Health Policy 119 (2015) 1011–1016

Contents lists available at ScienceDirect

Health Policy

journal homepage: www.elsevier.com/locate/healthpol

Health Reform Monitor

Strategic purchasing reform in Estonia: Reducing inequalities in access while improving care concentration and quality☆

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ARTICLE INFO

Article history:
Received 21 January 2015
Received in revised form 10 June 2015
Accepted 11 June 2015

Keywords:
Specialist care
Selective contracting
Strategic purchasing
Quality of care
Hospitals
Estonia

ABSTRACT

As of 2014, the Estonian Health Insurance Fund has adopted new purchasing procedures and criteria, which it now has started to implement in specialist care. Main changes include (1) redefined access criteria based on population need rather than historical supply, which aim to achieve more equal access of providers and specialties; (2) stricter definition and use of optimal workload criteria to increase the concentration of specialist care (3) better consideration of patient movement; and (4) an increased emphasis on quality to foster quality improvement. The new criteria were first used in the contract cycle that started in 2014 and resulted in fewer contracted providers for a similar volume of care compared to the previous contract cycle. This implies that provision of specialized care has become concentrated at fewer providers. It is too early to draw firm conclusions on the impact on care quality or on actors, but the process has sparked debate on the role of selective contracting and the role of public and private providers in Estonian health care. Lastly, the Estonian experience may hold important lessons for other countries looking to overcome inequalities in access while concentrating care and improving care quality.

1. Introduction

The Health Insurance Act stipulates that the Estonian Health Insurance Fund (EHIF), the core purchaser of health services in Estonia, is not obliged to contract all health care providers operating in Estonia. Since 2002 the EHIF has developed a transparent contracting process and introduced criteria for selecting the best providers in terms of quality and cost [1]. Health care providers are contracted for at least three-years. The last contract cycle for inpatient and outpatient specialist as well as nursing care ended in the first quarter of 2014. This provided an opportunity to revise the selective contracting criteria so that they would better respond to changes in the health care delivery system and population needs, but also to further prioritize providers with a higher quality of care. The changes needed to address the increasing role of family medicine based primary care with a gradual increase of gatekeeping and coordinating prevention and care [2]; the concentration of higher level specialist care; and an increased capacity of the Hospital Network Development Plan (HNDP) hospitals due to the EU structural funds investments. Unsurprisingly, these developments have had significant repercussions for the EHIF's strategic purchasing policy.

☆ Open Access for this article is made possible by a collaboration between Health Policy and The European Observatory on Health Systems and Policies.

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http://dx.doi.org/10.1016/j.healthpol.2015.06.002

Strategic purchasing, or active purchasing, in contrast to passive purchasing (e.g., use of historical budgets), can be seen as the main instrument for promoting efficiency in the use of health funds [3]. It should promote quality and efficiency by among others examining actual health needs and their regional variations, the interventions and services that best meet these needs, and how these interventions and services should be purchased or provided while taking into account the availability of providers and their quality [4]. Today, many countries are grappling with these issues and seek to develop the expertise and systems to implement an effective strategic purchasing policy [5].

This paper aims to describe the main changes in purchasing of specialist inpatient and outpatient care in Estonia. Moreover, it examines its results so far and its impact on stakeholders. In the conclusion we focus on the long-term impact of this new contracting policy and some lessons for other countries.

2. The purchasing process in Estonia

Selective contracting was introduced in 2002 to ensure timely and geographical access to care in locations and specialties where HNDP hospitals, which are not selectively contracted, have limited capacity and long waiting times exist. Furthermore, it was intended to introduce more competition into health care provision, increase choice, improve service quality and allow contracting of private providers. The process applies a set of defined criteria in line with the Administrative Procedure Act and the Health Insurance Act. Selected providers receive contracts for a minimum period of three years.

At the beginning of each year the EHIF negotiates capped cost and volume contracts with hospitals [1]. The contract's framework covers medium-term conditions for five years for HNDP hospitals [6] and at least three years for other selected providers. The EHIF only contracts providers that are licensed by the Health Board. The EHIF is required to contract all HNDP hospitals (19 state- or municipality-owned acute care hospitals working under private law). The negotiation process determines the volume of care these hospitals are allowed to provide in a certain location. HNDP hospitals provide outpatient and inpatient specialist care but also nursing care and some also dental care [7]. The rationale behind this is that these hospitals need to be contracted to guarantee geographical access to a minimum level of specialist care and 24/7 emergency care. The HNDP 2015 has its origins in the Hospital Master Plan (HMP) commissioned by the Ministry of Social Affairs (MoSA) with financial support from the World Bank. It was prepared by Swedish consultants and aimed to plan an efficient future hospital network. In 2003, the government eventually adopted it as the HNDP. Among others, it categorized hospitals into regional, central, general and local according to the range of services provided and required that a hospital should be within 60 min travel time by car (70 km) [1].

In 2013 the EHIF had contracts with 167 specialist care providers in total, including 19 HNDP hospitals, which means that 148 have been selectively contracted. In dental care the number of selected providers is 338 and in nursing care 60. However, in terms of turnover, selected providers account for a relatively small share (8%) of the specialist care budget. In contrast, this share is much higher in dental care (88%) and nursing care (46%). These shares have been stable since the early 2000s.[1]

The new contract cycle for specialist care providers started in April 2014 and will last for four years and one quarter. The formal selection process started in late 2013 and covers important innovations in geographical access criteria, which are used for planning and selective contracting, and a stronger emphasis on quality criteria in contracting. The new criteria were published about 2 month before launching the selection process, which means that there was little time for stakeholders to adapt to the new situation.

2.1. New geographical accessibility criteria

According to the Health Insurance Act, access to health care services has to be equal in all regions of Estonia. This principle is the basis for the EHIF when defining its purchasing policy and its contracting process. Access to care is monitored in two dimensions: timely access and geographical access. Timely access is measured with the time an individual has to wait to receive necessary care, which is reported monthly by providers to EHIF. Geographical accessibility, meaning which services should be available in which location, had not been explicitly defined until recently. Some elements of the latter are reflected in the ministerial level decree on requirements on hospital types, which sets minimum and maximum levels of specialties that have to be available by hospital types [1]. However, these requirements are set for the provider rather than its geographical area and have not been systematically revised since the mid 2000s. Therefore, the EHIF had to develop own geographical accessibility criteria to be used for annual contract planning and also as a basis for selective contracting.

Geographical accessibility criteria were first defined for outpatient specialist care. It was assumed that service provision of good quality could be achieved if doctors perform a certain minimum amount of services in their provision area. The areas were defined as counties (15 in total), because historically each county had at least one strategic hospital. The minimum workload per one county was then defined as the amount of services and the corresponding number of full time equivalent specialists needed to deliver these services. The assumption is that one full-time equivalent doctor works 225 days per year, 7 h per day and that one appointment with a patient lasts on average 20 min. Furthermore, to best utilize limited human resources, defining a minimum workload per location should avoid fragmentation of their working time over different locations. Moreover, to provide outpatient specialist care of good quality there is need for high-tech equipment and access to supportive medical services such as laboratories and radiology. It is assumed that this can be

[1] This data comes from (unpublished) EHIF internal information to which the first author has exclusive access

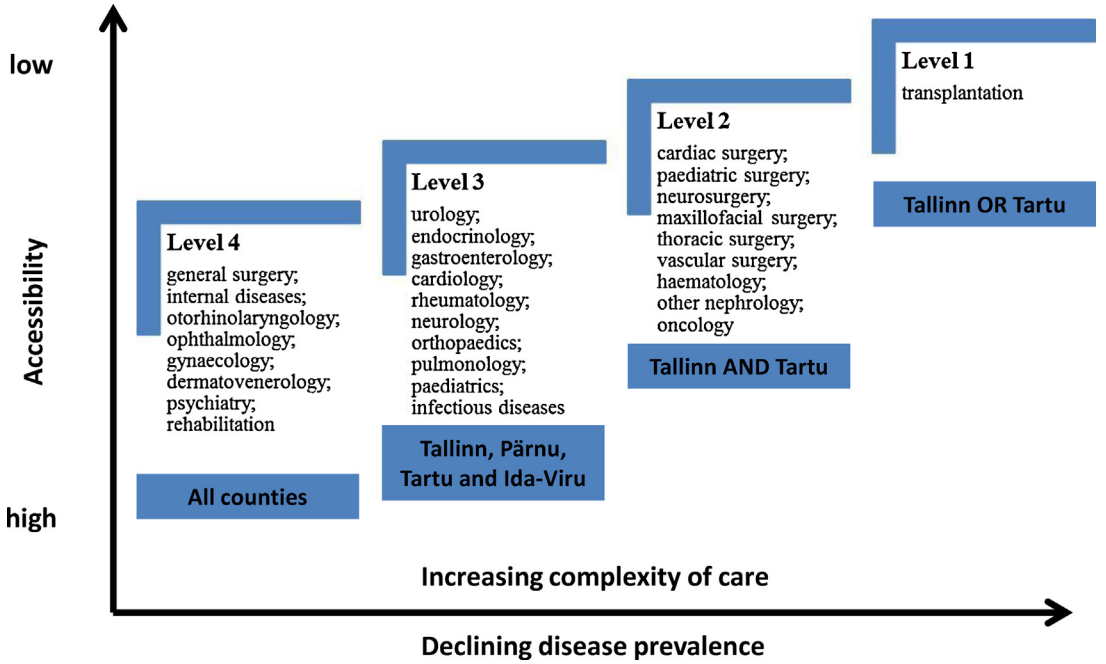

Fig. 1. Four levels of geographical access to outpatient specialist care.

arranged more efficiently if there is sufficient workload per location.

To guarantee an optimal organization of care provision, four levels of access were defined for outpatient specialist care, which closely relate to the complexity of the care and disease prevalence (see Fig. 1). The first level includes rare and very complex care that is made accessible in one location in Estonia–Tallinn or Tartu (e.g., organ transplantations). Services at the second level have to be accessible in two locations – Tallinn and Tartu (e.g., oncology, cardiac surgery, neurosurgery, and vascular surgery). At the third level there are services that have to be available in four biggest counties – Tallinn, Pärnu, Tartu and Ida-Viru (e.g., urology, endocrinology, gastroenterology, cardiology, rheumatology, neurology, orthopedics, and pulmonology). The fourth level includes the most common care types and includes specialties that have to be accessible at county level (e.g., general surgery, otorhinolaryngology, ophthalmology, gynecology, dermatovenerology, and psychiatry).

2.2. Implementing the criteria for contracting

The new criteria were integrated in the outpatient specialist care providers' selection process in 2014 and used as baseline for the contracts (see Fig. 2). The EHIF has implemented this within the boundaries of the existing framework consisting of the Health Services Organization Act (in force since 2002), which defines the types of hospitals and licensing procedures, and a Ministry of Social Affairs regulation stating the requirements as list and scale of services to be provided and the care standards [7]. These provider-level standards set minimum and maximum standards for medical specialties that have to be accessible in each hospital type. These standards give providers opportunities to develop medical areas that have a rather low volume of care compared to the maximum stated level.

The EHIF estimates population need for health services based on historical patient-level service utilization by specialties and by counties but limiting this to −/+10% of the Estonian average. Additionally, some regional characteristics such as population density (regions with higher population density have higher outpatient care shares compared to inpatient care) and also whether the area is an island or not are included. In practice, high-density regions may be 6% above the Estonian average while low-density regions may be 11% below the Estonian average. Thus if average population need is 100, the variation may range between 90 and 110 in a county with average population density. If the county is high-density, population need may be as high as (100 + 10 + 6 =) 116, while in a low-density county this number could be as low as (100 − 10 − 11 =) 79. With this information, the needed levels of service provision are calculated taking into account patient mobility between counties and evaluated against geographical accessibility criteria (see Section 2.1.). This results in an estimation of service volumes needed per specialty and county. Next, the EHIF uses this as a basis for negotiations with HNDP hospitals. If the HNDP hospital does not have sufficient capacity to cover the need for specialized services for a certain county and according to the geographical accessibility criteria services of that particular specialty, the remaining need for services is verified against optimal workload criteria. If the remaining need for services is at least 50% of a full-time equivalent optimal workload, the EHIF opens public tender to select providers. Below

Box 1: Estimating the need for outpatient gastroenterology care in Tartu County (example)
Using historical patient-level utilization patterns in Estonia adjusted to the Estonian average and adjusted for regional characteristics, the estimated need for outpatient gastroenterology care (a third level specialty thus only available in 4 counties including Tartu) of the population living in Tartu County was 3473 treatment cases in 2014. Of this need, 3376 treatment cases are provided in Tartu County while the rest go to another county. In addition, 2197 treatment cases were provided to patients living in a county that does not have to provide these services and thus have to travel to Tartu County. In total the need for gastroenterology in Tartu County is 5573 (3376 + 2197) treatment cases. The HNDP hospital in Tartu is able to cover 4096 treatment cases (based on historical data and hospitals own assessment), which leaves a remaining need of 1477 treatment cases. An average patient has 1.6 visits, lasting 20 min (1/3 hrs). This means 1477 × 1.6 visits × 1/3 h = 788 h. The optimal workload per one FTE is 225 days × 7 h = 1575 h per year. This implies that the remaining workload is 788/1575 = 0.5 FTE, i.e., the minimum amount for the EHIF to start a public tender.

50%, the amount of services is deemed too small to have efficient provision (see Box 1 for an example). This evaluation was done for each outpatient specialty for each county before opening public tender. In daycare and inpatient care, where the role of providers outside the HNDP is minimal, the evaluation procedure was similar.

2.3. More emphasis on contracting quality of care

The objective of the contracting process is to select the best care providers. Obviously, the new workload criteria are hoped to concentrate specialist care and achieve an improvement in care quality, although international evidence on this relationship is so far inconclusive [8]. Compared to the previous selection process, which assesses bids on price and quality, the greatest change is the increased weight awarded to quality. The assessment procedure defines the weighting of each individual quality criterion (see Table 1) and also how each provider making a bid must measure these criteria. Additionally, providers using the national e-health system received extra points. If two providers receive equal total points, the new procedure stipulates that the provider receiving more points for quality criteria will be contracted. Under the previous process, providers had to make a new bid with lower prices after which the cheaper provider was contracted.

However, it remains difficult to compare the quality of service delivery by providers. Until now, the selection procedure focuses more on input related factors, e.g., share of certified doctors, share of operating doctors in surgical specialities, availability of nurse appointments, availability of technologies and supportive services that are necessary to provide care. Although the development of outcome related criteria is a priority area and the HNDP hospitals data on selected indicators are published regularly [9,10], they are not yet in use for selection.

3. Preliminary results

The specialist care selection process was finalized by the end of March 2014. EHIF selected providers for 18 specialties as well as for in-vitro fertilization, hemodialysis, cataract surgery and endoprosthesis. In 2011 the EHIF had to select specialist care in almost 40 geographical areas compared to 'only' 15 counties in the new contract cycle that started in 2014. The updated contracting procedure better reflects population need in the country (and its counties), as historically there existed large regional disparities between the numbers of provider and specialties available per population. These were mostly the result of historical supply side factors rather than differences in medical need. Indeed, during the Soviet times each administrative unit had a town with village hospital, which were later restructured into outpatient specialist policlinics. However many of these towns have decreasing populations and may no longer be able to support a policlinic [11]. Defining geographical areas for outpatient specialist care as counties is in line with HNDP hospitals "catchment areas". From the provider perspective this made competition harder as providers from smaller areas now had to compete on the county levels with more providers and at least one HNDP hospital.

As expected, the providers' interest to supply services was much higher than EHIF's ability to purchase and therefore several providers were awarded lower volume

Table 1
Quality criteria used for specialist care purchasing in Estonia (example for general surgery).

Criteria	Weight (maximum points)	Maximum points awarded if
Lower price	10	Price reductions >10%
Penalties	10	No penalties
Arrears of taxes	10	No arrears of taxes
Corrective actions by Health Board	3	No corrective actions
Petitions to the expert commission on quality of care	4	No justified petitions
Connection to E-Health system	4	Data submitted to the E-Health system
Share of accredited doctors	10	All doctors certified
Comprehensive care provision	10	Contract includes outpatient and inpatient care
Share of surgeons who have been doing surgeries	10	>90% of surgeons have performed surgeries
Share of diagnostic tests and procedures	10	Above the average
Share of doctors working in inpatient care setting	10	>90% of doctors working in inpatient setting
Workload	10	Workload is 90–100% of optimal workload

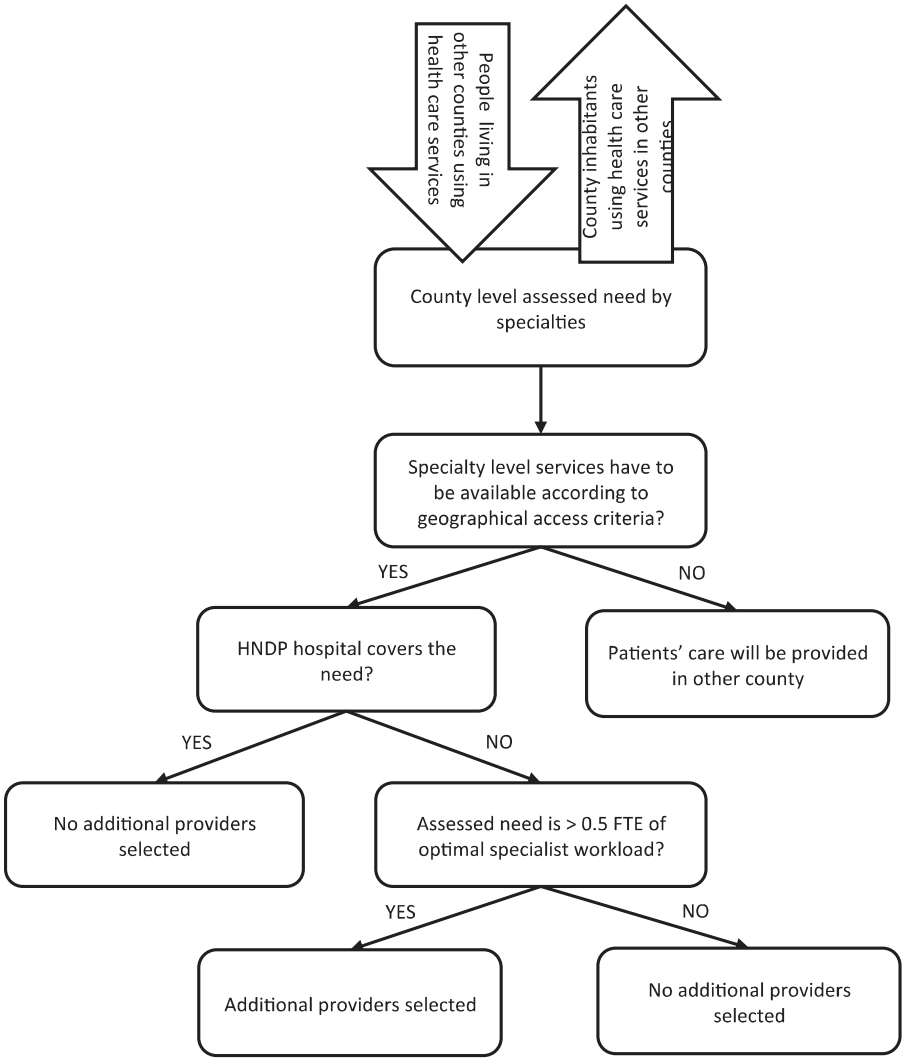

Fig. 2. The EHIF's selective contracting process.

contracts than applied for or received no contract. This was especially the case in Tallinn and Tartu where relatively many providers operate and competition for contracts is strongest. In total, the EHIF contracted 58% of applied service volume with 121 providers, 20% less providers than in 2011.

4. Impact on stakeholders

Financially, the impact on the EHIFs budget was marginal as the capacity of the HNDP hospitals has been increasing and thus the contract volume for selective contracting remains relatively small.

Even though the methodological basis for the new process was transparent and in line with regulations ensuring equal treatment of all providers applying for contracts, provider reactions were (unsurprisingly) mixed. Obviously the largest backlash was among those not receiving contracts. Especially those that were in counties where HNDP hospitals had sufficient capacity and no additional contracting took place and thus had no chance to compete for a contract. This happened for example to one small private provider in Tartu, which previously delivered approximately 100 childbirths per year. Some providers urged patients to nevertheless ask for reimbursement of care for which they did not receive a contract, hoping to put pressure on the EHIF and the political system. Currently there are no plans to support providers without contract but the question may come up when a new selection of providers is planned.

The EHIF used local media and family doctors to inform population. To mitigate the impact on patients, the EHIF covers the treatment cost for people on waiting lists of providers that have not received a contract in 2014. However, those not on waiting lists may have to visit another location than they were originally planning, possibly in

another county. It therefore remains to be seen how patients react in the longer term.

5. Conclusion

The EHIF's objective in revising its selective contracting policy has been to focus on patient needs rather than historically developed provider capacity, which has led to large disparities in distribution of providers and specialties and patient access. It is still too early to know the long-term impact of the new contracting process, but some first observations can be made. First, one of the ongoing debates at the court level is the EHIF's ultimate right to prefer HNDP hospitals and to contract them without following the same procedure as for all other providers. So far the position of lower level courts has been favoring this approach but the Supreme Court has not spoken on this matter yet. Second, among HNDP hospitals, vertical integration is favored and some first results are already visible. Regional hospitals in practice get partial ownership in general hospitals, leading to a higher concentration of specialist care. This can be seen as a positive trend – especially in light of human resource shortages and the increasing role of primary care. Third, the growing capacity of HNDP hospitals combined with the preferential treatment they receive, raises questions with regard to the future role of private providers' in Estonian health care. Fourth, many challenges remain in terms of purchasing on the basis of actual population need and quality. The process of establishing population need may still be biased towards historical supply factors and future refinements in methodology will be necessary to make better estimates. Moreover, meaningful quality indicators need to be developed that not only look at input or process but also at outcome. Lastly, this innovation in contracting policy may offer valuable examples for other countries, especially those making the transition from passive to active purchasers and struggling with an unequal distribution of providers, differences in access and fragmented care provision. This seems to be particularly relevant for countries with a Soviet legacy of central planning as well as many developing countries [4,5].

Conflict of interest statement

During the time of writing, Triin Habicht was working for the Estonian Health Insurance Fund.

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