ANALYSIS OF THE IMPACTS AND EFFECTS OF HOSPITAL NETWORK OPTIMISATION

Summary

February 2024

iza
Inštitút
zdravotných
analýz

Introduction

The optimisation of the hospital network (hereinafter "HNO") represents a comprehensive reform aimed at ensuring accessible, high-quality and safe healthcare for all patients in the inpatient healthcare sector. The reform defines the hospital network in terms of geographical accessibility as well as catchment areas. It also defines the scope of care and the conditions under which it is to be provided. The proposed changes are intended to bring greater order and clarity to the system. Ultimately, it is the **patient who will gain the most**.

The material focuses on a quantitative but also qualitative analysis of the impacts and effects of the reform, taking into account the existence and availability of the necessary data. Not all impacts and effects could be quantified because the necessary data are not currently collected at the necessary quality and granularity. Optimising the hospital network will affect not only hospitals and patients, but also the functioning of other parts of the system, health insurance companies, public health insurance and public finances themselves. Certain impacts are also foreseen for the emergency medical service and the transport medical service.

Summary of main findings

The new maximum waiting times for selected medical services will increase costs (creation of technical provisions) and potentially expenses (increased production) of health insurance companies. Conversely, in the medium term, the higher quality of health care provided is likely to result in savings on future health and social insurance expenditure and higher tax revenues.

A clearly defined scope of care will lead to a redistribution of hospital admissions between different levels of hospitals. Approximately 8% of hospital admissions will be redistributed as a result of the centralisation of more complex cases (by 2022). The redistribution of hospital admissions will also be followed by a redistribution in financing of an estimated EUR 176 million based on 2022 data. Transfers in the opposite direction to compensate for this quantified impact are not included. The possible decrease in output can be compensated by Level I and II hospitals by an increase in outpatient output as well as in inpatient procedures in optional programmes, which are left to the agreement between providers and insurers. These consist mainly of one-day care, follow-up and long-term care. The specific potential for increased output for lower-level hospitals is represented by the aftercare and rehabilitation programme. There is a long-standing shortage of beds of this type in Slovakia and the development of this type of healthcare will require resources that cannot be quantified at present without a defined strategy and action plan.

Optimising the hospital network can help to use the current scarce staff resources more efficiently. The number of medical staff in Slovakia has been critical for a long time. The reform creates the conditions to concentrate staff where they are most needed and to ensure that they are used efficiently, especially in overnight shifts and at weekends. The categorisation of inpatient care clarifies staffing requirements, which will also be reflected in the quality and safety of care provided.

The reform also clarifies the material and technical equipment requirements of the individual programmes, the volume of missing equipment amounts to almost 67 million EUR for mandatory programmes and 52 million EUR for the currently approved additional programmes. The equipment requirements are defined taking into account the complexity of the care needed at the different levels of hospitals. Clear rules will also help to prioritise purchases and distinguish essential from development investments. For the purchase of part of the necessary material and technical equipment, a call from the Recovery and Resilience Plan has been launched.

In addition to the requirements for personnel, material and technical equipment, more stringent infrastructure requirements will be added. The cost needed to complete the missing infrastructure is approximately €29 million for the mandatory programmes and €6 million for the currently approved additional programmes. Specifically, this concerns the construction of heliports or helipads and the establishment of a neonatal intensive care unit at the Level II maternity units.

Hospital reform may indirectly lead to higher demands on the ambulance and transport health services, but ultimately the patient will benefit. With a clear programme structure in hospitals, patient management, better call indication and triage will be easier on the part of the emergency medical service operations centre. This can reduce the volume of secondary transports and ultimately get the patient the care they need sooner. Conversely, due to potentially longer commute times and therefore the workload of ambulance crews, a higher number of vehicles as well as staff is likely to be needed, eventually also a change in the use of the transport health services and in the structure of the ambulance service.

The total impact of the optimisation of the hospital network in terms of additional capital resources for compulsory programmes, i.e. those that hospitals have to fulfil in order to maintain accessible and comprehensive healthcare, is EUR 96 million. The analysis also quantifies the impact on the approved supplementary programmes requested by hospitals, which amounts to EUR 58 million. The list of approved supplementary programmes is subject to change over time and is determined on the basis of healthcare need.

Table 1: Summary of HNO Financial Impacts for Mandatory Programmes

	Amount (EUR million, excluding VAT)	Area	Entity
Total additional resources	**96**		
Purchase of missing equipment	67	equipment	Hospitals
Completion of landing areas for helicopter emergency medical service	25	Infrastructure	Hospitals
Completion of neonatal intensive care units	4	Infrastructures	Hospitals
Total reallocation of resources 2022	**71**		
Procedures transfer (disabled programs)	71	Production	Hospitals

Source: IZA

For the first round of allocation of supplementary programmes, the Ministry of Health has chosen a phased implementation approach to the reform. Therefore, the first list of approved programmes is determined primarily by the care that hospitals provide today (to a reasonable extent). If hospitals do not meet the conditions, including the minimum number of procedures, the list of supplementary programs may change in subsequent years. Investments in supplemental programs need to be well considered with regard to long-term sustainability and the need for the program itself. The Ministry should not only assess the current need, but also forecast the need for each program over a 5-to-10-year horizon to allow sufficient time for changes and capacity building.

Optimising the hospital network

The aim of the Hospital Network Optimisation reform is to ensure that every patient has access to affordable, high-quality and safe healthcare in the inpatient healthcare sector. The reform brings order and clearer patient direction to the hospital care system. The rarest, most challenging inpatient cases will be concentrated in comprehensive hospitals. The purpose of this concentration is to ensure quality and make optimal use of scarce resources, which includes staff. Routine and long-term care, on the other hand, will be brought closer to the patient.

Box 1 Overview of HNO reform legislation and implementation

The Law on Categorization of Inpatient Health Care (the "Law") was approved in 2021. It represents the basic framework for the categorization of hospitals and the conditions of the network of hospitals that will be covered by the public health insurance (PHI). The Act defines the conditions of geographical accessibility, the size of catchment areas, as well as the categorization of inpatient health care, which are subsequently specified in the Decree on Categorization of Inpatient Health Care.

The Ordinance on Categorization of Residential Care (the "Ordinance") was first issued in 2022. More than 400 medical experts participated in its drafting. They defined the content of the different programs, medical services and their levels so that every patient knows exactly where he or she will get the care he or she needs. For selected medical services, time availability (maximum waiting times) and minimum numbers of procedures (per doctor or hospital) are also defined. In addition, the decree also defines the staffing and material and technical equipment for each programme and a list of quality indicators.

Each programme has a programme profile which determines whether the programme is compulsory, complementary or optional for hospitals at each level. Programmes that are not defined for a hospital of a given level cannot be provided by the hospital with reimbursement from the PHI, i.e. the programme cannot be contracted by the health insurance companies. Within the document we refer to these as **prohibited programmes.**

- The hospital must provide the **compulsory programme** and the health insurance company is obliged to contract it.
- The hospital provides the **supplementary programme** on the basis of an approved application. Once approved, health insurers are obliged to contract it in the same way as the compulsory programme, and the hospital is obliged to provide it until it applies for withdrawal of the programme or is withdrawn from the programme for failure to comply with the conditions defined by the Decree and the law.
- **Optional programme** - the hospital can provide it if it agrees with the health insurance company.

At the end of 2022, the **first network of hospitals** was also released. **Supplementary programs** have been approved to individual hospitals of level I to V in **1Q 2023**. The hospital network as well as all hospitals included in the network will be **evaluated annually** from 2023 onwards. In case of non-compliance with the categorization conditions, a sanction mechanism is defined, which may lead up to withdrawal of the allocated supplementary program or downgrading of the hospital to a lower level.

The need for systemic reform of inpatient healthcare in hospitals in Slovakia is long-standing and has taken various forms and names in the past. However, it has always pursued one common goal - to achieve the best possible results in the form of quality health care in conditions of limited financial, material and personnel resources.

The optimization of the hospital network, together with the decree on the categorization of inpatient health care, clearly defines five levels of hospitals. In view of the complexity of care and the complexity of treatment, each hospital has precisely defined what medical programmes (hereinafter referred to as "programmes") it must provide. It also defines additional programs that it can provide, subject to approval, if there is a need for this type of medical care in a given region. Also precisely identified are the programmes that a hospital may provide under an agreement with the health insurer without the need for approval, as well as the programmes that it may not provide on the contrary.

The HNO improves patient safety and quality of care. For more than 600 medical services (about 40% of the total), it introduces **time availability of treatment**, i.e. by when the latest the patient must receive the indicated treatment. For hundreds of medical services, it specifies the **minimum number of procedures** that a hospital, a workplace or even a doctor must carry out in a year. In addition to quality and safety, this also has an impact on the efficient operation of hospitals. The decree also **specifies the material, technical** and **staffing requirements** for each programme and each level. It also defines **quality indicators** for all programmes.

Picture 1: Hospital levels according to HNO

V. Level	IV. Level	III. Level	II. Level	I. Level
highly specialised (**quaternary**) care with very rare occurrence	specialised (**tertiary**) care with low numbers	**comprehensive** acute and planned care	acute and planned care at regional level	
for the whole of Slovakia	population of 1.4-2.0 million, 3 hospitals	600-800 thousand inhabitants, 8 hospitals	catchment 100-200 thousand inhabitants, 31 hospitals	
1 in Slovakia	with availability within 90-120 minutes from the patient's residence	with availability within 60-90 minutes from the patient's residence	with availability within 30-45 minutes from the patient's residence	
highly specialized care for children and adults, heart transplantation, burn centers	cardiac surgery, highly complex procedures in neurosurgery, highly specialised onco-surgical treatment, specialised care for children	interventional treatment of stroke, acute severe trauma, complex elective care, complex haematological diseases, endoscopic procedures in the GIT	basic acute and elective surgical procedures (e.g. appendectomies, joint replacements), standard care in internal medicine, neurology, paediatrics, obstetrics and neonatology	It provides a diverse spectrum of approved Level II supplemental programs based on health care need, surgical procedures in overnight care, aftercare, and rehabilitative care

Source: own processing by IZA according to the Hospital Network Optimisation 2022

Hospitals' compliance with these criteria, as well as the network itself, will be evaluated and published annually. If a hospital fails to meet the requirements, it may lose full reimbursement from health insurers. Long-term non-compliance may result in the loss of the programme or downgrading of the hospital.

The hospital network is not immutable, and the law establishes a mechanism to respond to the changing needs of the population. If an annual data-driven network assessment confirms a growing need for a service in the inpatient health care system, hospitals can obtain new supplemental programs. As part of the network evaluation, all hospital-level data will be publicly released annually by June 30, including quality indicators. This was first done in 2023.

2024