

# Health Economics in Improving the Health Care System. Roles and Economic Implications

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## Abstract:

This research paper is an attempt to demonstrate the significant role of the health economics in the development and strengthening of the health care system. Health economics using general economy theories related to individual goods and markets of medical services can provide valuable clues for the analysis of health systems, taking into account their organizational and functional structure. In recent years, health economics it has become one of the most important economy industries due to increasing health costs that have mainly caused state budget deficits.

**Keywords:** health; health economics; health care system; quality of life; economic development.

**JEL Classification:** I15; I13.

## Introduction

Nowadays, in scientific considerations about health and disease, the representatives of various disciplines increasingly point to the complex nature of these concepts.

Multidimensional health models are based on two main assumptions. The first is the statement that human health is a specific whole, which includes the functioning level in all spheres of life. These models define man as a whole person, *i.e.*, an entity whose being transcends the biological dimension. The second assumption is that simply dividing people into those who are healthy and those who are unwell is not possible because everyone may have a different level of functioning in each of their dimensions of health. Determining the "health condition" of an individual should therefore precede the analysis of its functioning in all its dimensions of health (Walentynowicz – Moryl, 2016).

Health and the issues of its protection are the subject of research in many scientific disciplines, including economics, which has been felt with redoubled strength in recent years, especially in the face of the SARS CoV-2 pandemic.

In macroeconomic terms, the subject of research is mainly the impact of human health in population as well as the health care system on economic growth and improvement of life quality of a country's society. The microeconomic approach undertakes the dependence of health condition on the productivity of people and households. Additionally, health care funding ultimately affects the operation of the entire health care system (Markowska & Węglińska, 2019).

## 1. Research Gap

Health is a multifaceted concept. However, its economic dimension continues to be treated marginally. The issue of health has long been neglected in macroeconomic theories of economic growth.

When considering the issue of the relationship between health and economic growth, special attention should be paid to the issue of health in terms of its impact on the quality and quantity of human capital human capital. Health determines the possibility of personal development and ensure economic security. Together with education, it forms the basis of human capital, determining the economic productivity of the individual. It is also determinant of high labor productivity, effective learning and human development. The article highlights the role of the economic dimension of health and its impact on not only individual development but also on economic growth.

The purpose of this research paper is to present selected theoretical aspects of contemporary health and health care economics based on literature. The discussed issues are general in nature and concentrate on indicating the possibility of using economy theories to analyze problems in the health sector.

## 2. The Multidimensionality of the Health's Concept

A comprehensive, multidimensional definition was provided by the World Health Organization, recognizing health as a state of physical, mental and social well-being, and not only as the absence of disease, impairment or disability. Three spheres have been accounted here. Physical health relates to the human body and is the background to somatic diseases. Mental health is not only mental balance, but also the ability to develop, meet needs, and derive joy and satisfaction from life. It is also the ability to deal with changes and overcome difficulties. The last sphere is social health, including the relationship of an individual with society and the performance of social roles and tasks (Syrek, Borzucka – Sitkiewicz, 2009).

Human health depends on many factors. Labonte divided them into: socio-environmental (e.g., social status, work environment), psycho-social (e.g., social support, sense of purposefulness), pathophysiological (blood cholesterol level, arterial hypertension), as well as risk factors resulting from individual behavior. In the last group, i.e., factors dependent on individual behavior, in addition to smoking and physical activity the nutritional habits were taken into account (Karski, 2008).

Socio-economic factors shaping health status, considered by the Public Health Agency of Canada and WHO, are an example of an approach to analyzing the determinants of health status and the mechanisms of transmission of their impact. Socio-economic status is generally associated with mortality, morbidity and life expectancy. The mechanisms responsible for this relationship, however, are not fully recognized. Identifying these mechanisms would help implement effective health policies incorporated into all policies in a country.

There is a consensus among economists that socio-economic factors are the most important, and among them, education is in the first place. It is the level of education that determines professional opportunities and income potential. Thanks to the acquired knowledge and skills, individuals can cope better with difficulties and stress. The second socio-economic factor affecting health is income. Higher incomes not only enable higher spending on health services, but also better nutrition, housing conditions, education and recreation. Income size is crucial, but income distribution is even more important as it determines mortality. Underinvestment in public goods and welfare as well as the existence of inequalities are believed to be more common in stratified societies, and this translates into greater health disparities in these societies. Occupation is mentioned as the third factor, although it is difficult to study as it requires considering the importance of various aspects of professional life. Unemployment is included in this category and it is known that being unemployed and its duration affect health<sup>1</sup>.

The economic aspect of health creates the basis for examination of specific health care costs and, indirectly, living conditions and socio-economic development. The cost of acquiring and maintaining health that is associated with the functioning of the health sector is an essential example here. This category is used to evaluate the costs of health insurance, e.g., car accidents, aviation accidents (Korporowicz, 2011).

When determining the cost of human health and life, it is also necessary to take into account the fact in which improving health will result in: reduction of individual expenditure relating to illness or accidents, increase in income from lost earnings, reduction of losses related to illness the so-called mental cost of a disease, limiting preventive expenses related to additional investments, e.g., a holiday trip to a cleaner environment, moving to a quieter part of a city (Korporowicz, 2011).

The growing costs of health care, burdening the public finances of most European countries, have changed the perspective of its perception. Health care started to be considered in economic terms, as a sphere subjected to objective processes related to market mechanisms and the achievement of desired effects of administration. According to the economic interpretation of the term, health care is defined as an economic activity in which, with the use of limited resources (material and work), the aim is to satisfy specific human needs, such as health needs. (Sobiech, 1990).

## 3. The Role of Health Economics

Health economics is a field of knowledge that treats health not so much as a broadly understood social problem, but as an economic problem. It deals with the expenditure and distribution of medical services and governmental health care policy. In recent years, it has become one of the most important economy industries due to rapidly increasing health costs, which have become the main cause of state budget deficits.

Knowledge of allocation of resources in the health care system allows the application of general principles of economics in the process of organizing this system and assessing the effectiveness of its functioning. All activities of the health care sector can be described with the use of appropriate economic tools that allow

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<sup>1</sup> [https://ochronazdrowia.sgh.waw.pl/files/1/12/ekonomia\\_i\\_prawo\\_1-2016\\_04\\_ewelina\\_nojszewska.pdf](https://ochronazdrowia.sgh.waw.pl/files/1/12/ekonomia_i_prawo_1-2016_04_ewelina_nojszewska.pdf)

considering the characteristics of this sector and the role played in it by all parties of the process - patients, health care providers and payers<sup>2</sup>.

The father of health economics is considered to be Professor Kenneth Arrow, who in a famous study in 1963 demonstrated that the specificity of expenditure and consumption of health services differs from the behavior in other traditional economy sectors. Health economics enriched with other disciplines, both medicine and psychology, helps to understand the specific asymmetry with which we deal in the health market<sup>3</sup>

According to Suhecka (2016), contemporary research in the field of health care economics is mostly devoted to the characteristics of relationship between national economic conditions and/or the sphere of health protection and health (in a broad sense) and diseases. The variety of research problems occurring in the health sector encourages interdisciplinary work and the development of appropriate research tools or the adaptation of specific instruments of influence. Currently, in economic analyses, much attention is paid to the evaluation of health in financial terms and the impact of various legal regulations on the shaping of supply and demand for medical services.

Health is a basic factor of productivity in the long run and is the foundation of human capital, which in turn guarantees the development of societies. In each health system, the relationships between health needs and demand for health services, which are the basis of social policy and planning, are subject to fundamental economic assessment. Society expresses the demand for medical care in various ways, most often it manifests itself in striving to obtain care that would ensure the fulfilment of their health needs (Suhecka, 2016).

The determinants of demand for health services include:

- economic determinants of demand (income, prices of alternative goods and services, including alternative medicine products, and the so-called non-pecuniary factors, e.g., time);
- demographic determinants of demand (age, education level);
- health determinants of demand (health condition);
- psycho-sociological determinants of demand (patient's value system, a will to be healthy).

The priority ones are those relating to the impact of health services prices and income on the volume and structure of demand (Rudawska, 2009). Economic research of the health care sector also addresses supply-side problems. Most often they concern: determining the supply factors and the economic efficiency of the entire medical infrastructure or its components referred to as markets. Supply factors define the possibilities of providing health services, which include: human and material resources, premises, organization of health care, efficiency or effectiveness of operations and attitude of the very medical personnel. The market of medical services is subject to specific observations. The research analyses: adaptation of the service market to changing conditions, the impact of competition on the quality of medical care and the impact of advertising. It is commonly believed that doctors create demand for a certain type of services. The market of nursing services is also monitored. Sometimes the research involves economic effects of the so-called professional substitutability of doctors (who are not highly specialized) by nurses with high professional qualifications (Rudawska, 2009)

Current research, both in Poland and around the world, aims to identify the reasons for the increase in expenditure as well as to improve the existing health reforms. According to Białynicki-Birula (2004) when considering the categories of supply and demand on the health services market, it becomes indispensable to refer to the regularities formulated on the basis of economic theory. In the area of health protection, medical services are the subject of supply and demand. Material goods, however, have an important role to play in the treatment process itself, often conditioning the possibility of providing medical services or constituting a necessary supplement to them. Due to the above, it is necessary to recognize services as a specific economic category comprising the basic method of satisfying health needs.

The issues that are the subject of health economics undergo constant evolution, inter alia, under the influence of the changing internal environment and the external health system. Different approaches and solutions are used in a situation of relative health stabilization, where certain problems are predictable, e.g., higher financial expenses in the autumn and winter season, as the incidence of certain diseases increases.

The fight against coronavirus has been a huge challenge for the health care system, especially in the context of limited resources. Numerous economic problems caused by the pandemic situation were also of interest to health economics, which deals, inter alia, with optimization and allocation of resources in the health protection sector. In this context, insufficient financial, human and infrastructure resources had appeared in the

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<sup>2</sup> <https://medbook.com.pl/książka/pokaz/id/10187/tytul/ekonomia-zdrowia-i-opieki-zdrowotnej-folland-goodman-stano-suhecka-wolters-kluwer>

<sup>3</sup> <https://www.obserwatorfinansowy.pl/bez-kategorii/ekonomia-zdrowia/>

foreground, which made the fight against the disease and its complications particularly difficult. In addition, other diseases and patients requiring hospitalization or basic health care have not disappeared. The effectiveness of this fight depended largely also on the structure and skills of the health service, which was the first battlefield. In a pandemic, almost every health system is overwhelmed. However, the most vulnerable were those places, where access to health care was limited in any case<sup>4</sup>

Health economics is an example of the applied economic theory, models, and empirical analysis techniques used to analyze how decisions are made by individuals, providers, and governments in relation to health and health care. (Morris, Devlin & Parkin, 2011)

By delving into the subject of interest in health economics, it is easier to understand the behavior of patients, doctors and the functioning and management of hospitals, because it benefits from such sciences as epidemiology, statistics, psychology, sociology, operations research or mathematics.

## Conclusions

Good health is one of the cornerstones of economy. Investing in health has long-term benefits for both members of society and the state. Being healthy is the right of every individual, and on the other hand, everyone has the right to the best possible health care.

According to Nojszewska (2016), the bettering of health accomplished by improving the socio-economic status can be achieved primarily by creating conditions for lifelong learning, enabling professional retraining, improving the functioning of labor market, including effective job placement. By limiting long-term unemployment and professional inactivity, the living conditions will positively change, and most importantly, the inequalities in social status, and thus in health, will be reduced. It is necessary to develop social capital mainly by supporting activities at a local level, thanks to which it influences social support and decreases the accumulation of unfavorable factors, generally occurring in the early years of life. The structure of social expenditure should be revised. Although their level in Poland is higher than the average among OECD countries, their structure has a negative effect on economic activity. Financial transfers are among the highest, but expenses for benefits in kind, including health care, are among the lowest. Incentives constructed this way discourage people from taking up work and put them into a trap of benefits, and at the same time, limit access to public goods, especially for people from lower social classes<sup>5</sup>.

Wałęga-Szych and Dudek (2011) believe that the "economization" of the health sector, which is understood as increasing the efficiency of its operation, rationalizing expenses and introducing cost accounting, would lead to the introduction of market economy elements to the medical sector. The idea would be to build a market of medical services and conduct health care policy based on the economic theory of public good. This theory has a long tradition and significant achievements in terms of economics. Using these achievements would enable to create a model of medical market based on the neoclassical market model on the one hand and the theory of human capital in pro-health activities and government regulation of services on the other hand.

Good material conditions are conducive to maintaining health, while poverty coexists with disease and mortality. Good health favors achieving a relatively high social position, enabling participation in social life. The relationship between health and material conditions has become the basis for undertaking extensive research into the social determinants of health and disease (Ostrowska, 1998).

Rydlewska - Liszkowska (2007) draws attention to the harmfulness of unjustified savings in health care. Among the existing conditions, economic conditions require undertaking analyses supporting the allocation of resources for health protection of employees. They are all the more justified, as any unreasonable savings on expenses dedicated to health of the working made by various social partners may occur to be short-sighted actions that, in the long run, will turn against society. Decisions that do not consider the impact of health of the population on the long-term condition of national economy are unacceptable. Therefore, as experience in European countries shows, reliable preparation of decision-making bases on investing in health and measuring its effects should rest not only with public institutions, but also with other entities, such as employers, health and safety inspectors, and occupational health service units.

When considering the issue of the relationship between health and economic growth specific attention should be paid to the issue of health in terms of its influence on quality and size of human capital (Białynicki – Birula, 2004):

- health determines the possibility of personal development and ensuring economic security, it affects the increase in the activity of individuals in many dimensions: economic, social, professional, etc.,

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<sup>4</sup> <https://gazeta.sgh.waw.pl/meritum/polityka-zdrowotna-pandemia-czy-nadchodzi-czas-trudnych-wyborow>

<sup>5</sup> [https://ochronazdrowia.sgh.waw.pl/files/1/12/ekonomia\\_i\\_prawo\\_1\\_2016\\_04\\_ewelina\\_nojszewska.pdf](https://ochronazdrowia.sgh.waw.pl/files/1/12/ekonomia_i_prawo_1_2016_04_ewelina_nojszewska.pdf)

- health positively affects economic growth through improving the quality of performed work and increasing the productivity of employees on a whole scale economy,
- in healthier societies, people live longer and their resources are much greater thanks to a longer period of savings accumulation. Therefore, in the analyses of economic growth, in addition to concepts closely related to the category of income, indicators characterizing health and life expectancy should also be taken into account.

The development of science has brought not only new treatment options, but also new thinking about health in its interdisciplinary understanding. Thanks to this, it becomes necessary to undertake wide-ranging actions for public health through the decisions of both politicians, representatives of health protection, as well as, all that results from the above considerations of economists.

This article emphasized the economic role of health and its protection, without which this category could not be fully described and understood. Health is an economic problem and the health care sphere is an economic activity. The principle of rational management should be implemented by medical entities which, using their own resources, will strive to obtain revenues exceeding the costs incurred. Health economics, on the other hand, with its advice from scientific research, can contribute to the improvement of the entire health care system.

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