

International exchange

The impact of pay-for-performance on the workload of family practices in Estonia

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ABSTRACT

Background The quality system in Estonia is a pay-for-performance scheme, rewarding family doctors for the quality of care they provide. This study examines the impact of the quality system on the workload of family doctors in Estonia.

Aim The aim of this study was to explore differences in the workload of family doctors participating in the clinical quality system and those not participating.

Methods The study was conducted using a database from the Estonian Health Insurance Fund, which consists of health-related data for 96% of the Estonian population. The study compared the workload of Estonian family physicians in two groups: those participating in the quality system and those not.

Results During the observation period 2005–2011, the proportion of family doctors participating in the clinical quality system increased from 48.2% to 69.2%. The total number of visits in primary care increased also and there was a difference in workload

between the two groups. Doctors participating in the quality system performed more primary (initial) and secondary (follow-up) visits. The number of visits per doctor was also higher for those participating in the quality system. There was a shift to visits carried out by nurses, which showed an increased workload for nurses in the quality system during the observation period compared with a stable workload for those outside the system. The number of home visits decreased in both groups.

Conclusion Pay-for-performance had a notable impact on the workload of the primary care team and its members. Paying more attention to detecting chronic diseases in their early stages, recalling patients for general health check-ups and immunising children may have an effect on health status, but also requires increased staff levels.

Keywords: family practice, pay-for-performance, primary care, workload

How this fits in with quality in primary care

What do we know?

Since 2004, when the United Kingdom (UK) implemented the Quality and Outcomes Framework (QOF) to achieve evidence-based quality targets, there have been several studies exploring the impact of pay-for-performance. UK general practitioners now need to work harder or employ more staff to earn the same rewards that they received before 2006. Nurses experienced an increased workload, but enjoyed more autonomy and job satisfaction.

What does this paper add?

This paper reflects data from the Estonian Health Insurance Fund and shows a notable impact of pay-for-performance schemes on the workload of family practices.

Introduction

Estonia started to reorganise its healthcare from the old Soviet system, known as the Semashko system, in 1990 and introduced a new speciality of family medicine.¹ The University of Tartu began to train family doctors and the first group opened their own practices in 1992. In 2000, active discussions about implementing a quality system in family practice took place. Several countries had already experienced payment-for-performance and Estonia decided to follow their experience.^{2–4}

Nowadays, the Estonian Health Insurance Fund (EHIF) is financed from income (health insurance) taxes. All working people, children, pensioners and disabled people are covered by state insurance. About 4% of the Estonian population are not covered by state insurance, and have private insurance or pay a fee for services.

Every family doctor has their own list of patients and an individual contract with the EHIF. A family doctor's contract with the EHIF is complicated and has five major components: capitation fees (five different age groups), basic allowances (for rent, information technology, telephone, car, petrol, etc.), fee-for-service for examinations and tests (22–37% of the total sum), distance allowance (for rural areas) and a quality reward (2–4% depending on performance).

In Estonia, family doctors, working together with family nurses act as gatekeepers to reduce the number of visits to secondary care. Every family doctor is responsible for the patients on their list, who can number between 1200 and 2400. The maximum number of patients on a list is state regulated and cannot exceed 2000; if a family doctor's list has more than 2000 patients another doctor has to be employed.

In 2006, Estonia started its quality system, which included an annual reward and a programme of incentives for family doctors.⁵ Joining the quality system is a voluntary process for all family doctors in Estonia and forms part of their contract. There are no penalties for doctors who do not participate in the quality system.

The Estonian quality system for family doctors includes clinical quality indicators for children (0–7 years) such as follow-up and immunisation indicators, screening for cardiovascular diseases (40–60 years), monitoring patients with type 2 diabetes and hypertension according to guidelines, follow-up of patients with hypothyroidism and post-myocardial infarction, providing minor surgical procedures and cervical smears, observation of pregnancy and participation in continuing medical education (CME) courses for at least 60 hours per year. Family doctors fulfilling all these criteria are entitled to extra payments. Payment-for-performance to reward excellence

is a part of the quality system, but the proportion of the general budget is relatively small in Estonia (2–4% of the total budget of the family doctors). Doctors participating in the quality system also have an extra fund (5%) for investigations. Even if the family doctor does not qualify for an annual reward, the increased fund for investigations is attractive to physicians.

Checkland *et al*⁶ noted that the impact of the Quality and Outcomes Framework (QOF) on practice organisation and service delivery was anticipated to lead to greater activity for practices and rewards were partly linked to this increase in workload.

The aim of this study was to compare differences between the workload of family doctors in two different groups: those participating or not participating in the quality system.

Methods

The EHIF collects population-based data from all healthcare providers contracted to state-insured patients (96% of the population) and this was also the source of our data. The database does not cover the 4% of the population who have no state medical insurance. The database was created from health service invoices sent by family physicians to the EHIF for payment.

These invoices list all services provided to patients, including all visits to family doctors and family nurses, as well as patient diagnoses according to the ICD-10. Data for service-providing family physicians are also included in the invoices. Data were analysed using the software R 2.13.1 and IBM SPSS Statistics 19 using descriptive statistics.

The study group consisted of all (100%) family doctors ($N = 1019$ in 2005, increasing to $N = 1083$ in 2011) working with patient lists in Estonia and having individual contracts with the EHIF (Table 1).

Family doctors were divided in two groups according to their participation in the quality system. Workload was defined as: (1) the total number of visits (consultations at the health centre or home visits) by family doctors and family nurses in Estonia, and (2) the number of visits per family doctor and family nurse. All visits were counted and divided into two groups of doctors according to participation in the quality system (Table 1). A primary visit means the first contact with the family doctor; secondary (follow-up) visits include further consultations during the same illness. One episode of illness can last until recovery or up to 120 days. All visits have a unique code and are marked on invoices (sent digitally to the EHIF) and all invoices are stored in the EHIF database. The total number of visits, number of primary visits

Table 1 Number of family doctors participating and not participating in the quality system in Estonia, 2005–2011

Year	Number of family doctors in the quality system	Percentage	Number of family doctors not in the quality system	Percentage	All doctors
2005	n/a		n/a		1019
2006	496	48.3	532	51.7	1027
2007	448	42.9	595	57.1	1044
2008	639	60.8	412	39.2	1051
2009	676	64.1	379	35.9	1054
2010	712	66.7	355	33.3	1067
2011	750	69.2	333	30.8	1083

Table 2 Number of primary visits, secondary visits, home visits and nurse visits per doctor in two different groups in Estonia, 2005–2011

Year	Family doctors in the quality system				Family doctors not in the quality system			
	Primary visits	Secondary visits	Home visits	Nurse visits	Primary visits	Secondary visits	Home visits	Nurse visits
2005	n/a	n/a	n/a	n/a	861	712	96	77
2006	1040	877	116	130	703	605	64	67
2007	1059	921	102	214	724	645	55	86
2008	1039	923	80	249	591	532	35	80
2009	987	888	73	277	564	486	31	86
2010	940	816	56	302	485	396	20	96
2011	956	868	54	323	452	389	16	106

(first visit during the one episode of the illness), secondary visits (follow-up visits which are needed during an episode of the same illness until recovery or finishing this episode of illness), home visits and independent nurse visits were analysed (Table 2).

Results

During the observation period 2005–2011, the number of family doctors participating in the quality system increased (Table 1). At the same time, the total number of primary care visits also increased (Figure 1).

There was a difference in workload between the two groups. Patients seeing doctors participating in the quality system had more consultations than those visiting non-participating doctors. In 2006, the difference between the two groups was marginal (1.3 times), but in 2011 the difference was 4.3 times. In addition, the number of visits per family doctor differed greatly between the two groups (Table 2). We investigated the numbers of primary and secondary visits and the tendency was the same – doctors participating in the quality system had more primary and secondary visits than those not participating (Table 2). Another finding was the shift in workload to nurses in practices with family doctors participating in the quality system (Figure 1). This shows the increasing workload during

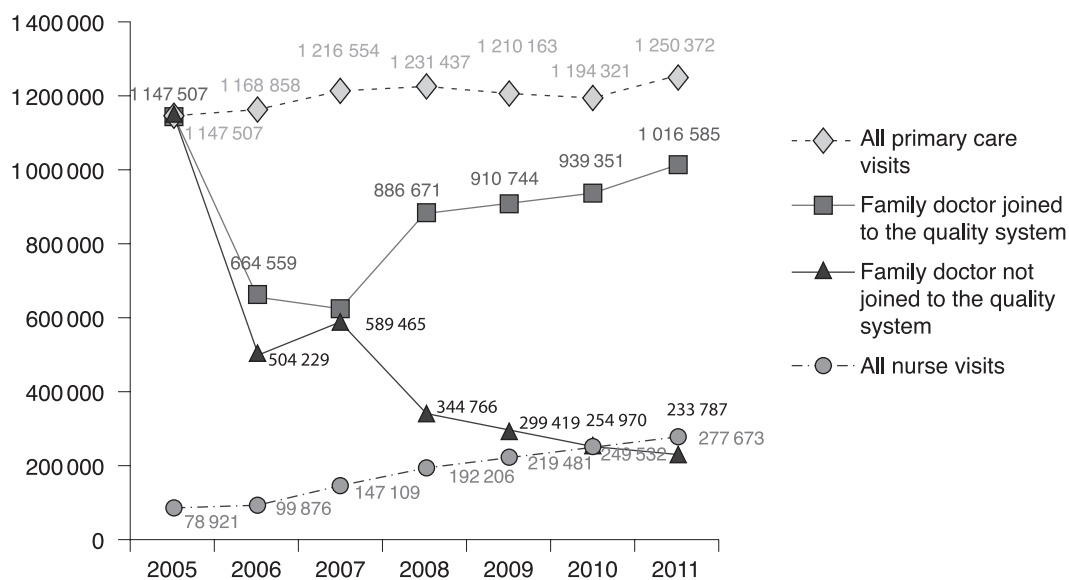


Figure 1 Number of all visits in primary care in Estonia, 2005–2011 (all primary care visits, visits to a family doctor in the quality system, visits to a family doctor not in the quality system, all nurse visits).

the period for nurses in the group linked to the quality system compared with the relatively stable workload in those not linked. The number of home visits decreased in both groups, but less so in the group within the quality system (Table 2).

During the observation period 2005–2011, the number of visits per family doctor was about the same in the quality system group (1340 visits in 2006 and 1355 visits in 2011), but decreased (from 948 visits in 2006 to 702 visits in 2011) for doctors not linked to the system (Figure 2). Figure 2 shows a decrease in workload for doctors outside the quality system and an increase in workload for those in the quality system.

The quality system in Estonia began in 2006. We found in our study that all primary care visits, including nurse visits, increased by 8.9% during the period 2005–2011 (Figure 1). Comparing the two groups – those within and those outside the quality system – there was a clear difference: in 2006–2011, the workload increased from 664 559 visits to 1 016 585 in the quality system group, but decreased from 504 299 to 233 787 in those outside the quality system (Figure 1).

During the observation period 2005–2011, the number of nurse visits increased from 78 921 in 2006 to 277 673 (351%) and the main increase was seen in the group participating in the quality system (Figure 1).

Discussion

Since the UK began pay-for-performance programmes in family practices,⁷ different countries have used this

system to increase value for money,⁸ assessing workload before and after the introduction of pay-for-performance contracts.⁹

Previous studies suggest that general health checks do not reduce morbidity or mortality, but the QOF in the UK may have diminished the workload of general practitioners, enabled them to concentrate on more complex care, and led to teams in which work and knowledge are more distributed among its members.^{10,11}

In our study, the explanation for the increased workload of family doctors may be the more intensive work and recall of chronically ill patients for annual health checks, and more intensive search and call of the patients from family doctors lists to perform activities named in the Cardiovascular Disease Prevention Programme – to calculate cardiovascular risk and body mass index, and to measure blood pressure, glucose level and cholesterol in the 40–60-year-old age group of people on a family doctor's list who have no known morbidities.

In our study, we also observed the number of visits per family doctor in both groups. During the observation period in 2005–2011, the number of visits per family doctor participating in the quality system was stable (only increasing from 1340 to 1355), but in the non-participating group it decreased from 948 to 702 (Figure 2). During the observation period, the situation of one nurse to each family doctor prevailed. According to our study, the number of visits to a nurse increased in the group participating in the quality system (130 visits in 2006 and 323 visits in 2011), but not in the non-participating group (67 visits in 2006 and 106 visits in 2011) (Figure 2). Because the quality system is based on preventive work (immunisation of

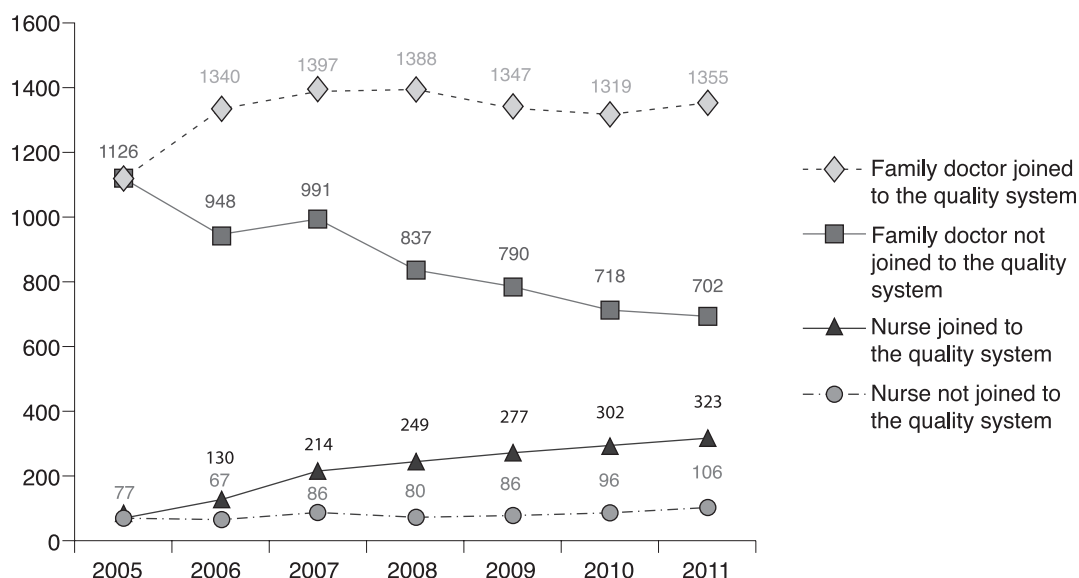


Figure 2 Number of visits per doctor and number of nurse visits in Estonia, 2005–2011.

small children, check-ups for chronic diseases and preventive visits to detect cardiovascular disease), the role of the practice nurse is very important; and although the workload of family doctors has not increased remarkably, the workload of nurses did increase significantly. The increased workload for nurses may be due to a shift in workload from the family doctor to the nurse. General advice giving and the interpretation of simple blood tests could also be performed by a nurse, and that was also found in our study. Doctors are dealing with 'more serious' problems and preventive work and follow-ups are undertaken by the nurse.

Another reason is that the workload of the doctors was already so high that there was no possibility to increase it, causing a shift in workload towards nurse visits. In their UK study, Gemmell *et al* found that general practices may have responded to a pay-for-performance contract by increasing staffing levels, with nursing staff absorbing a higher proportion of the clinical workload and doctors focusing more attention on chronic and preventive care. Expanding nursing roles may increase the quality of primary care, but may also have led to greater nurse workloads,¹² as we found in our study.

Since 2013, the EHIF has also funded a second nurse for each family doctor within the family doctors' contract. This might help reduce nurses' workload and give family doctors more time for chronic and preventive care.

The number of home visits decreased during the observation period, in both groups (Table 2). This is also a change from the old Semashko model to the European model of healthcare, relieving doctors of time-consuming home visits and increasing work in

healthcare centres. The decrease in the number of home visits might also be due to another change in the healthcare system in Estonia. In 2006, Estonia began an independent system of home care delivered by nurses. Home nurses work under contract from the EHIF and are not part of family practices. Furthermore, visits by home nurses are not included in our study.

Although doctors outside the quality system had fewer visits, and despite the increased workload, the number of participating doctors increased from 48.2 to 69.2% (Table 1).

Conclusion

Pay-for-performance has had a notable impact on the workload of primary care teams in Estonia. The number of visits increased for both doctors and nurses, but more so for nurses. This confirms the important role of nurses in quality of primary care in Estonia. Paying more attention to detecting chronic diseases in the early stages, recalling patients for general health check-ups and immunising small children will improve health status, but require increasing staff numbers and workload.

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ETHICAL APPROVAL

The Ethics Committee of the University of Tartu approved the study.

PEER REVIEW

Not commissioned; externally peer reviewed.

CONFLICTS OF INTERESTS

None.

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