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The counter value of the medical services to the detriment of the aging population

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Abstract: Public spending on health related to government spending and the need to consolidate the budget across Europe are of increasing importance. Health expenditure is an important topic in political debates on how to ensure the long-term sustainability of public finances for population health. Long-term budgetary projections can be very useful in enabling policy makers to consider the possible evolution of public spending and the impact of the main reasons underlying the costs of health care.

Key Words: health expenses, health, health care costs, medical services, health sustainability.

INTRODUCTION

The specialized units of emergency type, in order to conclude contracts for the provision of medical services with the Public Authorities responsible for ensuring health, take into account the documentation regarding the quantitative and qualitative indicators provided by norms, respectively the provisional estimate of the costs of the medical services provided under continuous hospitalization.

In this context, in order to establish the provisional estimate of the costs of the medial services provided by the specialized units of emergency type, the Public Authorities responsible for ensuring health have the obligation to analyze the documents for the substantiation of the average rate per case resolved, the daily rate of hospitalization, the rate per case for the services provided under day hospitalization, as well as the specific indicators established by norms, the level of performance indicators of the management of the specialized units assumed by the management contract, except for the units that have interim managers [1].

The amount contracted by the Public Authorities responsible for ensuring health with the specialized units consists most of the amount related to the hospital medical services whose payment is made on the basis of the rate per solved case - DRG system.

The rate per solved case - DRG system is established on the basis of the case complexity index (CCI) and the weighted case rate (WCR). The methodology for establishing the CCI and WCR used when contracting hospital medical services is provided in the norms. The average rate per case solved by specialties is established by negotiation between the Specialized Units and the Public Authorities responsible for ensuring health under the conditions stipulated in the norms and cannot be higher than the maximum rate stipulated in the norms [1].

MATERIALS AND METHODS

Public health expenditures are driven by a number of factors that affect both the demand and the supply of health goods and services. The size and structure of the population, its health status, individual and national incomes and provisions regulating the access to health goods and services are considered key factors of the demand. Secondary determinants include availability and distance to health services, technological

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progress and the framework that governs the provision of those goods and services (institutional instruments).

The demand for the provision of health care services is considerable being, generally, associated with possible significant benefits. However, these benefits come at a substantial cost: in the 28 EU member states, the health care spending represents a significant share of total spending - on average 8.0% of GDP in 2015 represents public spending. Overall, over the time, the public spending on health care has increased in most EU Member States [2].

RESULTS AND DISCUSSIONS

In the debates about the cost of health care services, the risks regarding the sustainability of health care financing were analyzed, establishing that these are in two ways:

First, increased longevity, without any improvement in health status, leads to increased demand for health care services for a long period of time, thus increasing total expenditures on health care incurred throughout life and, overall, increased spending on health care (Breyer et al. 2010, Zweifel *et al.* 2005). Often, it has been stated that new medical technologies have saved lives that could be brought to an end due to fatal diseases, but which have been less successful in maintaining human health [2].

Secondly, at the level of several EU Member States, the public health care system is largely financed by the employees' social insurance contributions. The aging of the population leads to an increase in the dependency of the elderly, for example - fewer people contributing to the beneficiaries of the health care services.

In this regard, it is estimated that the dependency rate of the elderly will increase from 29.6% in 2016 to 51.2% in 2070. Therefore, in the future, a smaller number of people will contribute to the financing of health care in the public domain, while an increasing number of older people will require additional goods and services in the health care field [2].

In the discussions on public spending for health care, the Public Authorities responsible for ensuring health analyzed the costs regarding the medical services from a longer duration in the field of work accompanied by a good state of health of the employees, which can diminish the effect of the aging population. In addition, many researchers have shown that aging has contributed to an increased spending far less than widely believed, and in many EU Member States, a real reduction in spending by older people (over 85 years old) per capita. However, this is because, in addition to the real needs, the social, economic and cultural considerations are necessary and determine the allocation of resources to medical services and the use of resources by different age categories.

Also, the aging of the population should be analyzed together with other factors that influence expenditure, such as health status, income, non-demographic factors and the legislation that regulates this segment.

At the individual level as well as at the national level, there is a significant relationship between population incomes and expenditure on care/medical care, which represents a significant factor that influences health care spending.

At the individual level, the expenses for the care/medical care depend on the way of health insurance of a medical intervention - public or private. If a person benefits from fully insured medical services, the demand for these health services is independent of that person's income, but the medical services provided to a person may or may not be partially covered by health insurance, which means that the increased coverage health insurance reduces the impact of revenue changes on the demand for such services.

At the national level, medical care expenses and incomes are narrower than at the individual level (considering the insurance). Under these conditions, the insurance measures taken in order to control spending and the political priorities of allocating less or more resources to different areas of public spending could reduce the link between public health care spending and national income.

In general, the increase of the income per capita determines the increase of the expenses with the health, but the vitality of the relation between them remains uncertain (the value of the income fluctuation on the demand of the health services).

Another important factor in establishing the costs of the medical services is the demographic changes and the changes in the state of health, in this view it is estimated that in the 28 EU Member States the public expenditures for health care will increase by 1.1 percentage points of GDP, from 6.8% in 2016 to 7.9% in 2070 [2].

Looking to Figure 1, it is noted that the increase of the expenses with the medical assistance raises concerns about the sustainability in the field of health on long term. At the level of the 28 EU Member States, health care expenses accounted for 6.8% of GDP in 2016. Estimates show that by 2070 these expenditures can increase to 7.9% of GDP only due to demographic aging population - and at higher levels when other factors are taken into account [2, 6].

In view of the determinant factors of the medical services' costs, the Public Authorities responsible for ensuring health are concerned about long-term sustainability, as other EU member countries are too. However, non-demographic factors are key factors in the cost of health care, as well as health care expenditures, which are key factors in health care spending. Also, as income and longevity increase, older people will be

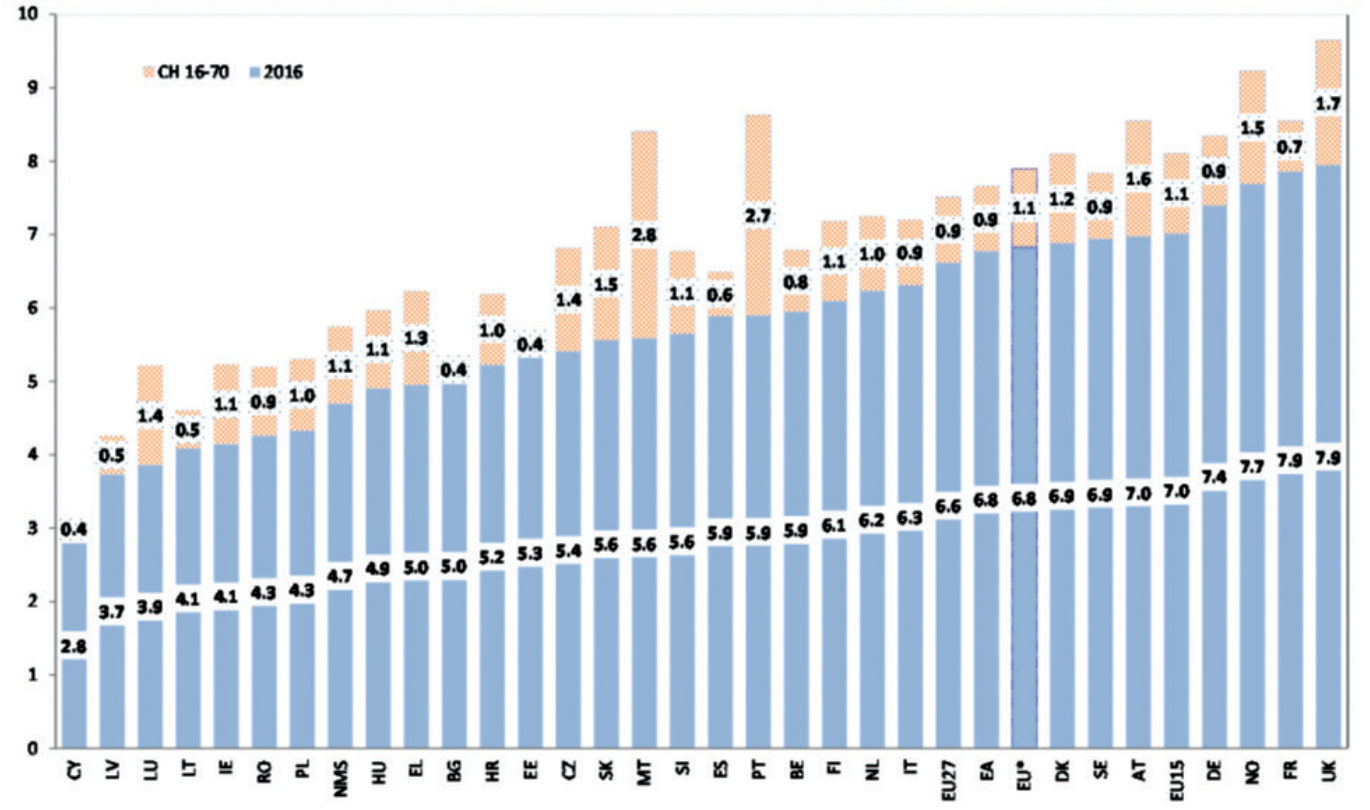

Figure 1. The estimation of the increase of public expenses with the medical assistance influenced by the demographic changes in the period 2016 – 2070 (% of GDP).

willing to spend more on health care services.

In this regard, we exemplify the fact that, at the level of emergency units, there are no elaborated provisional estimates of the costs of the medical services provided under a continuous hospitalization regime, which would be the basis for the conclusion of contracts and additional acts with the Public Authorities responsible for ensuring health, the payment of these medical services being made on the basis of a rate per solved case - DRG system, established on the basis of the case complexity index (CCI) and the weighted case rate (WCR), approved by norms [3].

Also, the emergency specialized units, in the conclusion of contracts with the Public Authorities responsible for ensuring health make out Annex no.1 to the O.M.S. no.1043/2010 regarding the approval of the methodological Norms for the elaboration of the budget of incomes and expenses of the public hospital, in which the quantitative indicators provided by norms are reported, as well as a substantiation of the rates per case solved in the day hospitalization regime.

In this sense, it is found that for the solved case-rate indicator (DRG), the emergency units do not elaborate a provisional estimate that shall be based on the substantiation of each component element of the costs of the medical services provided under continuous hospitalization.

Also, according to the legal framework in force, the total amount contracted by the specialized emergency units with the Public Authority responsible for ensuring health is formed by the amount related to the hospital medical services for acute illnesses whose payment is made on the basis of a rate per solved case (DRG) for the specialized emergency units financed in the established DRG system, as follows:

- Number of discharged hospital cases contracted x annual case-mix index x weighted case rate for each year. The contracted amount (CA) of each specialized emergency unit provided in Order, with the Public Authority responsible for ensuring health, for continuous hospitalization services for acute conditions in the DRG system, is calculated as follows:

$$CA = P \times (No\_bed \times IU\_bed / DMS\_hospital) \times CCI \times WCR$$

For example: No_bed represents the number of approved and ready for contract beds, after applying the provisions of the National Bed Plan, which does not include the beds for the sections and compartments of ATI, IU_bed, DMS_ hospital, CCI and WCR represent the index of bed use, the average duration of beds hospitalization at the hospital level, the weighted case rate and the case-mix index, respectively. The average length of hospitalization at the hospital level - DMS_ hospital - is provided in the Order [4, 5].

The value of the reference percentage (P) is established in relation to the classification of specialized units according to competences, according to the legal provisions in force, respectively the provisions of the Order of the Minister of Health no.323/2011 regarding the approval of the methodology and the mandatory minimum criteria for the classification of the hospitals

according to their competence, with the subsequent modifications and completions.

In conclusion, the specialized emergency units do not substantiate a rate per solved case based on calculations for establishing the need for human, material and capital resources, respectively establishing the direct, indirect and general expenses needed to carry out medical services for continuous hospitalization (a provisional estimate of the costs of the medical services provided under continuous hospitalization).

Compared to the previous ones, the increase of the incomes determines technological innovations in the health sector, of an essential importance for explaining the previous increases of the expenses in the field of the health, fact confirmed in many studies. In this respect, the decisions regarding increased access to health services and improving the quality of these services, in particular for the elderly, will mean that the aging of the population will remain at the center of public debates on health spending.

The expenditure on health care per capita will increase along with national income per capita. The result is that the share of health expenses in the national income will be constant if there is no aging of the population. However, on the one hand, the empirical studies show that both spending on health care in the public and private sectors can exceed the national income growth rate because of both increased concerns for a better health care and of a greater willingness to pay for health care services, however, it is assumed that future increases in life expectancy will be based on poor health.

Also, the expenditures for health care are influenced by the productivity of the economy, respectively the "total risk of factors productivity", which means that, compared to the initial value, the productivity of the economy will increase more slowly in the future. On average, the estimated growth for the EU is 0.8 percentage points of GDP, with 0.1 percentage points of GDP lower than in the forecast of "elderly employees" [2, 6].

It can be concluded that aging and non-demographic factors influencing health care spending can exert pressure on long-term public finances, which can be extended even beyond the current aging trends of the population. These pressures are unlikely to lead to the withdrawal of public sector funding from health care.

Also, a greater concern for public funding will cover a big part of the provision of health care services, and the spending covered by private funds can play an important role, but will play a complementary role in many EU member states by eliminating lack of funding from public funds, allowing treatment in areas that do not require saving lives.

Conflict of interest. The authors declare that there is no conflict of interest.

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