

THE EVOLUTION OF THE MEDICAL SYSTEM AND HEALTH STATUS IN ROMANIA AFTER THE COLLAPSE OF COMMUNISM

Laura MAXIM (DIACONU)*

Corneliu DIACONU**

Andrei MAXIM***

Abstract: *The purpose of the present paper is to analyse the changes that occurred in the Romanian medical system since the communism's collapse and until nowadays and to determine the evolution of the population's health status during this period. During the last 25 years, the public Romanian healthcare system has been struggling to cope with underfunding. Our results indicate that this fact had a significant influence on both the medical assistance, reflected in physicians' emigration and poor healthcare conditions, especially in rural areas, and on the individuals' health status, Romania being far behind other EU states from this point of view.*

Keywords: health status; healthcare system; healthcare expenditures; medical assistance

JEL Classification: I11; I15; I18

Introduction

After the Second World War and until 1990, Romania, as most of the former socialist countries from the Eastern Europe, implemented a Semashko healthcare system. This type of system was characterized by the fact that all the funds required to develop the medical activities were public and the state was the only owner of the material resources and the only supplier of the healthcare services. It was based on the centrally planned principles, on rigid management and on the state monopoly. Consequently, the healthcare system created by the Ministry of Health was integrated and centralized, completely controlled by the state through taxes, without freedom of speech, but available to all people. Under the Semashko system, there was a severe scarcity of various forms of capital, from pharmaceuticals to technology, and the healthcare workers were underpaid and usually poorly trained (WHO, 2006).

The reform of the Romanian sanitary system has started after the collapse of communism, in 1990. However, in Romania these reforms were more difficult to implement than in other Eastern European states due to the long-lasting underfunding of the healthcare system during the communist regime. The problems that existed in that period in the healthcare field were analysed in the project "A Healthy Romania", financed and implemented by the World Bank between 1992 and 1993

* Assistant Professor, PhD., Faculty of Economics and Business Administration, Al. I. Cuza University of Iasi, e-mail: lauradiaconu_07@yahoo.com

** Professor, PhD., University of Medicine and Pharmacy Gr. T. Popa, Iasi, e-mail: cdiaconu_09@yahoo.com

*** Assistant Professor, PhD., Faculty of Economics and Business Administration, Al. I. Cuza University of Iasi, e-mail: andrei.maxim@feaa.uaic.ro

(Vladescu *et al.*, 2008). This project includes some recommendations that have influenced, since 1994, the transition to a healthcare social insurance system, more decentralized, pluralist, with connections between the healthcare insurance funds and the services' suppliers.

Despite many attempts to reform the national healthcare system, nowadays it still confronts with many problems, caused mainly by the political and social changes that occurred after 1989, which influenced the implementation of the reforms. Moreover, as in many other former communist countries, in Romania the healthcare was not one of priorities of the public financing. From the point of view of the public expenditures on the healthcare services, Romania has constantly been placed on the last positions among the EU candidate countries, between 2000 and 2006, and among the EU states, since 2007 (when Romania's EU adhesion took place).

Considering all these aspects, the present paper intends to analyse the changes that occurred in the Romanian medical system from 1990 and up to nowadays and to determine the evolution of the population's health status during this period. In order to achieve this purpose, statistical information from various reports and databases was collected, tabulated and analysed for the case of Romania in close relation with the EU situation.

1. Overview of the healthcare system in Romania after 1990

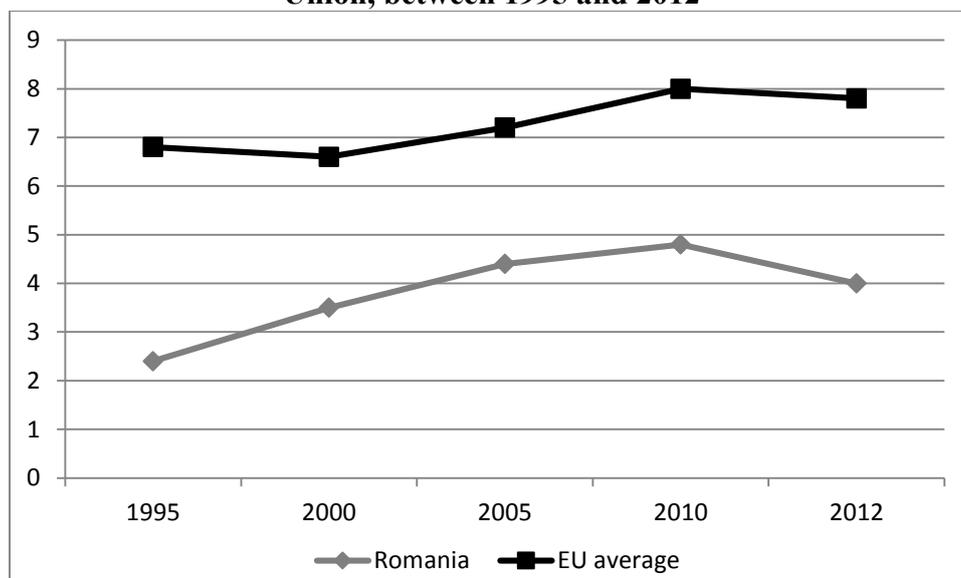
After the centralized healthcare system from the communist period, the decentralization process started with the Public Administration Law which was adopted in 1991. This was the first step in the healthcare reforms which were aimed to improve the health status of the population and to offer an efficient usage of the resources.

Between 1990 and 2000, the Ministry of Public Health issued several decrees and laws regarding the organization of the Romanian medical system, which changed its entire structure. These were mainly focused on the hospitals' organization and financing sources, the physician's role and status, the development of the social health insurance system, funded through the employment-related premiums, and on the management of the major health problems. The healthcare private sector emerged between 1993 and 1999, but this process was very slow in most of the medical fields (Bara *et al.*, 2002).

Since 2000, the basic laws regulating the health system have been modified and adjusted several times, depending on the political changes and in the context of Romania's preparations for the EU membership. A more comprehensive Health Reform Law came into force in May 2006.

Despite all these reforms and regulations, from the early 1990s and until today, Romania’s healthcare system has struggled to cope with underfunding. Like in all the other European states, in Romania this system is financed from public and private resources, combining the state budget financing, public and private health social insurances, co-payment or direct payment of the medical services to the patients (Vladescu, 2004). However, the majority of the resources come from the public sector (around 75-80% according to the World Bank statistics) and, as in many other former communist states, in Romania the medical system has always been at the end of the governmental priorities list. Therefore, even if the percentage of the public health expenditure in GDP has almost doubled during the last 25 years in Romania (World Bank, 2014), it still has a very low value, placing the country on the last positions among the EU states (Eurostat, 2014a).

Figure 1 – Evolution of public health expenditure as share of GDP, in Romania and European Union, between 1995 and 2012



Source: Authors’ compilation and adaptation from World Bank, World Development Indicators, The World Bank Group, 2014, <http://data.worldbank.org/data-catalog/world-development-indicators>

In 2003, the social problems of the public medical assistance have worsen due to the impossibility of offering, for a period of time, the compensated and free medicines. This fact generated an increase in the healthcare private spending. Looking at the data offered by the National Institute of Statistics (NIS), between 2001 and 2006 the percentage of the healthcare private spending in the total private spending has increased for all the types of households. The highest increases were felt especially by those with low revenues: the unemployed persons and the pensioners – from 3.8% to 7.5% and, respectively, from 3.8% to 5.2% (NIS, 2008). Considering this aspect and the fact that

Romania is, according to the statistics, a middle income, developing country, the need to invest in people should be a priority.

The public amount spent for the healthcare is very important because, according to Stancu (1996), it generates three main types of effects: *medical consequences*, determined at the individual level through the person's capacity of recovery, *economic effects*, which reflect the "un-production" due to the illnesses (the average period in which a person is unable to work), the eradication of some diseases, the increase of the average active life etc., and *social effects*, such as: the average life expectancy, the morbidity, the general and infant mortality and the public medical assistance (number of inhabitants per physician, per bed in hospitals etc.).

If the *medical impact* of the public healthcare spending is very difficult to evaluate at a national level, the *economic and social effects* can be noticed by analysing the statistics. Actually, almost all the indicators that measure these two types of consequences (with the exception of the *public medical assistance*) offer an image of the general health status of a nation, which will be discussed in the next part of this paper. Considering the low public amount spent for the healthcare system in Romania, the hypothesis of our study is that the country is lagging behind many other EU states from the point of view of the economic and social effects of the public expenditures.

From the point of view of the *public medical assistance*, the level and the quality of the health care provided nowadays is substantially higher than in 1990. This is due to the implementation of *new and modern medical equipment, technologies and therapies*, the introduction of various types of *medicines* on the Romanian market, the emergence of the private healthcare system and of a large network of private pharmacies. However, despite these progresses that were made especially in the large hospitals from the urban areas, the healthcare system from the rural environment is far lagging behind. For example, in 2011, in the rural areas the *number of beds* from the public and private hospitals represented only 12% of the total number and the physicians counted only for 11% of the total (NIS, 2013). Considering that approximately 45% of the total population lived in 2011 in the rural areas (NIS, 2011), the situation is alarming.

Looking at the statistics, we notice that, actually, the public medical assistance from the entire country is lagging behind almost all the other EU states. Between 2000 and 2010, while the total population decreased approximately by 9% (NIS, 2015), the number of beds from public and private hospitals decreased by more than 18% (Eurostat, 2014b). Considering the *number of the physicians* at 100,000 inhabitants, table 1 shows that the value registered in 2010 in Romania was 28% below the EU average.

We can see from table 1 that the number of physicians per 100,000 inhabitants has constantly increased in Romania between 1995 and 2010. However, this evolution was not because the total number of the physicians has increased, but because the descending trend of the population, which diminished with more than one million inhabitants between 2005 and 2010. In reality, the total number of the physicians has diminished. After the EU adhesion, but especially since 2010, Romania confronted with massive migration of physicians mainly to the Western and Nordic European countries. According to the data offered by the Romanian College of Physicians, 3,000 doctors enter into the medical system per year and approximately 3,500 come out, through retirement, death, but mainly through migration (Romanian College of Physicians, 2015). The main reasons that encourage the physicians to migrate are the low incomes received in Romania, which are 10 to 15 times lower than in the Western Europe (Haivas, 2010), and the poor working conditions.

Table 1 – Number of the physicians per 100.000 inhabitants

	1995	2000	2005	2010
EU average	313	337	318	331
Romania	177	193	195	237

Source: Authors' compilation and calculations from Eurostat (2014b); World Bank (2014); WHO (2007)

The most worrying situation is in the hospitals, where the number of doctors and nurses has dramatically decreased during the last years. If in 2011 there were 20,648 physicians in Romania, in 2014 their number decreased to 13,521, while the number required by the Ministry of Health's normative, given the population of the country, is 26,000 (Romanian College of Physicians, 2015).

2. Trends of the health status in Romania

As mentioned in the previous part of the paper, in Romania the health status can be influenced by the level of the public health expenditures, since this amount has a considerable share in the total medical spending. To determine the health status, it is necessary to analyse some indicators such as *average life expectancy, general and infant mortality rate, fertility rate, progresses made in eradication of some diseases* etc. These indicators are important to identify the *economic* and *social effects* of the public spending.

If in the early 1950s the health status in Romania was comparable to that in the Western European countries, during the communist period it has significantly lagged behind these states.

Between 1990 and 2000, a sharp decline in the living standards, due to the increasing poverty, had a negative influence on the Romanians' health status.

In 1990, the *life expectancy* in Romania was five years lower than in the Western European states and the *infant mortality rate* was three times higher (McKee, 1991). The infant and maternal mortality are relevant indicators for the problems that some mothers and new born children confront with when trying to accede to the medical assistance, for the low quality of the medical services and for the insufficient information regarding the methods to prevent the diseases and to maintain the hygiene.

However, the gradual decrease in maternal mortality rates, equipment, technologies and medicines contributed to the increase of the life expectancy. If in 1990 the average life expectancy at birth was of 69.9 years, in 2012 it augmented up to 74.5 years (European Commission, 2014). Moreover, during the same period of time, the infant mortality rate per 1,000 live births has decreased almost three times. Despite the fact that these values reflect an improvement in the health status of the population, Romania still remains among the states with the lowest life expectancy in EU in 2012, together with Bulgaria, Latvia and Lithuania (European Commission, 2014). It is also the country with the highest infant mortality rate – 9‰ (European Commission, 2014).

Related to the life expectancy, it is important to know the average number of years of a person with a good level of health. This aspect could be determined with the help of another indicator: healthy life expectancy – HALE. The data offered by the World Health Organization reflect that, between 2000 and 2012, the Romanian individuals have been healthy almost 88% of the duration of their lives, the HALE indicator showing a slow increase from 63 to 66 years during the analysed period (WHO, 2014). However, considering that the average value of this indicator at the EU level is 73 years (European Commission, 2014), we can argue that Romania has to catch up with the other member states from this point of view as well.

While the *mortality rate* has increased since the collapse of the communism, from 11‰ in 1989 to 13‰ in 2012 (World Bank, 2014), the *fertility rate* has significantly diminished between 1989 and 2012 (from 2.22% to 1.53%), the lowest value being achieved in 2000, of 1.31% (European Commission, 2014). Meanwhile, analysing the same statistics we can see that, even if the fertility rate in Romania has been below the EU average since the end of the 1990s, after 2007 it has been surpassing the values registered in those EU countries worst hit by the recession, such as Greece, Spain, Italy or Cyprus.

The decreasing fertility rate together with the increasing old age dependency ratio – from 16% in 1990 up to 22% in 2013 (World Bank, 2014) – have generated a so-called “ageing at the bottom”

phenomenon, visible in the population pyramid through a reduction at the base. Some analysts consider that this current demographic situation, which is present not only in Romania but also in many other states, could have been influenced by the longer schooling period, the changes occurred in the role of women in households and by the early retirement schemes (Carone, 2005).

Traditionally, it is considered that there is a positive relation between the *income level* and the health status because the raise of the salaries allows the individuals to buy not only more expensive and better quality food, but also a larger range of medicines. Despite these evidence, some studies have underlined that, in the end of the XXth century, the most important improvements regarding the health status are influenced more by the technological and medical progress than by the increase in the income levels (Preston, 1975; Jamison *et al.*, 2001).

In the case of Romania, the decrease in the population's purchasing power due to the decline of real income, the increase of the prices between 1990 and 1999 and to the nowadays economic recession had a negative impact on the nutritional habits. During these periods, it was noticed a reduction in the consumption of fruits, fish, meat, eggs or milk (Constandache and Nenciu, 2013), aliments included by the specialists in the category of healthy food (Willett *et al.*, 1995). By contrast, between 2000 and 2008, when Romania registered significant economic progress and increases in the consumers' incomes, these nutritional habits have improved.

It is known the fact that the *lifestyle*, reflected in the nutritional habits, physical activity, smoking or high consumption of alcohol, correlated with factors such as high blood pressure, high cholesterol or overweigh, positively influence the premature mortality rate, especially due to the cardiovascular diseases and cancer. Actually, analysing the statistics offered by the European Commission, we can notice that the top diseases that foster the mortality rate in Romania are the cardiovascular and cerebrovascular ones, followed by cancer (European Commission, 2014). While the first two have registered a descending trend since 2000, the malignant neoplasms had, unfortunately, a positive evolution. Despite this evidence, in Romania there are no screening programs for the most frequent types of cancer. Consequently, the patients are detected in advanced stages of the disease, fact that favors earlier retirement of the young persons, higher expenses and lower life expectancy.

Table 2 – Main diseases fostering the mortality rate in Romania and in EU, in 2011 (the death rate per 100000 inhabitants)

Diseases	Romania	EU average
Diseases of the circulatory system	1040.3	395.1

Ischemic heart diseases	344.9	139.2
Cerebrovascular diseases	316.8	94
Malignant neoplasms	265.6	268.5
Diseases of the respiratory system	76.1	80.5

Source: Authors' compilation from European Commission, ECHI - European Core Health Indicators, 2014, http://ec.europa.eu/health/indicators/echi/list/index_en.htm

The increasing number of the people that neither have a job nor are registered as unemployed led to the rising number of the uninsured persons. Since they cannot benefit from medical assistance for chronic diseases, they get to hospital as emergencies, with severe illnesses, which usually are associated with multiple untreated comorbidities. Therefore, the *duration of hospitalization* gets prolonged, the *costs* increase and the *recovery chances* diminish.

According to the diagnosis and disease's severity, the *hospitalization period* can differ very much. In Romania, it was noticed that the average duration of hospitalization had very small changes between 2007 and 2011, decreasing from 7.8 to 7.5 days (European Commission, 2014). Again, these values are among the highest in EU.

Regarding the types of illnesses, during the last 25 years, in Romania we can observe an increase in the number of both contagious and non-contagious ones. Meanwhile, significant progresses in *eradication of some diseases* have not occurred yet. A study conducted by World Health Organization presents the ten leading risk factors of the diseases in Romania. While in the case of men the main factors are the cigarettes and alcohol, for women the high blood pressure and the high Body Mass Index (BMI) are the most important ones (WHO, 2003). These results allow us to argue that, together with the physical, social, hereditary and financial causes, the behaviour has also an important impact on the health status and on the general welfare level of the population.

Conclusions and perspectives

Despite all the reforms and regulations implemented since the early 1990s, the Romanian healthcare system has been struggling to cope with underfunding. Nowadays, the country occupies one of the last positions in the EU top states regarding the percentage of the public health expenditure in GDP. This is a very concerning aspect since in Romania the majority of the financial resources come from the public sector.

Considering this aspect and analysing various health indicators, the research has confirmed our hypothesis from the beginning of the paper: Romania is far behind many other EU states from the

point of view of the economic and social effects of the public expenditures. Therefore, we found out that the number of the doctors from the hospitals decreased by almost 35% in the past three years, reaching an alarming level in 2014 of only half of the value required by the Ministry of Health's normative. This situation was mainly caused by the "brain" migration, due to the low incomes received in Romania and to the poor working conditions. This dramatic situation is worsened by the fact that the number of beds from public and private hospitals has also diminished since 2000.

However, Romania's improvements in maternal mortality rates, equipment, technologies and medicines contributed to the increase of the life expectancy during 1990-2012. Meanwhile, the infant mortality rate has significantly decreased. Despite these improvements, Romania still remains on the lowest positions among the EU states according to the life expectancy and healthy life expectancy. It is also the country with the highest infant mortality rate.

Another worrying situation in Romania is related to the ageing population phenomenon. Our research has found out that the fertility rate has substantially diminished after 1989 while the old age dependency ratio has augmented.

Analysing the statistics, we have noticed that the top diseases that foster the mortality rate in Romania are the cardiovascular and cerebrovascular ones, followed by cancer. Actually, they seem to be in close connection with the lifestyle (including the nutritional habits), which may depend on the consumers' purchasing power.

Considering all these aspects, our concern is that the Romanian health care system will have to cope with three major challenges in the next decade. The first one consists in the demographic changes, especially the ageing population and the decline in the number of the working age individuals. This aspect will put a greater pressure on the medical services in the context in which it will have to respond to an increased demand of the aged persons. Secondly, the advances in medical science, such as innovation in surgery, screening and diagnosis, will generate new demands within the health services. Related to this, the third challenge refers to the rising public expectations from the health services, people wanting to be treated more as consumers than as patients.

In conclusion, we can argue that it is vital to reorganize the Romanian sanitary system and to restructure the politics regarding the public health expenditures in order to have a high efficiency.

References

- Bara, A.C., van den Heuvel, W.J.A. and Maarse, J.A.M. (2002) “Reforms of Health Care System in Romania”, *Croatian Medical Journal*, Vol. 43, No. 4, pp. 446-452.
- Carone, G. (2005), “Long-term labour force projections for the 25 EU Member States: A set of data for assessing the economic impact of ageing”, Economic Papers – European Commission, Directorate-General for Economic and Financial Affairs Publications.
- Constandache, M. and Nenciu, D.S. (2013), “The Structure of Romanian’s Food Consumption and its Implications on Health Condition and Quality of Life”, *Romanian Statistical Review*, Vol. 12, pp. 41-51.
- European Commission (2014), “ECHI - European Core Health Indicators”, available at: http://ec.europa.eu/health/indicators/echi/list/index_en.htm (accessed March 2015).
- Eurostat (2014a), “Healthcare statistics”, European Commission, available at: http://ec.europa.eu/eurostat/statistics-explained/index.php/Healthcare_statistics#Healthcare_expenditure (accessed March 2015).
- Eurostat (2014b), “Healthcare indicators - 2000 and 2010”, European Commission, available at: [http://ec.europa.eu/eurostat/statistics-explained/index.php/File:Healthcare_indicators_2000_and_2010_\(per_100_000_inhabitants\)_YB14.png](http://ec.europa.eu/eurostat/statistics-explained/index.php/File:Healthcare_indicators_2000_and_2010_(per_100_000_inhabitants)_YB14.png) (accessed March 2015).
- Haivas, I. (2010), “Health care in Romania: Fighting collapse”, *Canadian Medical Association Journal*, Vol. 182, No. 7, pp. 654-655.
- Jamison, D.T., Sandbu, M. and Wang, J. (2001), “Cross-Country Variation in Mortality Decline 1962-87: The Role of Country-Specific Technical Progress”, CMH Working Paper No. WG1:4.
- McKee, M. (1991), “Health services in central and eastern Europe: past problems and future prospects”, *Journal of Epidemiology and Community Health*, Vol. 45, No. 4, pp. 260–265.
- NIS (2008), “Chapter 4 – Incomes, spending and the population consumption”, available at: <http://www.insse.ro/cms/files/pdf/ro/cap4.pdf> (accessed April 2015).
- NIS (2015), “Population and its demographic structure”, available at: <https://statistici.insse.ro/shop/?lang=en> (accessed April 2015).
- NIS (2011), “Romania in digits”, Statistical Report, available at: http://www.insse.ro/cms/files/publicatii/Romania_in%20cifre%202011.pdf (accessed April 2015).

- NIS (2013), “The activity of the sanitary units”, National Institute of Statistics’ Report, available at: <http://www.insse.ro/cms/files/publicatii/Activitatea%20unitatilor%20sanitare%202012.pdf> (accessed April 2015).
- Preston, S.H. (1975), “The Changing Relation between Mortality and Level of Economic Development”, *Population Studies*, Vol. 29, No. 2, pp. 231-248.
- Romanian College of Physicians (2015), “Doctors’ migration”, Press Release, available at: <http://www.cmr.ro/comunicat-de-presa-34/> (accessed February 2015).
- Stancu, I. (1996), *Finante*, Economica Press, Bucharest.
- Vladescu, C. (2004), *Sanatate publica si management sanitar*, University Book Press, Bucharest.
- Vladescu, C., Scintee, G. and Olsavszky, V. (2008), “Romania – Health system review”, *Health Systems in Transition*, Vol. 10, No. 8, pp. 1-181.
- WHO (2006), *Health and Economic Development in South-Eastern Europe*, World Health Organization Press, Paris.
- WHO (2007), “Health for All database”, WHO Regional Office for Europe, Copenhagen, available at: <http://www.euro.who.int/hfadb> (accessed February 2015).
- WHO (2014), “Healthy life expectancy (HALE) at birth”, available at: https://data.un.org/Data.aspx?q=life+expectancy&d=WHO&f=MEASURE_CODE%3AWHO SIS_000002 (accessed February 2015).
- WHO (2003), “The world health report 2003 – Shaping the future”, World Health Organization, Geneva, available at: <http://www.who.int/whr/2003/en> (accessed February 2015).
- Willett, W. C., Sacks, F., Trichopoulou, A., Drescher, G., Ferro-Luzzi, A., Helsing, E. and Trichopoulou, D. (1995), “Mediterranean diet pyramid: a cultural model for healthy eating”, *The American Journal of Clinical Nutrition*, Vol. 61, No. 6, pp. 14025-14065.
- World Bank (2014), “World Development Indicators”, The World Bank Group, available at: <http://data.worldbank.org/data-catalog/world-development-indicators> (accessed March 2015).