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Health Reform Monitor

The 2017 reform of the hospital sector in Poland – The challenge of consistent design☆

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ABSTRACT

Beginning in October 2017 a system of basic hospital service provision, popularly called the 'hospitals network' was implemented in Poland. It covered 594 hospitals out of a total number of approx. 920 operating in 2017. The regulation's official objectives were to: *"(1) improve the organization of services delivered by hospitals; (2) improve access to hospital care; (3) optimize the number of specialist wards; (4) improve coordination of in- and out-patient care; (5) facilitate hospital management*". The aim of this paper is to describe the background of the reform planning and its formal objectives, content and implementation process, as well as to assess the preliminary results and discuss the possible limitations and implications. Although the official term 'hospitals network' is used to describe the reform, in practice it does not involve an element of cooperation between hospitals. The regulation's main feature was changing the financing methods for a pre-defined scope of services (from per-case to global budget).The reform was planned and implemented on a rather ad-hoc basis while its major controversy is the lack of quality of care, health outcome and population health need measures in the network inclusion criteria. The assessment of the reform's impact on service provision requires long-term analysis and access to detailed quantitative data.

1. Introduction

In Europe, hospital care absorbs approx. 30% of total health expenditures and is primarily financed from public sources. In 2015, the share of hospitals in the total current health expenditures ranged from 29% in Germany to 47% in Estonia (for Poland it was 36%) [1]. Reducing the number of curative care beds and promoting diverse hospital care cost-containment mechanisms have been common trends of European health systems in the past two decades. The broader re-organization of in-patient care sectors, which involves centralization of hospital care provision, reducing excessive infrastructure and moving away from hospital-centered to integrated care systems has been a reform target in many European countries [2–4].

Hospital networks have become a popular organizational form promoted in public health systems [3,5]. They are usually defined as a group of hospitals that cooperate with each other in order to coordinate and deliver health care services for a given population [5–7]. Although there are significant differences between countries, hospital networks are usually formed by diverse forms of strategic alliances or contract agreements, while the aims of building such networks may include, inter alia: improving coordination of care and hospital productivity, containing costs, enhancing information and knowledge sharing [3,4,6,8].

On 1 October 2017 a system of basic hospital service provision, popularly called the 'hospitals network' was implemented in Poland. The reform's general objectives included: improvement of the organization, structure and access to services delivered by hospitals; and hospital management facilitation. The aim of this paper is to describe the background of the reform planning and its formal objectives, content and implementation process, as well as to assess the preliminary results and discuss the possible limitations and implications. The methods include: literature review, desk analysis of legal regulations, reports and statements issued by the main health sector stakeholders as well as analysis of basic quantitative data on hospital sector functioning.

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2. The 2017 'hospital network' reform

2.1. Policy background

The hospital sector in Poland is characterized by a historically oversized infrastructure. In 2014 there were 4.9 acute and 6.5 total hospital beds per 1000 population in Poland in comparison to the European Union (EU) averages of 3.9 and 5.2 respectively. Also the number of hospital units per 100,000 population is higher than the EU average (for acute care hospitals in 2014: 2.6 and 1.9 respectively) [9]. The existing beds are characterized by a relatively low occupancy ratio (66.2% for general hospitals in 2016) [10]. The high number of acute hospitals beds is accompanied by huge deficits in the long-term care sector.

In 2016 there were 926 hospitals in Poland. The majority of hospitals are public - they represent approx. 88% of all hospital beds. Public hospitals can operate in the form of so called, 'independent health care units', institutes or after corporatization – as a commercial company with the majority of/all shares belonging to the state/local government. The ownership structure of public hospitals is fragmented, divided between the three levels of local government (municipalities, counties and voivodships), ministries and medical universities. Private hospitals, although numerous, are usually small units. Regardless of the ownership structure, the vast majority of services provided by hospitals are financed from public sources: 95% in 2015 [11].

The health system in Poland is traditionally hospital-centered. In 2016 almost 50% of the total public payer (*Narodowy Fundusz Zdrowia – NFZ*) budget was spent on in-patient care services, while only 13% and 8% were devoted to primary and ambulatory specialist care respectively. In general, the share of hospital costs in the NFZ budget gradually increased from 47.6% to 49.7% between 2010 and 2016 [12]. In terms of service delivery, Poland has comparatively high hospitalization rates for chronic conditions (e.g. asthma and chronic obstructive pulmonary disease) and, as a consequence, one of the highest levels of avoidable hospitalizations in the EU [13].

Until October 2017, (prior to implementation of the hospital network reform) the NFZ bought hospital services via an annual contracting procedure which took the form of competitive tenders or (rarely) negotiations. The value of the contract with the public payer was the main determinant of hospitals' revenues. Providing services above the contracted value (justified as delivered under 'sudden circumstances') and claiming additional funds (also via court lawsuits) was a common practice. Depending on financial ability, the payer usually, at least partially, covered these claims. Nevertheless, numerous public hospitals faced the problem of a difficult financial situation with a significant value of overdue liabilities.

As a consequence of the above, the hospital sector has always held a high position on the policy agenda. For example, the issues of constraining public hospitals' debts; commercialization processes; hospitals' adjustments to new technical and sanitary standards; and the progress of informatization; as well as adjusting the sector better to the population's actual health needs have been important MoH priorities for more than a decade now. Actually, the idea of introducing a hospital network was first mentioned by MoH representatives in 2006 [14]. The proposed project was focused on formulating a national network of hospitals with the main aim of adjusting the hospital sector organizational structure, as well as diagnostic and therapeutic capacities to the actual population needs, as defined by epidemiological and demographic indicators [15,16]. Yet, after the parliamentary election held in 2007, and following a change of MoH executives, the project was not developed.

2.2. Policy process

After the 2015 parliamentary elections, the Law and Justice party (*PiS*) was able to form a majority government. The newly appointed Minister of Health presented in December 2015 a list of short and long term changes/reforms to be implemented in the health sector. The first one included, inter alia, de-commercialization of hospitals, while the long term plans involved changing the basis of funding the health system from insurance to tax based [17]. In general the new government promoted the idea of the 'national health service' and a clear distinction between public and private service providers.

The first formal announcement of the 'hospital network' idea was presented in July 2016. The Ministry of Health (MoH) presented the document 'National Health Service - Strategy of changes in the health system in Poland for the period 2016–2018' [18]. The document had a rather general character and described six priority areas of planned health system reforms:

1 organization of health system funding (introduction of tax based funding; liquidation of the NFZ beginning in January 2018);
2 organization of hospital care provision (implementation of the hospital network);
3 level of health expenditures (increasing the share of public health expenditures on health to 6% of GDP);
4 primary health care (developing PHC capacities, including implementation of care coordination elements);
5 public health (integration of public health services under the new Public Health Agency);
6 medical staff remuneration level (introduction of minimum salary level regulations) [18].

It is worth mentioning that within two years of the document's presentation, the MoH formally withdrew the proposals regarding NFZ liquidation and tax based funding.

The project of hospital network regulation was formally presented and opened for a public consultation process in September 2016. The written justification to the project took the form of a rather general, eight page long document. It indicated that the two main problems to be addressed by the new regulation are: the need to formally introduce the reference levels for hospital and specialist care and the need to provide more stable sources of financing for hospitals. There was no additional document including comprehensive regulation impact assessment analysis (RIA), nor its ex-ante cost-benefit evaluation (the RIA was limited to a simple, three page table).

During the 30 day long public consultation process, more than 90 organizations (including, inter alia, numerous hospitals, local government units, health care worker associations, and the NFZ) provided a total number of 325 comments [19]. In general it is quite difficult to unambiguously indicate the main stakeholders' positions toward the reform, as many of them might have supported its general idea (providing stable financial sources for hospitals), yet expressed numerous doubts concerning the details. For example, representatives of public hospitals (both hospital managers themselves and the owners – local governments) requested detailed information concerning the level of financing and precise justification of the network inclusion criteria. An association representing several patient organizations expressed their concerns regarding the possible limitation of services not covered by the network. In general, regardless the stakeholders' positions towards the proposed changes, their practical influence on the reform was rather minimal (Fig. 1). The vast majority of the submitted comments were assessed by the MoH as unjustified and/or not related to the proposed regulations.

Table 1
Hospitals included in the hospital network implemented in October 2017.

Hospital network level		Type of hospitals	Number of hospitals included
basic	level 1	general, county hospitals (providing services in at least 2 out of 5 specialties: general surgery, internal medicine, gynaecology and obstetrics, neonatology, paediatrics)	283
	level 2	hospitals providing more complex procedures (a minimum of 6 specialties, including anaesthesiology and intensive therapy)	96
	level 3	multi-profile specialist hospitals (a minimum of 8 specialties, including anaesthesiology and intensive therapy, infectious diseases)	62
specialist	paediatric	single specialty – paediatric	13
	oncology	single specialty – oncology	20
	pulmonology	single specialty – pulmonology	30
	pan-regional / national	institutes and clinics/university hospitals	90

Source [21].

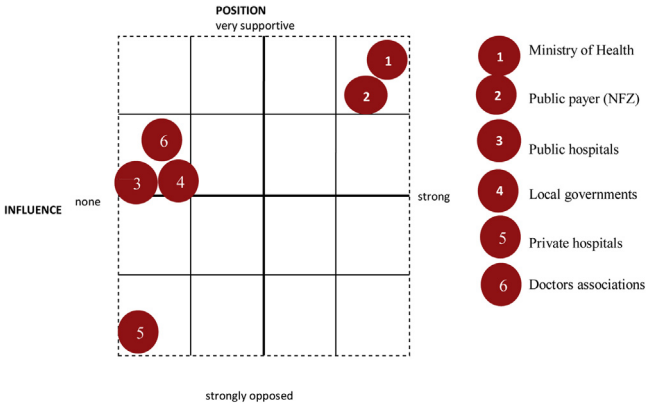

Fig. 1. Stakeholders' positions and influence on the reform process.

The updated draft of the hospital network regulation was sent to the Parliament in February 2017 and adopted a month later [20]. What is important is that although the general regulations (amendments to the Law on Health Care Services Financed from Public Sources) were adopted in March 2017 - the executive regulations were not finalized at the same time. This means that only a general reform framework was accepted, while the exact details related, for example, to the network inclusion criteria as well as to the rules of hospitals' budget value calculation were still undecided. In general, the reform's timeframe was rather short (several months between the regulations' first project publication and deadline of implementation - which originally was set for July 2017), the Ministry of Health did not provide information on any ex-ante quantitative impact assessment of the proposed changes, and there was informational chaos related to details of the executive regulations.

2.3. Aims and content

According to the MoH official website, the objectives of the 'hospital network' reform were as follows: "(1) to improve the organization of services delivered by hospitals; (2) to improve access to hospital care; (3) to optimize the number of specialist wards; (4) to improve coordination of in- and out-patient care; (5) to facilitate hospital management" [20,21]. Indirect, general assumptions behind the reform were related to improving the relationship between the payer and hospital care providers while ensuring continuity and stability of financing for providers, which was important from the point of view of securing access to health services. However, for none of the defined objectives was an indicator to measure its realization proposed.

The reform introduced a system of basic hospital service provision in which hospitals are divided into seven groups/levels (three basic and four specialist) depending on the scope of services provided (Table 1). The services provided within the network, in addition to inpatient care, also include ambulatory specialist care in outpatient units in hospitals, rehabilitation services and services provided during the night and over holidays. Psychiatric hospitals and long-term care facilities were not included. Assignment of entities to network levels is valid for four years and done by the directors of regional NFZ branches based on a set of predefined criteria. These included (in addition to providing a pre-defined scope of services): having a contract with the public payer for at least two years prior to the reform implementation and providing emergency care services. Additional hospitals (not meeting the inclusion criteria but assessed as 'important for the health security of the region's population') might be included in the network based on a regional NFZ branch director's individual decision.

The regulations introduced a significant change in the payment mechanism (although the basic unit of calculation remained Diagnostic Related Groups – DRGs) (Table 2). Hospitals included in the network have guaranteed access to public financing - they are financed based on a global budget principle for the complex care provided within the defined period of time (instead of hitherto per case financing). The global budget is calculated per hospital and covers all types of care (in-patient as well as ambulatory specialty visits and rehabilitation). A contracting procedure was preserved as a subsidiary form for services and/or hospitals not included in the network. In addition, for services included in the network, a list of 24 financed separately (outside the global budget) was defined. These mainly include some highly specialist and diagnostic procedures.

The network covers only pre-defined specialties – the indicated types of hospital wards/ambulatory clinics. Thus, in some hospitals (with ward structures substantially different from those proposed in the regulations) some of the wards and out-patient services might be included in the network, while the remaining might be contracted on unchanged principles, outside the network. The global budget value is calculated based on the number and value of services reported in the previous period. Yet the mathematical formula for its calculation includes negative financial incentives for exceeding its granted value - the higher the overspending, the lower the increase of the future budget value. In general, from the payer perspective, one of the indirect objectives of the reform was elimination of the problem of services provided by hospitals above the contracted limit. The budget calculation formula also introduced financial incentives to shift patients to cheaper out-patient care as well as to undergo an accreditation process (Table 2).

2.4. Implementation process and preliminary outcomes

A total number of 594 hospitals were included in the network as of October 2017, the vast majority of which were public. The requirements on specific types of required wards and emergency

Table 2
Comparison of hospital payment methods as of October 2017.

Scope of services	included in the network		not included in the network = unchanged method (the same as prior to the reform)
Payment timeframe	a four year guaranty of financing		annual contract
Method	global budget calculated on the basis of the number of services delivered in the previous reporting period	services financed separately – a list of 24 types of services financed outside the global budget amount	a contracting procedure which takes the form of competitive tenders
Management flexibility	flexible management of the services structure		the hospital can shift the contracted budget between different types of services (up to 15-20%), based on an agreement signed with the payer
Incentives for service structure changes	a 1% increase of the budget value in the case of reporting a larger number of out-patient services (by at least 10%) as well as a 1 % budget value decrease in the case of reporting a lower number (by at least 5%) of out-patient services		no direct, positive incentives to shift to out-patient or to provide one-day hospitalizations.
Incentives for quality assurance	the possibility of a 1-2% increase of the budget value, depending on the number of points acquired in the accreditation process		the assessment of the provider offer is done based on the following criteria: quality, complexity, availability, continuity, price

Source: authors own work based on dedicated regulations.

services provided led automatically to the exclusion of private hospitals, which are mostly small, single specialty units [22]. Informational chaos in the months after publication of the regulations' first draft (which was changed several times afterwards) led to hectic decisions regarding public hospital mergers (in order to meet the ward structure inclusion criteria). However, at the country level the scale of mergers was not significant (this was mainly related to hospitals owned by the same local government unit). Representatives of the private sector opted for allowing consortia of public-private units to access the network, yet this proposal was rejected by the MoH.

The wards included in the network possess approx. 145 thousand beds. As a consequence the network covered approx. 64% of all hospitals and 68% of beds. According to the MoH estimations, approx. 93% of the NFZ total budget for hospital care was devoted to services included in the network. Available, fragmented data for the first three quarters of network operation indicate that: the total number of services delivered by hospitals included in the network in the first quarter (October 2017 – December 2017) increased by 5% in comparison to the previous year; however, in the following two quarters (January – June 2018) the number of services decreased by 5% in comparison to the previous year. The majority of hospitals which reported the lowest percentage of lump sum consumption were from the network's first, most basic level [23,24]. As of writing this paper, the NFZ has not provided data allowing for more in-depth analyses.

In the opinion of the managers of the hospitals included in the network, the change of the financial mechanism allowed for more flexible financial management and supported strategic planning decisions [25]. The regulation introduced partial financial incentives to shift patients from in- to out-patient care (at least for the services provided within the network) while the 4-year financing guarantee allowed more stable long-term projections.

3. Discussion

The assessment of the reform's impact on service provision requires long-term analysis and access to detailed quantitative data. These should include information not only on the value but also the structure of the services provided under the new system. As mentioned before, Poland is characterized by the overcapacity of the hospital sector, which is accompanied by deficits in outpatient care provision. Also, day care utilization is at a low level (e.g. in 2016 only 35% of all cataract surgeries were performed in day-care settings, while in France the share was 91%) [26]. Although the hospital network regulation provided financial incentives for hospitals to shift from in- to out-patient services, the new system did not include one-day procedures, which continued to be contracted separately (outside the network), thus without stable financing sources. In general, evaluation of the hospital reform's impact on service delivery should take into account the ongoing changes in other subsectors. In Poland these especially include changes to primary and long-term care as well as implementation of IT solutions and different organizational changes aimed at reducing the impact of medical worker deficits.

One of the major controversies concerning the reform's design and implementation is the lack of any quality of care, health outcomes, and/or efficiency measures in the network inclusion criteria. These were rather based on existing infrastructure. Although the health care needs maps (including maps dedicated to hospitals care) were prepared and published by the MoH in 2016, the following hospital network regulation lacked direct justification in the identified population health needs [27,28]. In terms of quality of care and/or health outcomes, in 2017 the MoH published a proposal of the basic principles of the dedicated legislation [29]; yet as of writing this paper, no progress has been made. As a consequence, there is no formal regulation of quality assurance and/or monitoring in hospital care. Assessing hospital performance has been promoted by international experts as a vital element of sector governance for almost two decades now [30,31]. Hospital sector reforms currently being conducted in other European countries often involve implementation of the mechanisms/indicators for performance assessment and monitoring. These are related mainly to clinical outcomes and quality of care, but can also involve financial indicators [32,33]. Performance assessment is also a key issue for the hospital competition mechanism [34].

As in many other Central and Eastern Europe countries, one of the major challenges in reforming the Polish hospital sector is fragmented ownership [35]. There is diversity of ownership structures and no single entity with steering functions at the regional or central level that could, for example, foster difficult and politically cumbersome decisions regarding hospital liquidations and/or mergers [27,36]. Network regulation may be used to promote the centralization of hospital sector, i.a. by defining inclusion criteria that would provide incentives for hospital mergers and/or developing pre-defined type of services. Yet at the same time a system level strategy for hospitals, showing a targeted model, is greatly needed. The preliminary fragmented data for the first months of the network's operation showed that numerous local hospitals, which are usually owned by the counties, were not able to utilize their budgets' total values. In practical terms, this meant a lower value of financing for future reporting periods. In general, these

hospitals are currently facing major challenges related to both the level of financing as well as doctor deficits [37,38]. In July 2018, the National Association of County Hospitals (including more than 130 county hospitals) issued an official petition to the NFZ, asking for increased financing and emphasizing their risk of insolvency in 2018, mainly due to rising staff costs [39]. In general, the issue of the functioning of county hospitals and their role in the Polish system has been a central issue of policy-makers' debates for many years now. There have been proposals of their acquisition by regional administrations, liquidation and/or transformation into local health centers. Yet, as in many other countries there is tension between the autonomy of the decentralized units and potential efficiency gains derived from centralization [40].

One of the reform objectives was better coordination of services delivered by hospitals, including in-patient, specialist ambulatory and rehabilitation. This is in line with the reform trends in many other European countries [41,42]. At the same time, changing the financing principles which gave some of the (mainly public) providers a guaranteed access to public financing may be defined as a partial retread from the competition principle. This element is, however, mainly related to the network inclusion criteria which are to be up-dated and modified every four years. The interaction between the principles of 'coordination' and 'cooperation' versus 'competition' in hospital care has been a central issue of researchers and debate among policy makers for many years now [43–45]. The Polish reform may indeed contribute to a better coordination of services; yet due to the above mentioned lack of hospital performance assessment indicators, the potential gains derived from 'competition on quality' cannot be achieved.

The reform of the hospital sector in Poland is a good example of the health system reform processes described in the literature that face both the challenges of consistent design as well as the challenges of successful implementation [46]. For hospital sector governance to be effective, strategic decisions at the macro and/or mezzo levels must be complemented by appropriate individual hospital management [41]. Thus, from the system point of view, a prerequisite is creating a proper set of incentives. Examples of strategic directions for the Polish system might include: (1) centralization of highly specialized hospital services; (2) shifting to out-patient and/or coordinated care models; (3) reducing and/or restructuring (for example, by transforming into long-term care) excessive infrastructure. Some of the actions undertaken by the MoH between 2016 and 2018 (e.g. piloting coordinated care models, launching the project of a highly-specialized oncological care provider network) suggest that these objectives are being pursued. The network regulations have provided a tool which can be used to reach these objectives, yet its efficiency depends on the practical details of implementation as well as how it is imbedded into the overall health system strategy.

4. Conclusions

Although the official term 'hospital network' is used to describe the 2017 hospital sector reform in Poland, its actual meaning is not consistent with the commonly accepted definition (as it does not involve the element of cooperation between hospitals). The regulation's main feature was changing the financing principles for a pre-defined scope of services. The policy implementation process was characterized by a relatively short timeframe, with problems related to misinformation and miscommunication. The new regulations' major controversy is the lack of quality of care, health outcome and/or efficiency measures in the network inclusion criteria. The regulation provided a tool for restructuring the Polish hospital sector. However, it will be important to closely monitor its effects, adjust the regulation when needed and to embed it into a more comprehensive strategy for the future development of the hospital sector in Poland.

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