

COORDINATING HEALTHCARE UNDER A PLURALISTIC HEALTH INSURANCE SYSTEM: THE CASE OF SLOVAKIA

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Abstract

The Slovak approach to decreasing health-care costs is based on a changed interpretation of the concept of 'a minimum network of providers'. This study describes the changes made in the healthcare system in Slovakia in order to keep it affordable. It shows how the initial interpretation of a minimum network as an assurance for general access to healthcare services slowly changed into a cutback making the minimum network an upper limit for healthcare. The study argues that the complexity of the network made for non-transparent policies, in which consultation was nearly absent and vertical power became dominant, despite the semi-independence of actors in the network. This observation runs counter to the network theory suggestion that in complex networks, with semi-independent actors, vertical power becomes useless.

Keywords: healthcare coordination, semi-independent institutions, networks.



1. Introduction

There is a generally shared agreement among experts that healthcare is at least in part a collective good that cannot be solely the individual responsibility of the citizens. Arguments supporting state intervention are based on the allocative activities and redistributive functions of government (Stiglitz, 2000; Maly, 1998). Feldstein (1993) argued that healthcare is an impure public good; subject to information asymmetry, externalities, uncertainty, and complexity. Because of information asymmetry, the most important factor limiting individual demand for health services is the inability to pay for such services individually, while from a social perspective, the general opinion, at least in developed Europe, is that all people are eligible for basic healthcare services, independent of their ability to pay. This opinion is demonstrated in, for example, the European Charter of Social Rights.

However, there are increasing difficulties in keeping healthcare affordable. In addition to contextual developments, such as the greying of society, the cost increase in healthcare is caused by the complexity of its network. As in all networks, this one is characterized by tension between the goals of each level involved in coordination of inpatient care and the presumed goals of the network as a whole, a strong resource dependency between the organizations involved, a complex of incentives that varies among the organizations involved and is contradictory from the perspective of the network of organizations, transaction costs that are largely determined by extensively monitoring and evaluating the performance of each of the constituting organizations, and opportunistic behavior among each of the organizations involved. Theories on inter-organizational relations are concerned with explaining the nature and consequences of specific types of relationships among organizations and the coordination thereof. The relationships may be defined in terms of their structure, i.e. alliances, partnerships, and networks, although many other connotations also exist (Cropper *et al.*, 2008). Overviews of theories in inter-organizational relations are found in Van de Ven (1976), Galaskiewicz (1985), Oliver (1990), Barringer and Harrison (2000) and Cropper *et al.* (2008).

However, while theorizing about the coordination and management of networks is still concerned with questions such as how to govern such complex networks in practice (Kenis and Provan, 2007), some governments have opted for a pragmatic solution that is, simply reducing the complexity of the network. This is, of course, easier said than done, and especially in healthcare it could have serious negative consequences. Nevertheless, this was the solution of the Slovak government, as well as the Hungarian government, in order to make the healthcare system manageable and affordable.

The goal of this paper is to analyze the way in which Slovak central and regional governments accomplish the task of optimizing the network of inpatient health services in Slovakia, and to evaluate the effects of this change on healthcare services. The paper focuses on this pragmatic solution, compared to the multitude of theoretical

suggestions to coordinate complex networks, by presenting a case study of Slovakia, where 'healthcare network' is rather decentralized: most healthcare providers are privately owned establishments, and most healthcare finance is in the hands of a network of at least formally competing public and private health insurance companies.

The Slovak solution to the issue of physical access is largely based on an interesting coordination tool: the 'minimum network of providers'. In the core part of this paper, we investigate how this minimum network has been defined in the subsystem of inpatient care (specialized hospitals excluded), and closely examine the policy implementation aspects. Our focus is on how the minimum network of inpatient care has been achieved through the coordinated activities of the state, at both the central and regional levels. Before that, we present an overview of the developments in complex network management theories (in our case such complex network is the network of coordination and delivery bodies described in the later text), of which it is remarkable that simplifying the complexity of networks seems to have never been considered. The final part of the paper displays current results in the area, analyses the pros and cons of intervention, and presents several important observations on the policy-making and implementation capacities of the Slovak government, and on the complexity of coordinating pluralistic service-delivery systems¹.

The main method used to draft this paper is the secondary analysis of existing data and information. Brief interviews with regional politicians, administrators and academic experts helped to frame the text.

2. Developments in complex network theories

The first systematic studies about networks, networking, and building coalitions in organizations are from the late 1950s and 1960s (Dill, 1958; Levine and White, 1961; Evan, 1965, 1966). This classical research described interactions between people across organizations who aim to create networks for getting things done and for exchanging information. These interactions often go beyond the formal structure of the organization and are assumed to accomplish more than could be accomplished by only going through formal channels. To create a network is seen as a rather simple task; it involves simply identifying people who could be helpful in the process of achieving the desired objectives, establishing their reliability, and then actively seeking their cooperation. Literature on this subject shows that a shared aim, i.e., 'getting things done in an organization' is involved in creating alliances i.e., 'getting agreement on a course of action with other people and joining forces to get things done' (Armstrong, 2006; Bolman and Deal, 2003). According to Evan (1965), social science research had previously been concerned primarily with networks understood as intra-organizational phenomena. During this time, the theory and methodology impeded research

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on inter-organizational relations. To solve this problem, Evan suggested two methodological tools that could prove useful in the development of empirical research on inter-organizational relations: graph theory and input-output analysis. The first tool was developed in research dealing with network visualization; the second is known as transaction cost economics [TCE], focusing on control phenomenon in inter-organizational relations.

During the 1980s and 1990s, scholars and practitioners (Perrow, 1992) described a growing interest in the networks and multi-organizational relations that are usually created to solve the complex problems that occur mainly in the private sector but also in the public sector. A network was defined as a 'group of more or less independent organizations that have a relatively stable and long-term cooperation' (Grandori and Soda, 1995 *apud* Jacobsen and Thursvik, 2002). The core position was that networking can essentially support and promote projects, programs, ideas, and sharing knowledge (Nohria and Eccels, 1992; Alter and Hage, 1993; Borgatti and Foster, 2003).

Provan, Fish and Sydow (2007) scrutinized contemporary articles dealing with inter-organizational networks in industry. According to their study, it would be an exaggeration to say that empirical studies have successfully created a theory about networks. The research on networks and inter-organizational relations instead constitutes fragmentary empirical studies focused on some important aspects of a network, but not examining the whole network. In organizational life, everybody talks about networks, but Provan, Fish and Sydow (2007) argued that researchers are still unable to effectively define this phenomenon. According to them, researchers who focus on business and business relations even avoid the concept of networks. Instead, they talk about 'partnerships, strategic alliances, inter-organizational relationships, coalitions, cooperative arrangements or collaborative agreements'. Other scholars interested in resource dependency theory (e.g., Pfeffer and Salancik, 2003), transaction cost economics (e.g., Williamson, 1991) or investigating inter-organizational contracts (e.g., Ariño and Reuer, 2006) often pay attention only to organizations and social relations between concrete actors involved in cooperating on behalf of their organizations, which cannot be perceived as research on networks as a whole (Provan, Fish and Sydow, 2007).

2.1. The coordination of network complexity

How networks are managed is a crucial aspect of network analysis. Classic theory (for a summary, see for example Kickert, Klijn and Koppenjan, 1997) suggests that hierarchy and steering is needed to manage a network. This theory is currently disputed, because there is a dilemma involving trust and governance in which too much governance steering and state responsibility can be costly and redundant because of the justified trust, but too little steering can be as costly because of inadequate safeguards in reducing opportunistic behavior (discussed for example in Groeneveld and Van de Walle, 2011). Those responsible often try to minimize the second failure and therefore opt for steering even though it can be redundant and costly. Theoretical ar-

guments for 'massive' state interventions in modern healthcare systems are widely accepted by the current logistics of healthcare systems in developed countries, and to a large extent in developing countries as well: normally the state is responsible or co-responsible for all the most important aspects of healthcare delivery, specifically for financing (accumulating and distributing resources), quality, and access assurance.

The ways in which such 'state responsibility' is executed vary significantly among countries. Some common models can be identified. For example, Bjorkman and Altenstetter (1998) identify four main forms of 'managing' healthcare services:

- A state-dominated, general-taxation-based model (tax revenues finance a major part of health services and a single public body is responsible for managing the most important aspects of healthcare delivery);
- A state-dominated, social-insurance-based model (compulsory health-insurance revenues finance a major part of health services and a single public body is responsible for managing the most important aspects of healthcare delivery);
- A pluralistic, social-insurance-based model (compulsory health-insurance revenues finance a major part of health services, several independent health-insurance companies reimburse services, and the state has a coordinative function); and
- A market-based model, where the role of the state is marginalized, and access depends very much on the ability to pay, though some social assistance programs may support access by vulnerable groups.

The boundaries among all these models are unclear. In practice, all real healthcare systems represent some kind of mixture. Even the difference between taxation-based revenues and health-insurance revenues is somewhat artificial; for example, Vostatek (2010) argues that social insurance can also be perceived as a form of taxation.

According to Kenis and Provan (2007) shared network governance will be most effective for achieving network-level outcomes when trust is widely shared among network participants (high-density, decentralized trust), when there are relatively few network participants, when network-level goal consensus is high, and when the need for network-level competencies is low.

Lead organization network governance will be most effective for achieving network-level outcomes when trust is narrowly shared among network participants (low-density, highly centralized trust), when there are a relatively moderate number of network participants, when network-level goal consensus is moderately low, and when the need for network-level competencies is moderate.

Network governance by a network administrative organization will be most effective for achieving network-level outcomes 'when trust is moderately to widely shared among network participants (moderate-density trust), when there are a moderate to high number of network participants, when network-level goal consensus is moderately high, and when the need for network-level competencies is high' (Kenis and Provan, 2007, p. 13).

Many governments cannot, or at least do not, wait for the final answers. This was the case in Slovakia. The government opted for a much simpler solution in coordinating the complex healthcare system: reducing the complexity of the network through the principle of a 'minimum network of providers'. The results are described in the next sections.

3. Coordinating changes of the network providing inpatient healthcare in Slovakia

The Slovak Republic was established on 1 January 1993 as a result of the friendly dissolution of Czechoslovakia, following the major changes after the 1989 'Velvet Revolution'.

The process of reforming the Slovak healthcare system started immediately after the Velvet Revolution in 1989. Important changes were introduced, especially privatization and the shift from financing healthcare through general taxation to pluralistic social health insurance. At the same time, there was a focus on maintaining universal access and ensuring a 'basic package' for all citizens, regardless of their ability to pay. Privatization is now nearly complete, except at the hospital level. The administration of the Slovak healthcare system can be described as decentralized and based more on coordination than direct management. This is due to the existence of several independent or semi-independent actors on the 'supply' side of the healthcare market, as described below.

A: The State: represented especially by parliament, by central, regional, and local governments, and by a specific agency: the Healthcare Surveillance Authority. The parliament is responsible for the legislative base for healthcare and it makes decisions about resources by setting the level of insurance premiums. The Ministry of Health (central government) is responsible for health policy development and implementation, which involved several different types of activities, especially defining the network of health establishments, coordinating central healthcare programs, and establishing and managing teaching hospitals and other specialized units (but has only general regulatory power in relation to the hospitals managed/ licensed by the regional governments). The Ministry of Health is also responsible for medical staff training and for the categorization of medicines. The Healthcare Surveillance Authority was established in 2004 as a part of agencification in Slovakia (Nemec, Sagat and Lawson, 2012). Its main tasks are to supervise the provision of healthcare and public health insurance and to arbitrate between actors. Almost fully independent regional self-governments are responsible for regional hospitals (regional or sub-regional hospitals, which may not provide complex inpatient services). By 2003, all these hospitals had been transferred to regional governments or converted into non-profit bodies. Regional governments are tasked with the maintenance of a minimum network of healthcare providers in their regions, including the licensing of all local and regional providers. Municipalities have limited responsibilities in the local network of providers.

B: Health Insurance Companies: In healthcare financing, Slovakia switched to the 'Bismarck' system of social health insurance, where independent health insurance companies are responsible for collecting, distributing, and managing the bulk of finance. Soon after the start of Slovakia's pluralistic health insurance system, 13 health-insurance companies were established. However, most of them later exited the market because of mergers or bankruptcies. As of 2014, only three health-insurance companies are still in existence in Slovakia: one public shareholder company, VsZP, with about 65% of the market, and two private health insurance companies, Dobra with about 25% of the market, and the smallest company, Union. Health insurance companies are responsible for collecting insurance premiums and paying for the services provided to their clients, the insured. The companies must conclude contracts with establishments belonging to the minimum network, but not with other establishments. In this way, they are able to influence the size and structure of the network of health service providers.

C: Healthcare Providers (outpatient and inpatient care). This paper concerns only hospital inpatient care – the network of hospitals in Slovakia consists of teaching hospitals (13 hospitals in 2014), managed directly by the Ministry of Health, and of regional hospitals. Regional hospitals have, as the result of the 2004 reform (for more see Nemeč *et al.*, 2013), very different ownership forms, may belong to regional self-governments, and may be established as independent non-state, non-profit organizations; some of them are fully privatized bodies.

3.1. 'Minimum network' of hospital inpatient healthcare in Slovakia

The main principle of the Slovak healthcare system is that it guarantees universal and equal access to all health services, regardless of the patient's residence or ability to pay (in practice, however, this principle is impossible to achieve). Legislation includes important elements to guarantee physical access to all types of healthcare services, and hence requires a 'minimum network of healthcare providers'. Such minimum networks should be established in outpatient and inpatient care and for emergency services. This section of the paper describes how the interpretation of this 'minimum network' slowly changed from being a lower boundary to becoming an upper limit for the number of healthcare providers. The Healthcare Act (576/2004) defines the minimum network for inpatient and outpatient care as 'a minimum number of publicly accessible providers on the territory of a regional self-government set by the number and structure of providers necessary to effectively guarantee accessible, continual, and permanent professional healthcare, reflecting the number of inhabitants, the geographic and demographic specifics of the region, the mortality and morbidity indicators of the territory, migration, and state security'. The Law on Emergency Services (579/2004) stipulating that every citizen has the right to emergency service within 15 minutes regulates access to emergency care (for more, see Nemeč and Kolišničenko, 2006).

The Healthcare Act established the principle that a certain minimum number of providers should be available in a given territory, but it does not explain this issue in details. In particular, it does not define ‘minimum network’ any more concretely, and it does not set clear responsibilities for establishing and maintaining ‘minimum networks’ – it fails to define the roles of the Ministry of Health, regional self-governments, or other actors. In such a situation – unclear legislation and the existence of several independent actors – effective coordination is the only available tool to fulfill this task.

Based on the 2004 healthcare laws, the original focus of ‘minimum networks’ was to ensure physical access to health services for all inhabitants. However, the issue of the ‘minimum network in inpatient care’ was not addressed with any concrete action by the Ministry of Health or by the regional self-governments. The legal statement that everybody should have a certain minimum level of physical access to health services remained almost a purely political proclamation for a long period, possibly because of changes in the government: after one year of implementing the 2004 set of healthcare reform goals, the right-wing government of Prime Minister Dzurinda was replaced by the left-wing government of Prime Minister Fico (for more, see Nemeč *et al.*, 2013).

Over the years, a general dearth of resources, in combination with an excess supply of inpatient facilities, led to a change in the Slovak government’s attitude. Table 1 illustrates the key economic aspects of the Slovak healthcare system, especially the permanent imbalance and increasing debt. Table 2 shows the main network indicators. On the revenue side, huge increases are seen in the health insurance premiums and

Table 1: Financial resources for healthcare in Slovakia, in millions (EUR)

	1995	2000	2005	2008	2010
Health Insurance Companies Expenditures	500	880	2,400	3,300	3,400
Direct State Budget Expenditures	280	390	400	100	200
Direct Payments by Consumers	45	150	700	1,000	1,100
Total	825	1,420	3,500	4,400	4,700
Per cent of GDP	5.7	6.1	7.2	6.5	7.3
Balance of HC system (expenditures/revenues)	-0.5	-7.9	-2.0	-3.1	-2.7

Source: Bjorkman and Nemeč (2013)

Table 2: Health Resources in Slovakia in comparative perspective

	1995	2000	2005	2008	2010
Doctors/ 1000 inhabitants Slovakia	3.2	3.3	3.7	3.9	3.5
Doctors/ 1000 inhabitants Hungary	5.1	5.2	5.0	5.0	5.0
Doctors/ 1000 inhabitants Slovenia	2.1	2.2	2.4	2.4	2.4
Doctors/ 1000 inhabitants OECD	x	x	x	x	3.2
Hospital beds/ 100 000 inhabitants Slovakia	691	636	772	736	652
Hospital beds/ 100 000 inhabitants Hungary	897	818	790	720	710
Hospital beds/ 100 000 inhabitants Slovenia	574	540	483	459	457
Hospital beds/ 100 000 inhabitants OECD	x	x	x	x	360

Source: Bjorkman and Nemeč (2013); OECD statistics

direct payments; on the resource side, an increase in employment in the health business is seen, as an increased number of hospital beds, which is twice the international standard. The tables show that reducing the complexity of the network in order to cope with increasing deficits and visible inefficiencies of the system became an urgent task for the government (figures from 2010 show immediate success in terms of capacities).

Under these circumstances, the Ministry of Health started to re-interpret the original intention of 'minimum network' principle, and to assure access to health services in a rather different way. The Ministry decided to publish secondary legislation on the 'minimum network' with another real aim, namely the optimization of the network. The 'minimum network' principle changed from a principle to assure access to a principle to maximize access and to decrease the number of small hospitals and the number of hospital beds.

In late 2007, the Government of the Slovak Republic published a government decree defining the minimum network for inpatient care. In this phase, the focus was mainly the protection of state-owned hospitals – the norm defined the 34 state-owned hospitals in their existing structure as representing the minimum network.

With the international fiscal crisis, the issue of optimization became more urgent in terms of the need to decrease excessive capacities. In 2011, the Government significantly amended its decree on the minimum network. As a result, new central data on the minimum inpatient network were published by the Ministry of Health with a focus on significantly decreasing the existing capacities.

Before describing the processes on the central and regional levels, we need to note an important process characteristic, namely that the process did not reflect good governance principles, especially regarding transparency, predictability, and consultations. The Ministry of Health never revealed how it calculated the minimum network of inpatient care. It also did not consult with regions, despite the fact that regional establishments are the core part of inpatient care and regions are responsible for regional hospitals. In addition, the Ministry of Health was expected to provide implementation guidelines for the regions in order to help them transpose the broad legal definition of the minimum network into practice. It delivered no guidelines beyond the detailed data from 2007 and 2011 that characterized the minimum network as the existing network.

3.2. Establishing the minimum network of inpatient hospital healthcare in Slovakia

The core actors engaged in the establishment of this minimum network are the Ministry of Health, relevant public hospitals, the public health insurance company VsZP, and the private health insurance companies Dovere and Union. From a management/coordination point of view, the Ministry of Health is the founder and coordinator of the academic hospitals and nominates the directors of all such hospitals. In performing its function, it has both horizontal and vertical power. The Ministry also has informal vertical power in relation to the public health insurance company VsZP

(via its representatives on the board of this public shareholder company), but it needs to combine this vertical power with horizontal coordination tools. With regard to the private insurance companies, only horizontal tools can be used.

The optimization of the hospital network was a two-step process. First, the network of 'central level' hospitals was defined as the set of state-owned hospitals under the authority of the Ministry of Health with a full range of services. The second step addressed the network of small hospitals under the authority of regional self-governments. At the central level, the task of optimizing the network of hospitals (the official task in the creation of the 'minimum network') was much simpler than within the regions. The task was just to choose which hospitals to include into the central network – by providing them with the status of academic hospitals.

Under these conditions, the Ministry of Health proposed a minimum network of academic hospitals (on the basis of regional and population data) and implemented it relatively quickly and without significant conflicts, because all of the insurance companies accepted this network without complaints. The current network is relatively well balanced as follows:

1. Three children teaching hospitals – one in each of four NUTS II² regions (Bratislava serving to West Slovakia): Bratislava, Banska Bystrica, Kosice.
2. Three major 'university' teaching hospitals – one in each of four NUTS II regions (Bratislava serving to West Slovakia): Bratislava, Martin, and Kosice.
3. Seven 'faculty' teaching hospitals in all major cities of Slovakia, where university academic hospitals are not located – Trnava, Nitra, and Trencin in West Slovakia, Zilina and Banska Bystrica in Central Slovakia, and Presov in East Slovakia. One specific specialized neurosurgery teaching hospital is in Nove Zamky (West Slovakia).

The changes at the regional level were much more complicated for several reasons. Although the Ministry of Health sets the norms for the minimum network, regional self-governments are formally responsible for it. Table 3 shows the heterogeneity of the hospital structures at the regional level. Public hospitals are established by the self-governing regions, private for-profit and not-for-profit hospitals are regulated by the self-governing regions. The public health-insurance company VsZP and the private health-insurance companies, such as Dovera and Union, all three are headquartered in Bratislava, which is far away from most regions.

Second, the self-governing regions have hardly any vertical tools to ensure the minimum network. Most of the hospitals in their territories are either Ministry of Health institutions or independent private bodies. Because the self-governing regions themselves own only a few hospitals in their area, all other lines of coordination are horizontal for them, except for the opportunity to ask the Ministry to act on their be-

2 Self-governing regions are NUTS III in Slovakia, in this case NUTS II level better reflects the problem.

half in relation to the health-insurance companies. Table 3 indicates the structure of hospitals in Slovakia when main changes started.

Table 3: Regional Hospitals in Slovakia (2009)

Ownership	Western Slovakia			Central Slovakia		Eastern Slovakia		Bratislava	Total
	TT	TN	NR	BB	ZA	PO	KE		
Public hospitals	4	4	2	2	5	3	1	1	22
Other hospitals owned by non-profit or private organizations	4	8	6	14	5	21	11	14	83

Abbreviations of regions: TT – Trnava, TN – Trenčin, NR – Nitra, BB – Banská Bystrica, ZA – Žilina, PO – Prešov, KE – Košice.

Source: Ministry of Health

Third, the fact that self-governing regions were asked just to decrease the number of existing hospitals and beds in the region in a way prescribed by the Ministry, instead of being enabled to implement their own independent regional healthcare policies, presented an issue. Under these circumstances, the relative policy-making freedom of the self-governing regions was reduced to the painful task of closing some hospitals.

The Banská Bystrica region can serve as an example of what happened on the regional level. Before the financial crisis, the region started to evaluate the network of hospitals. The university-level advisers suggested that the region should use two core criteria for setting the minimum network: the average yearly number of hospitalizations in the region, and the physical access of the patients (travel time by public transport). The underlying criterion for the minimum network was the level of hospitalizations in different districts of the region. Experts calculated the level of physical access according to two criteria: the percentage of citizens able to access the nearest hospital within 60 or 120 minutes and the average travel time per citizen.

The core problem was that the ‘optimal network’ modeled according to these criteria differed significantly from the network of hospitals that existed before the 2007 Ministry of Health’s first ordinance on the minimum network. As a result, the areas with more hospitals would have to close one or more hospitals. However, the regional assembly never took a formal vote on the proposed minimum network, for both political and technical reasons.

Initially, the fact that there were actually more hospitals than in the minimum network was not perceived as a problem by the Banská Bystrica regional government. The situation changed after 2008 due to strong pressure from the central government. Consequently, the minimum network became more of an order from the central government than a decentralized objective to be achieved by the regions. The Ministry used its indirect vertical connections with the public insurance company VsZP, which agreed to reflect the proposal for the minimum network in its reimbursement system (VsZP did not continue to conclude contracts with hospitals outside the minimum network). The private companies later adopted the same approach, by which the

'redundant' regional hospitals lost most of their revenues. With insufficient revenue (revenues from insurance companies represent a major part of hospital income, direct payments are rather limited, and subsidies from state and regional budgets are normally not provided for running expenditures), smaller hospitals closed down or merged with the dominant hospital in the area. Within a few years, the total number of regional hospitals in this region halved. It decreased from 16 to 8 (5 non-profit and 3 for profit). Although the goals of optimization were achieved, the issues regarding costs and benefits of such change need to be discussed. This is the focus of the next section.

4. Discussion

The 'minimum network' of inpatient hospital care in Slovakia presents an interesting case in the worldwide perceived need to reduce healthcare costs and for the study of complex networks.

As to the consequences for network theory, the Slovak case indicates that even in complex networks, vertical power remains crucial and can be used by semi-independent actors in the network to accomplish changes that they cannot accomplish on their own. In this case, the vertical power of the national ministry was 'gratefully' awaited and accepted by the 'independent' regions, to avoid a situation in which they themselves would be blamed for the reduction of the healthcare network (the regional authorities have the actual legal power to dismiss/dismantle public regional hospitals and may not issue licenses for private ones). Furthermore, this situation indicates that the effectiveness of such processes of change (the effectiveness in terms of results from the changes is evaluated later in this text) does not depend on the quality of the process in terms of good governance practices. As it was argued above, transparency, consultations, and predictability were mostly absent during the process of change, and it appears that most of the key players were not too disappointed about the lack of good governance (for some explanations, see Vesely, 2013).

As to the effects of the changes, we discuss some aspects of the policy process below and evaluate the provisional short-term outcomes.

First, as to the process, both the Ministry and the regions were expected to set transparent rules for building the minimum network. Although the medical community repeatedly requested clarification, this did not come about at any time in the entire history of this process of transition.

Second, certain originally interesting and potentially positive ideas were considerably adapted in the implementation process to achieve completely different goals from those originally intended. The initial purpose of establishing the minimum network of inpatient care was to ensure general access to healthcare. In reality in the later phase, because of fiscal constraints, the Ministry sought to reduce the number of hospital beds under the heading 'minimum network' (by defining upper limits for the provided healthcare capacities – hospitals, wards, beds). This is an interesting example of how original intentions are transformed over time. The goal to optimize the

network was attained relatively successfully, because the legal definition of a 'minimum network' was imprecise, and difficult to put into practice, especially as there were no implementation guidelines. This allowed the change from the original intention to the new one (from a guarantee of physical access to a means of optimizing the network to reduce the financial costs of the healthcare system).

Third, regional self-governments with very limited vertical implementation powers were expected to set their own rules and to establish a 'minimum network' on their territory. This did not happen during the first phase, because there was a risk of difficult political fights at the regional level. The regions had to rely on the vertical power of the national ministry, and the optimization of the network on the basis of relations between the Ministry and VsZP was in the end the best choice for all of the regions. The inhabitants of smaller cities were, of course, unhappy to lose their small hospitals, but there were no major protests. Partly this can be explained by the fact that many of these hospitals were closed because of bankruptcy, framed as a private sector failure, instead of as being caused by administrative decisions of regional self-governments.

Fourth, the study provides certain policy lessons from the point of view of public-private partnerships. The ownership mix among insurance companies is expected to be a source of competition, resulting in improved services. However, with the dominant role of one of the insurance companies, VsZP, in the system, and the strong position of the state in VsZP, real competition does not exist: two remaining companies just followed the decision of VsZP to stop contracting with some facilities, as 'ordered' by the Ministry of Health.

The structure of hospitals is another issue on this topic. In certain dimensions, and especially for the quality of non-medical services, such as accommodation or food, privately-owned hospitals perform better. Private or non-profit ownership often also implies budgets that are more constrained and need better financial management systems. However, there are several risks with such an ownership mix. High-quality coordination and regulation are necessary for ensuring the balance of public and private interests. Private hospitals may go bankrupt or limit the scope of their activities. For example, they may only provide 'lucrative' health services. If this happens in areas where there are no alternate capacities, access can be endangered. The Slovak solution, of a basic network of public teaching hospitals complemented with a network of private non-profit and for profit establishments, might be a good one. Finally, this case documents the high coordination capacity of the Ministry of Health of the Slovak Republic during the process of optimizing the hospital network in the country. It is difficult to assess why the Ministry was so successful in this particular case and encountered non-resistance from all of the main actors (including patients).

Overall we can conclude that, taking into consideration the financial crisis, the Ministry basically adapted to the changing conditions of the financial market by changing its concept of a minimum network. It is very difficult to measure if the processes of optimizing the network positively or negatively affected the quality of ser-

vice (a uniform central system for evaluating patient satisfaction does not exist in Slovakia); however, our opinion is that except for the non-transparency of the process, the optimization of the network of hospitals in Slovakia represents a positive example of a concrete public policy.

The most obvious benefits concern the financial consequences of decreasing the number of small hospitals and the number of hospital beds in Slovakia, thus slowing the unsustainable growth of health capacities in the country and stabilizing the level of indebtedness of the healthcare system (Tables 1 and 2). From an expert viewpoint, this change had another positive short-term effect: it enabled a higher quality of care because of the greater specialization in larger hospitals.

The closing of hospitals may deliver several negative effects, but we may argue that in this case, the negative effects are minimal, if any. The optimization of the hospital network did not significantly reduce access to healthcare services. At the level of academic hospitals, there is almost no change in the maximum travel times of patients in need of specialized care. At the regional level, the example of the Banska Bystrica region shows that in all areas except one, citizens can reach inpatient care within 60 minutes by public transport (Hrckova and Kuvikova, 2011).

The optimization also did not influence waiting lists in a negative way. A recent study on waiting lists in Slovakia (Muzik and Szalayova, 2013) documents that waiting list for certain indications do not depend on physical capacity constraints (Table 4), but on financial resources available and spending priorities of insurance companies. Partly because of the public attention to this issue in the media in Slovakia, provoked by the publication of the preliminary results of this study, additional resources were invested to decrease the number of patients waiting for treatment in early 2013 (see Table 4).

Table 4: Waiting lists in Slovakia (number of patients per insurance company)

Date	VŠZP	Dôvera	Union	Total
30. 04. 2013	7 778	2 709	124	10 611
31. 10. 2012	14 242	2 937	160	17 327
31. 03. 2012	16 310	3 074	157	19 541
31. 10. 2011	7 888	2 943	102	10 933
31. 10. 2010	6 476	2 539	160	9 175

Source: Muzik and Szalayova (2013)

The last potential negative side effects of this change, namely the increase of local unemployment, also did not appear. Table 5 presents data from the Banska Bystrica region, where half of the small hospitals closed in 2010-2012. The impact of closing hospitals on unemployment within the profession was marginal if any, since it was easy for unemployed professional staff from the closed hospitals to find new positions.

Table 5: The number of unemployed in Banska Bystrica region – sector N (healthcare, veterinary services)

XII 2007	XII 2008	XII 2009	2010	2011	April 2012
675	672	1143	1128	1062	1066

Source: <http://www.upsvar.sk/statistiky/nezamestnanost-stvrtrocne-statistiky>

A potential lesson from this situation relates to the future consequences of the minimum network. Making the minimum hospital network equal to the actual network creates certain access risks. Under such conditions, existing providers represent a highly monopolistic structure. This may influence their behavior, and raises a very important question: What if some of them close down? Decreasing the number of hospitals may be easier than replacing the missing capacities. If there is no supply of potential new operators willing to enter the healthcare market, regional self-governments will struggle to establish new capacities on their own. The risk of long-term shortfalls in capacities is high, especially in Slovak conditions, where the reimbursement rates from health insurance companies barely cover the actual hospital costs. The concept of a minimum network of inpatient healthcare is an interesting healthcare policy instrument. Formally, it seems to be a very positive attempt to guarantee equal access to high-quality healthcare services. However, in reality several implementation problems may generate important future risks.

It is still too early to draw any definitive conclusions, as short-term results may differ from long-term results, as often happens in public policy-making and implementation processes. Although the short-term results of this coordination exercise are predominantly positive, the long-term effects may be different, especially since a monopolistic supply structure has been created.

5. Conclusions

This study described a change made in the healthcare system in Slovakia in order to keep it affordable. It showed how the initial interpretation of minimum network as an assurance for general access to healthcare services slowly changed into a cutback, making the minimum network an upper limit for healthcare. It argued that the complexity of the network made for non-transparent policies, in which consultation was nearly absent and vertical power was dominant. This observation runs counter to the network theory suggestions that in complex networks, with semi-independent actors, vertical power becomes useless and agreements must be reached by consultations and horizontal coordination.

Although we are the last to promote the bad practices seen in the healthcare reform in Slovakia in this regard, it is striking to see that the semi-independent actors 'gratefully' accepted the use of vertical power by the central government and the ambiguity and obscurity with which it acted during the process of closing down hospitals and reducing the healthcare network. It is also striking that despite these defects in the process, the positive results as mentioned occurred and massive protests were

hardly seen. This outcome disputes the assumption, widely accepted among network theorists, of the causal relation between process and outcomes. Under that assumption, positive outcomes should depend on transparent processes in which mutual dialogue and recurrent consultations among the actors in the network are central. The Slovak case argues otherwise. This case indicates that when difficult decisions have to be made, the actors in the network might be happy if another actor is able and willing to take the responsibility for such decisions by using its power.

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