Kalda R, Põlluste K, Lember M. Patient satisfaction with care is associated with personal choice of physician. *Health Policy* 2003; 64(1): 55–62.
23. Põlluste K, Kalda R, Lember M. Evaluation of primary health care reform in Estonia from patients' perspective: acceptability and satisfaction. *Croat Med J* 2004; 45(5): 582–587.
24. Kalda R, Põlluste K, Maaroos HI, et al. Patients' opinions on family doctor accessibility in Estonia. *Croat Med J* 2004; 45(5): 578–581.
25. Põlluste K, Kalda R, Lember M. Satisfaction with the access to the health services of the people with chronic conditions in Estonia. *Health Policy* 2007; 82(1): 51–61.
26. Põlluste K, Kalda R, Lember M. Accessibility and use of health services among older Estonian population. *Cent Eur J Public Health* 2009; 17(2): 64–70.
27. Põlluste K, Kallikorm R, Meiesaar K, et al. Use of general practice and rheumatology outpatient services in rheumatoid arthritis. *Fam Pract* 2012; 29(4): 433–440.
28. Lai T, Dorner T, Stćhr Johansen A, et al. *Better noncommunicable disease outcomes: challenges and opportunities for health systems.* Country Assessment. Estonia. Version March 20, 2015. WHO, Copenhagen 2015.
29. The World Bank Group. The State of Health Care Integration in Estonia. Summary Report. January 2015.

Address for correspondence:
Dr Kaja Põlluste
Department of Internal Medicine
University of Tartu
L. Puusepa 8
51014 Tartu, Estonia
Tel.: +371 7318 607, e-mail: kaja.polluste@ut.ee

Received: 03.06.2015
Revised: 15.06.2015
Accepted: 22.06.2015