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## Efficiency as a parameter for assessing the Polish healthcare system

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### Summary

**Introduction.** Efficacy is defined as one of the most valid parameters of health system evaluation. It should be said that there is no consistent definition of the concept of effectiveness in health care, which would allow for the evaluation and comparison of health systems in the world. One can not point to the best or even near ideal of the health system. However, you can rank individual health systems with respect to the evaluation of individual parameters or groups of parameters. One of the possibilities is to evaluate the effectiveness of the system.

**Aim of the study.** The aim of the article is to define and analyze particular types of system effectiveness in the context of the Polish health system.

**Description of knowledge.** The literature on the subject is divided into operational and dynamic efficiency. Dynamic efficiency is divided into adaptive and innovative. The Polish health system is characterized by high operational efficiency. Operational efficiency determines the intensity of the system. The key factor for improving the health of the Polish society, as a factor of socio-economic development of the country is to improve the dynamic efficiency of the system.

**Conclusions.** Health care in Poland has high operational efficiency while low dynamic efficiency, both adaptive and innovative, which clearly demonstrates the existence of a paradox of the overall effectiveness of the health care system in Poland.

**Key words:** health protection, system efficiency

## **Introduction**

Health is defined not only as the greatest good, but also as social capital. It is increasingly seen as the major deciding factor, besides education and professional experience, in the quality of human capital [1]. In most developed countries, the healthcare sector accounts for between 8 and 15% of the total value of the economy, making it one of the largest branches. Healthcare is a sector larger than education, IT, agriculture, tourism or telecommunications [2]. An increase in GDP growth can be affected by investment not only in machines (physical capital), but also in health (social capital). Investment in citizens' health means a quicker return to professional activity and better quality of life, which also lasts longer, resulting in a better functioning economy and social prosperity.

Efficiency is considered one of the most reliable parameters for assessing a healthcare system. At the same time, it should be stressed that there exists no single definition of the concept of efficiency in healthcare which could enable the functioning of healthcare services around the world to be assessed and compared.

### **Aim of the paper**

The aim of this article is to define and analyse individual types of efficiency in the context of the Polish healthcare system.

### **Current state of knowledge**

#### **Types of efficiency**

The literature in this field differentiates operational and dynamic efficiency. Dynamic efficiency is further divided into adaptive and innovative [3].

#### **Operational efficiency**

The Polish healthcare system is characterised by high operational efficiency, understood as an assessment of the value of health based on the principle of “doing more with the same resources”. It defines the intensiveness of a system’s functioning. Investment in healthcare in Poland is among Europe’s lowest, yet the basket of guaranteed services covers a very wide range of medical care, including some services which are not refunded in richer countries [4]. We also have highly educated medical staff (although there is an insufficient number of specialists), and the equipment used by Polish medical institutions is in line with the standards and quality of that used in Western Europe. All this means that the resources available enable a wide range of medical services to be provided at a relatively high level compared to the investment made, which is a clear indicator of the high operational efficiency of our system. This is also confirmed by the results of Bloomberg’s annual Healthcare Efficiency report, among others. In terms of healthcare efficiency we outperform such countries as Sweden, Norway, Finland and even Holland each year. In 2016 we entered the world top 20, in 18th place. The systematic improvement in the operational efficiency of the Polish healthcare system is illustrated by its jump of 9 places in the ranking since 2009 [5].

It should also be pointed out that problems with queues as identified in our health service are due to the maximum operational efficiency bursting at the seams, and not because of its low level, or indirectly due to low efficiency of the functioning and management of individual links in the chains within the system (primary healthcare, special emergency care, diagnostics, hospitals, rehabilitation or residential care facilities).

#### **Dynamic efficiency**

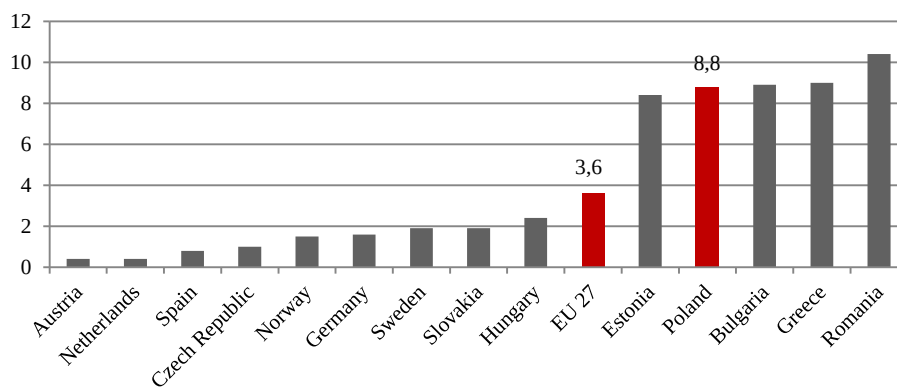
The key concern in improving the health of Polish society, as a factor in the country’s socio-economic development, is to improve the dynamic efficiency of the system. This efficiency consists of adaptive and innovative parameters [6]. Increasing the value of both

types of dynamic efficiency is desirable in the context of both healthcare policy (macroeconomic conditions) and the functioning of care facilities (microeconomic conditions).

### Adaptive efficiency

This type of efficiency is defined as the capability to gradually adapt to changes taking place in the surroundings, as well as the ability to recognise the nature of problem arising and the possibility to solve them appropriately. It is mainly this kind of low effectiveness which is responsible for excessive waiting times for services, which lead to a limiting of access to healthcare, in other words the queues seen daily for doctors. According to Eurostat, Poland takes one of the last, shameful positions in the EU in this regard (graph 1).

Graph 1. Index of unsatisfied needs in access to healthcare in selected European countries in 2013 (w %)



Source: Own study based on data: [www.ec.europa.eu/eurostat](http://www.ec.europa.eu/eurostat)

Restraint in implementing systemic reforms could lead to a decrease in the operational efficiency of the healthcare sector in Poland. The first consequences of a lack of stable, long-term healthcare policy are already noticeable. The rather clichéd example of this problem are the queues for doctors and limited access to services. This situation is due mainly to the social nature of the healthcare system in Poland. It guarantees more than can actually be provided using the financial resources available. Queues are also a major cause of society's unsatisfied and systematically increasing healthcare needs, due to the ageing population. The operational efficiency of the Polish healthcare system is approaching the ultimate threshold. It is no longer capable of covering the growing need for medical services, or of satisfying Polish patients with the quality it offers.

### **Innovative efficiency**

This type of dynamic efficiency is defined as the ability of a system to implement innovations, i.e. methods for improving its functioning. The low dynamic efficiency in Poland, in terms of both innovativeness and adaptation, is caused mainly by underfunding of the system, an insufficient number of medical staff, low standard of legislation, lack of clarity in regulations, and a lack of social consultations. Another fundamental problem is the lack of a stable long-term healthcare policy in terms of financing healthcare and regulating the functioning of areas of public health, i.e. prevention and health education.

### **Conclusions**

It is obvious that it is impossible to indicate the best healthcare system in the world, or even one approaching perfection. However, individual systems can be ranked with regard to assessments of individual parameters or sets of parameters. One of the possibilities is an assessment of the efficiency of how a system functions. As mentioned in the introduction to this article, it is a problem to create a single definition of efficiency, including with reference to healthcare systems. This fact was confirmed by a WHO report in 2000 dedicated to determinants and measurement of the efficiency of healthcare systems, which initiated a wide-ranging international debate and revealed many controversies.

One example of the difficulties arising from a general assessment of the efficiency of a healthcare system are the contradictory values of individual components of that parameter. As shown in this paper, our healthcare has a high operational efficiency, but at the same time a low dynamic efficiency, both adaptive and innovative, which clearly demonstrates the paradox of the general efficiency of the Polish healthcare system.

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