

**The Criteria For Establishing The Health Care System At  
The Beginning Of The Third Millennium, With Particular  
Reference To Public Health Aspects**

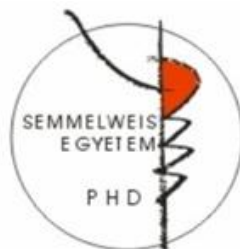
Doctoral Dissertation

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## INTRODUCTION

The provision of healthcare as a public service task was only built step by step between services provided by the state or local authorities to the population. The development of the role of the state in European states can be regarded as a process of development that has passed through certain stations to the state of the time, required and progressed according to the possibilities defined by medical science, in line with the social development needs.

The development and emergence of healthcare institutions preceded the creation of a healthcare system systematically for several centuries. In the Middle Ages, health services were provided by healing regiments specializing in this task, and the noble nobility sustained fights. Later on with the bourgeoisie the urban population built and operated hospitals. At this time, however, there was no systemic and organized relationship between the individual institutions and doctors who provide healthcare, so in this sense We can not talk about healthcare systems, but about healthcare Institutions and healthcare Providers.

Until the XIX. century, the underdevelopment of medicine and technology would not allow hospitals to do actual and effective healing. The advancement of preventive, curative and diagnostic services, clearly defined the development of the healthcare system. From the second half of the XIX. century, the proliferation of basic benefits, was based on the local public and / or the general practitioners and the puppet service providing basic services.

The development and incorporation of curative and diagnostic services into the basic care system, as well as the extensive regulation and standardization of official tasks, made it possible to separate the basic and administrative tasks from each other. It started in the second half of the IX. century, and ended in the 1930s.

The foundations of the modern hospital were built at the beginning of the twentieth century with the development of anesthesiology, the effective prevention of infections and the

discovery of antibiotics for the effective medication of infectious diseases and the development of medicine and technology. The role of hospitals was appreciated, as the results were used between institutional frameworks - suitable infrastructure, human resources. The hospital as a healthcare institution has become significant within the care system, and hence the differentiation of hospitals has also started, with the main components of capacity, technology and professional spectrum.

At the turn of the millennium, most of the technology and, in particular, the development of information technology, many forms of service became available outside the hospital. With this, the role of hospitals was re-evaluated because benefits that were previously found only in hospitals are now often included as basic or community benefits.

The matching of social needs and health services to each other clearly characterizes the efficiency of the supply system. This is obviously determined by the behavior of market players, the customer and the service provider, which is the regulator of the market. The health care system is, in fact, the mapping of the actors in the healthcare market and

their intentions in a given system of relationships. As a result, there are many factors in the development of the health care system, however, its service portfolio and current social needs are always comparable. The direction of the transformation of the supply system must basically be in line with this social need.

## OBJECTIVES

The economic crisis that began in 2008 drew attention to the fact that the well-funded welfare systems of the welfare societies - healthcare, social area, education - which were partly financed by loan, have so far not been preserved or restructured. The economic crisis has reduced the self-reliance of society, since the services that are coming out of the shrinking state system of tasks can only be obtained from the free society by the members of the society. However, with the marketing of health services, a significant social segment may be in the service of users and consequently the social needs that can be interpreted as part of the individual needs remain unsatisfactory. This dilemma must be valued in the second decade of the XXI. century. The development of healthcare systems requires a conscious and active attitude that the state can adequately influence the structure, operation and services

provided by the system of its own, by adequately defining it, in order to meet the population needs.

As noted above, it should be considered that:

- what does the society need
- what services does the healthcare system produce
- has it been possible to create an effective structure for the production of services
- does the state have a sufficient system of tools to regulate the development of the supply system?

## METHODS

During my work, I applied methods known and widely used in scientific methodology and literature, among which the use of qualitative and quantitative methods in public health sciences and in these areas of health policy was accepted.

In the context of qualitative analysis I conducted the exploration and evaluation of the nature and nature of social processes; I analyzed the most important social aspects of the development of the health care system and the interactions between the supply system and the society. I made the formulation, the exploration, the description and the system-like analysis of their laws. In the context of qualitative analysis, I looked at the development of the market for health

services, examined the impact and direction of the factors influencing it, and the reaction of the market and related relationship in the dimension defined by services and needs. I have investigated the evolution of medical services and the quality of their conformance to population needs.

In addition to this, I also relied on quantitative analyzes using data from existing public databases: KSH (Hungarian Central Statistical Office), WHO, World Bank, OEP (National Health Insurance Fund Of Hungary) etc. For example, the impact of financing-type reform measures on purchasing services in the development of health-related types of public finances. As well as examining the institutional structure of domestic neurological and stroke care, and making suggestions for optimal transformation.

In accordance with the above methodology, during the examination of the development of the health care system, I mainly processed the literature related to the development of the Hungarian care system and looked into the literature related to the development of the supply systems of other countries. I have researched the data, processed the information obtained and concluded a conclusion on the main development determinants of the healthcare system and the

healthcare market. In this sense, I did not only approximate the introductory part of the developmental history.

In the development of the history, I have synthesized knowledge on three major areas:

- I examined the evolution of the market for health services, both in terms of regulation, purchasing of services and the development of services.

- I analyzed information on the morbidity of the population, from which I was able to deduce the social needs at the given level of development in science.

- I examined the characteristics of the development of the health care system - the structure, operation and regulation of the supply system.

By comparing the above information, I came up with conclusions and found out which legalities defined the development of health services as public goods, their social utilization and the regulatory directions of the healthcare market.

One of the most important considerations was the change in the state's share of the state's healthcare market, and I compared the volume of purchases on the healthcare market with the level of purchased services.

From the evolution of the epidemiological picture, I determined the social need for health services, which I



compared to the healthcare services produced by the care system. I studied both the change in the therapeutic / curative and the preventive - primary, secondary and tertiary service palettes and their representation in the portfolio of healthcare services and evaluated their suitability for the population needs.

I analyzed the current Hungarian healthcare system and the health reform efforts of recent years. I have studied the two major areas of the reform efforts, the financial and financing side, which aims to optimize the functioning of the system and the structural area through the purchase of services, which it intends to improve with the production of health services.

## RESULTS

### **Healthcare benefits are becoming a public task**

The incorporation of healthcare services into public tasks performed by the state, began step by step from the XVIII. century. The state intervened in the economic processes driven by a welfare goal, with regulating them so that health services are made available to the members of society. Health services are public goods that are unprofitable

for the masses, so their production and purchase requires decisions by the state.

The state achieved three phases - regulation, purchasing, and service - by gradually integrating health services into the public task system as a public task. In this process, the state had to apply more and more bureaucratic coordination to the healthcare market and to become more and more active. Regulatory was the constant instrument in the hands of the state, which was obviously the result of the process and the customer and service role built on it, which became determinant in the later stages of the process.

### **State presence in the healthcare market**

Health care systems - health care institutions and people and organizations of the healing process - are constantly changing, optimally mapping the level of development of medicine and technology and, on the other hand, be matched to the needs of the population's morbidity characteristics. However, these systems are always different from the optimum, which is the reason for their considerable resistance to change and the fact that their design criteria are not regulated, which in many cases led to spontaneous

development. Therefore, there is always a difference between the current state and the supply system with the optimal structure and capacities in the given position. This is particularly a problem because the market for health services is not a market and the characteristics of the public goods market are valid. That is, the state directs the market for health services through strong regulation, restriction of competition, and governmental influence of economic operators' market conditions, using bureaucratic coordination tools. Therefore, the lack or under-regulation of the market that dominates the market or a particular market will lead to poor or poorly performing operations. The purpose of state regulation is to clear social prosperity or reduce the deterioration of wealth, in order to support the needs of society as effectively as possible. The lack of state regulation here may, in other words, give rise to the emergence of other incentives in the operation of the market, which undermines the realization of the state system.

### **Relationship between service needs and portfolio**

In the development of the health care system, the epidemiological conditions describing the social need should be trained. The health service needs of society and the

correlation of service portfolios produced by the supply system are an important indicator of the quality of the supply system.

During the period I have studied, the epidemiological picture was completely redesigned, certain diseases disappeared, the incidence of others diminished, others became curable and, consequently, the life expectancy at birth increased significantly.

In the first epidemiology era, curative medicine was still ineffective, leading to primary prevention, which significantly improved the efficiency of the system. In the second period, the scientific support of primary prevention strengthened, secondary prevention was introduced, and tertiary preventive services were provided for chronic diseases. During this period, diagnostics of many diseases became possible and effective curatorial procedures were developed. As a result, the role of curative medicine has been enhanced, in addition to the fact that the care system has developed effective preventive services such as the Green Cross Health Care, carers. The third era was characterized and characterized by the faster development of medicine than ever before. Its main area was diagnostic and healing; high-tech procedures have been introduced in all areas, and specialization has also strengthened. Technological explosion, by achieving

significant efficiencies in curative medicine, has resulted in a shrinking balance between curative / preventive medical services. Among the preventive medicine services, primary prevention was the least influenced by the fact that examining and influencing the role of lifestyle factors and environmental impacts is the main guideline for leading public health trends.

Secondary prevention services in the second period have not been developed and are not integrated into the conventional services of the care system, neither in primary care nor outpatient care. There is no adequate population selection and risk analysis, so only cervical and breast cancer screenings that are interpretable and cost-effective for the entire population are included among the secondary prevention services available to the Hungarian population.

The most significant lag behind the tertiary prevention services is that, as the most demanding of chronic non-communicable diseases representing the most significant social illness, this is the service that is most demanded.

### **The impact of needs on services and on the institutional structure**

When examining the clinical services of the health care system, we can see that modern services provided by the

hospital in providing a service portfolio that is typical of the care system are a priority given to the technological development of the age. At the same time, the ongoing shortage of social needs and the services emanating from the supply system was perceptible. The most obvious example of this is in the first half of the XVIII century. There was a lack of pulmonary capacity in Hungary due to the considerable social burden of tuberculosis. The resulting shortage induced the introduction of low-progressive, cheaper, preventive-type services - the emergence of pulmonary agents since 1907 - which effectively relieved the inpatient hospitals. Caring services were now effectively combining primary, secondary and tertiary preventive services and were able to substantially reduce the social need for hospital care. A similar process took place in the beginning of the XX. century, when two other major diseases with major social illness, including sexually transmitted diseases and psychiatric disorders. However, this trend has not continued since the technological explosion in the sector has again focused on the development of highly progressive services provided in hospitals and the preventive type of services did not or only minimally evolved over this period. It is typical for this period that health spending has increased in excess of GDP in most developed industrial countries.

From the backdrop of healthcare reforms from the 1980s, the intention was to slow down and maintain the growth rate of healthcare expenditures that have been increasing so far, and the representation of health care tasks within the state budget should not increase. The treatment of this problem had to be resolved in order to satisfy the health services needs of society both in an objective and subjective sense. Therefore, services should not be used solely on the basis of their social utility but on the many subjective aspects of society. The process of reform began with this criterion.

Periodically occurring economic crises, however, have highlighted that healthcare spending, like other state purchases, can not grow unlimited, or even scarcely characterize the purchasing power. This has triggered the process leading to the examination of the healthcare market and supply systems and the process that is often referred to as reform or transformation. This process has virtually examined all parts of the healthcare market, and as a result, the service portfolio has also been revised.

### **Concentration of progressive services**

Technological development has been given new focus and has been supporting not only the institutions, hospitals, the

production of highly progressive services, but also the low progressivity of the institutions. The proliferation of technologies that support preventive services broadly enabled large parts of health services to be produced outside the institutions. This process has resulted in a change in the high concentration of high-tech, progressive services in hospitals. Lower number of cases and higher technological needs and human resources competence necessarily require fewer institutions where these services are produced. This is a necessity because competence can only be ensured by the appropriate organizational unit and the individual at the same time. At the same time, of course, the disease composition has also changed significantly among hospital services.

In my dissertation on writing about institutional concentration I present an example of the design of the progressive neurological care in Hungary.

### **The need for structural and operational regulation of institutions**

The concentration of clinical-type healthcare services required the structural revision and transformation of healthcare institutions and hospitals. Thus, the increase in the number of decisively reflective services and the number of



cases at a relatively low level necessitated the institutional and structural regulation of institutions. Without proper regulation, the illnesses will be disordered and proper concentration can not be ensured in the institutional system. Creating fewer but more specific and costly services in healthcare institutions requires the optimal allocation of resources systematically. This resource allocation can only be made with the provision of services through appropriate regulators. Naturally, regulation can only be external regulation given that health services are a public good and the market is bureaucratically coordinated.

### **Extension of Primary Prevention Services**

Health services are public services, which are characterized by a scarcity of available resources, that is, in a market that is not or is limited in scope, to find a solution to meet population needs more effectively. However, the solution is probably not a method, but we need to achieve our goal by using more effective intervention methods. One of the aims to be achieved is to be able to effectively intervene in the epidemiological conditions of the population, ie. the reduction in the population's needs is achieved. The number of illnesses in the population can be reduced by introducing effective

preventive services. Primary preventive services aim to eliminate and disrupt the risk factors involved in the development of the disease. These services are partially personalized, but more efficiently, in accordance with the risk factors specific to the smaller or larger groups of the population, as defined for these groups. Extending the primary preventive services and effectively implementing them at the population level has a decisive influence on the effectiveness and sustainability of different health systems.

### **The possibilities of secondary prevention**

Another important tool for influencing the healthcare market is secondary prevention, which, in addition to increasing life expectancy, aims to shift expensive, progressive, high-technology services to cheap low-progressive services. Filtering services in the At the beginning of the XX. century, they emerged from the decisive developmental direction of the sector at the same time as the technological explosion in the healthcare sector happened. The possibilities of secondary prevention were not exploited and did not develop at the pace as it would have been possible. The

secondary preventive service portfolio lags behind the level at which the level of development of medicine is currently justified. However, the necessary condition for future development is to identify within the population the risk group where specific secondary preventive services / screening can be effectively provided. The screening of populations across the population should be transformed into selective screening of risk groups because efficiency can only be ensured. However, the introduction of secondary preventive testing in a broad portfolio will be decisive in reducing cancer mortality and sustainability of sectoral expenditure.

## CONCLUSIONS

The maintenance of the bureaucratic regulation of the care system is necessary for health services as public goods. Accordingly, the presence of the state on the public health services market is desirable both on purchasing and service providers, as free market regulation can distort the functioning of the market. Market-type reforms, especially the use of

"quasi-market" tools, are not useful if there is no opportunity to expand sectoral resources. Structural transformation tools have been given primarily where the state is a strong player on the market, both on its financiers and service providers. It has a major role to play in adapting services to social needs, in which the epidemiological characteristics of society should be matched to the service portfolio of the service system. In addition, the relationship between institutional providers should be regulated so that their operational efficiency is improved at system level.

## LIST OF MY PUBLICATIONS

### **Publications on the basis of the dissertation:**

1. Szentes T, Kovacs L, Ovary C (2016). New hospital structure in the twenty-first century: the position of tertiary level neurological and stroke care in a changing healthcare system. Springerplus, 5: (1) Paper 2039. 9 p.
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3. Szentes T (2016). Epidemiology and the relationship between the services provided by the health care system in Hungary = Major epidemiology and the relationships of the health care system in Hungary. *Hungarian Epidemiology*, 12 (1-2): 45-57.
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10. Csiszar A, Szentes T, Haraszti B, Zou WP, Emilie D, Petrany G, Wagons E (2001). Characterization of cytokine mRNA expression in tumor-infiltrating mononuclear cells and tumor cells freshly isolated from human colorectal carcinomas. *European Cytokine Network*, 12 (1): 87-96.