The Paradoxes of European Medical System Regarding the Performance Management

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Abstract. The notion of performance is associated today with the success of the organization or of a system and is influenced by many factors and variables. To identify what can influence the health system performance, we should understand the significance of the medical performance concept, the general characteristics of European health system and its components. For this paper I used the qualitative research. Through the analysis of documents, i selected and interpreted the information and i found a number of contradictory ideas and situations that may limit getting the medical performance. This contradictory semantic constructions are named the paradoxes of European medical system. This paper is interesting and original in the way that it refers to the specific topic and captures the overall picture of the European health system. The results showed that even though some medical concepts and specific indicators shows utility for medical system and appear to be indispensable, in practice they may cause limits or uncertainties in the ability of getting the desired performance level.

Key words: Management, Performance, Medical System, Paradox
JEL classification: A13, I11, I12, I18

1 Introduction

The public health service is vitally important, many experts considering that reforming the ways of financing health services is the key to the success of an effective medical system. (Stanciu, 2013) The health is the largest "industry" of the European Union and should be remodeled and modernized (Björnberg, 2014) Patient mobility remains the European Union directive that accelerated the request for performance and transparency in medical services, the countries most involved in this being Holland and Luxembourg (Björnberg, 2014). Health it is important for the overall economy, as a key factor in ensuring a strong workforce and a thriving economy (European Commission, 2012) Healthcare services create an area that will generate significant employment opportunities in the coming years. The efficacy, safety and experience, are the main components of a quality care, an important element of performance for health systems. (Comisia Europeana, 2014d) The evaluation of costs and performance of the health system are based on the general standard to quantify the costs of healthcare and the medical units revenues. Multi-criteria analysis methods enable a more rigorous classification of health establishments, by evaluating management performance indicators. (Susca et. all, 2012) The opportunity of using bibliometric indicators was already anticipated in advanced economies where preferential investments were made in biomedical research, which today accounts for more than half of research from the US and Western Europe (Corlan, 2012). Heart disease are the first cause of hospitalization and death in the European Union. (OECD 2014). Vaccination programs are among the safest and most effective public health interventions to provide protection against disease. (OECD 2014). Almost 3% of household spending, went to medical services in recent years across the EU. In the EU, Romania has the largest pay out of pocket (OECD 2014) Strengthening cooperation between states in the medical field at EU level rose by Directive 2011/243. In the past 10 years have increased spending on health care and for chronic diseases. There is an uneven distribution of doctors in Europe. The health sector can generate a large number of jobs. Health is a value in itself and is a condition for economic prosperity. (European Commission 2014c) Collection of information on the comparative effectiveness of health systems is still at an early stage. (European Commission 2014c). It requires
the creation of European Reference Networks, for example in the field of rare diseases (European Commission 2014b), but also the handling of cases of disease that shows no emergency through family medicine (hospitalization may be avoided) (Ministerul Sanatatii (2014). Two of the goals made by European countries for health reform are: to promote the preventive medicine and to find solutions through the positive medical systems that are at the european level. (Rethmeier, 2010) Healthcare sector is strongly influenced by the degree of innovation and represents 10% of EU GDP. In 2010, 8% of jobs in the EU were in the health system (European Commission (2014c). The sanitary economy is an application of economic sciences, which studies how are produced and provided the healthcare services and also the behavior related to health services (patients, doctors, politicians, etc.). (Frum et al., 2011) The right to health means "to enjoy of a variety of facilities, services and necessary conditions ", according to the UN Committee on Economic, Social and Cultural Rights. (Dragomirişteanu et al., 2011) In Europe, life expectancy has continued to rise but have increased the inequalities (79 years). In Romania and Bulgaria, life expectancy is the lowest in Europe (OECD 2014) and significant deficiencies were identified at European level in the ability to plan future labor demands in health but also to meet the needs healthcare. (Comisia Europeana, 2014d)

2 Literature in review

The concept of medical performance includes all of its components: quality, efficiency, effectiveness, patient safety, security, the necessary medical equipment, the computerized medical system, accessible information, low costs, reduced bureaucracy, the correlation between the management system and the health policies (Stanciu, 2013) equitable rapport among taxpayers and insured and many other aspects. A modern medical system involves a good allocation of funds collected by specialized institutions, investments in infrastructure, the necessary equipment. Even if at the european level the public expenditure on medical services were approximately 6% for Romania were 3% of GDP for 2011. (Stanciu, 2013) „A comprehensive framework for assessing the performance of health systems should have four major functions: the function of service assurance, the function of financing the health system, the function of resource generation and the function of coordination, organization and administration" in accordance with essential idea retrieved in the Report of the World Health Organization for 2000 (Dragomirişteanu, Astarastoae, 2011) The existent level of performance can be identified and measured by a careful data collection system and a through an analysis of them over a long period. In OECD countries, the performance can be assessed by measuring the economy of resources, costs, efficiency, effectiveness and quality of service. (Profiroiu et al.) The level of medical performance can be influenced by other aspects such as: the level of investments and expenditures, the interest in medical research (Dragomirişteanu, Astarastoae, 2011), the indirect payments of patients, healthy life style, economic crisis, the cooperation between Member States in use health technology assessment and improving the access to innovative technologies for each patient (Comisia Europeana, 2014d), death rates, maintaining the citizens preoccupation for health care, the delayed availability of innovative medicines (Dragomirişteanu, Astarastoae, 2011), the risk factors, workforce planning, the migration phenomenon, the risk of infection in a hospital, the reported number of beds for population needs and more.

It can be seen that there is a strong relation between the country's total income and the expenses for health and it is not surprising that Switzerland and Norway have spent the most in this regard, in 2012 (over 4500 euro / person), Austria and Germany (3600 euro). (OECD 2014) In 2012 were allocated around 8% of GDP for health. The Low Countries allocated 11% and Romania allocated 5.4% of GDP, according to OECD, WHO and Eurostat. (OECD 2014) In France, Romania, Austria and Poland, one-third of the expenditures on health sector are for
hospitalization. Portugal and Cyprus spend most for ambulatory care-40% of the costs. Slovak Republic and Hungary spend most for medical goods-10%. Expenditures for long-term care are in countries such as Norway, Denmark and the Netherlands. (OECD 2014) The healthiest lifestyle based on a low levels of alcohol, tobacco and obesity, are found in Italy, Ireland and Sweden. (Rijksinstituut voor Volksgezondheid en Milieu, 2014)

Even though the phenomenon migration can develop the personal and professional life of the immigrant, the capacity and the effectiveness of health system from his origins, may be affected. A recent report in this regard, notes that the United Kingdom of Great Britain is the country with the largest number of foreign doctors in Europe (37%), followed by Ireland (30%). (Covaliu et al., 2012) A significant number of immigrants also exist in the Nordic countries (Norway, Finland and Denmark). By 2020 the European Union will register a deficit of 1 million health workers. It could be possible that 15% of all necessary assistance in Europe not be covered. (Covaliu et al., 2012) In Europe, another negative aspect that influence the performance are the out-of-pocket payments which have increased. (OECD, 2014)

Health system performance is influenced by the level of hygiene (the risk of infections). In Europe, exist this risk in the most hospitals, with some exceptions as: Bulgaria, Poland and the British Islands. The level of hygiene and the use of antibiotics has increased considerably in the UK (Björnberg, 2014) According to a survey (Karanikolos, Mkee, 2011) the death rates obviously affects the level of performance. Even though a progress has been made (life expectancy increased by 6 years, compared to 1980 and has decreased the premature mortality), in accordance with the study "Health at a Glance: Europe 2010", there is big differences between Member States concerning the provision of health services and the risk factors on the continent. (Dragomirișteanu, Astarastoeae, 2011)

In the accordance with evaluation of the performance of the various national health systems, at the European level, Romania is ranked 34 of 34 countries and obtained only 489 points from 1000, compared with 822 points - Netherlands and Iceland- 799 points. (Stanciu, 2013) The number of beds reported to number of population, affects the performance level and since 2000 in all EU countries, has decreased the number of beds, except in Greece, Germany and Austria which had the highest number of beds / inhabitant. (OECD, 2014)

The level of performance can be influenced by the availability of medicines and by the degree of access to healthcare services. In Ireland, medication costs are higher and in Luxembourg the patients get medical treatment in neighboring states (they not have a primary health care system even if it is the richest country in the European Union). (Björnberg, 2014) In Greece there is the highest number of doctors per 1,000 inhabitants, compared with Romania and Poland where it is the lowest number of physicians in Europe (OECD, 2104). In countries such as Norway, Switzerland and Luxembourg they allocate large sums for health, over $ 6,000 annually. In countries of Western and Nordic Europe the sums are between 3,000 and 5,000 dollars (Björnberg, 2014). In Romania, even if in the last ten years, the level of investment in high-performance equipment exceeded 1 billion USD, Romania is the last in the coverage with Magnetic Resonance Tomography and Computed Tomography (Dragomirișteanu, Astarastoeae, 2011) In the Czech Republic, Slovak Republic and Hungary there are the most doctor consultations. (OECD, 2014)

Performance indicators may reflect the quality of medical care in the hospital, the efficiency of technique reflected in the appropriate use of resources but also keeping the costs of the technical plateau under control. (Mihut, 2013) At the european level, there is very little evidence about the registers of the doctors but also persist the difficulty in accessing the medical documents. (Björnberg, 2014) In Romania are a lot of official institutions that collects data directly from hospitals. Some institutions had implemented the statistical system, named Diagnosis Related Groups (DRG) based on the Australian version. This system try to change the way of financing the hospitals and the way of
collection of a minimum set of clinical and demographic data about the patients (Stamatian et al., 2010).

Health profile of Romania, in compliance to the Statistical YearBook 2013 "Health", available on the online address of National Institute of Statistics, includes the following aspects: high number of registered health units are for dental surgeries, the largest category of medical personnel has secondary education (declining number compared to 2007), the number of beds is in a downturn, there are only two units nationwide for tuberculosis even if the number of the diseases have increased in 2012. (National Institute of Statistics, 2013) According to the European Community Health Indicators (ECHI) 2013, Romania has the highest level of informal payments in Europe (Ministry of Health, Romania, 2014) and is the last in terms of the customers for health services (the financial allocation for health per capita).

The expenditures on health are under 1000 USD / inhabitant and places Romania on a last position in Europe, before Albania and Republic of Macedonia. (Ministry of Health, Romania, 2014) 75% of hospitalized cases have not references through family doctor and 50% of patients are hospitalized for urgent situation, indifferently of the cause of hospitalization [World Bank, 2011]; (Ministry of Health, Romania, 2014) In Romania, three out of four patients with low-income, must pay out of pocket for medical care. (Ministry of Health, Romania, 2014) The existence of the hospital performance management can be achieved through the compliance with the recommendations made by the World Bank, to classify into 5 categories (five levels of competencies), the hospitals. (Stanciu, 2013)

3 The research methodology

I analyzed the contained data in specialized articles, data from official documents, statistical data, secondary data but also tertiary data. I identified, evaluated and selected the documents. I did some correlations between obtained information. The research was qualitative. I interpreted data from fragments of texts. I identified the recurring concepts in the specific literature and i tried to understand the meaning and the report that it is established between each other. I selected materials that address to the same topics and i noticed the frequency of certain issues and concepts. I identified the context in which is placed the concept of performance and its components. I used to analyze exploratory studies, descriptive and explanatory studies, case studies from which I extracted the essential ideas, originality of the information and the antithetical enunciations. I tried to capture the causal links from the European medical system.

4 Diagnostic analysis at macro level- Positive versus negative European health systems

4.1 The positive aspects of the European health systems

The states that are listed subsequently, have a high level of medical performance if we refer to the following ideas: the decreased waiting time, newly established health centers, the focus on preventive medicine, the allocated expenditures for health services, the best clinics from the medical system, the introduction of E-Health discipline, respect for patients’ rights, increased accessibility level, the introduction of catalogs with quality ranks, the use of performance indicators, the introduction of reservation possibilities, the electronic transmission of medical prescription, patient consultation without an initial doctor appointment, the transparency of information in the system, the decentralized planning system, the way of formation of the Social Insurance Fund (progressive taxation), the free access to health care, the access to cross-border healthcare, the immunization campaigns, the regional autonomy in providing health services.

Even if there are 3 models of obvious public health systems in Europe (Beveridge, Bismarck, Semashko), European countries have adopted a mix of this three models (Stanciu, 2013). No one can say that a model can be preferred. The Netherlands is the only country that has obtained the best score for three times in the European Index Health Consumer Powerhouse (898 points in 1000) followed by Switzerland
with 855 points. Swiss healthcare system is known as excellent. In the year 2014, Norway was on the third position with 851 points, in terms of health expenditures per capita, Finland occupies the fourth position (846 points) and Denmark the fifth position. The most obvious progress was done by Macedonia, from position number 27 to position number 16 (2014) by eliminating the waiting list and implementing E-booking system. (Björnberg, 2014)

The Netherlands have founded 160 primary healthcare centers with the access to surgical problems 24 hours per day. The decisions are taken in system through medical professionals and with the co-participation of citizens. A large number of politicians and bureaucrats were excluded. (Björnberg, 2014) Belgium and Switzerland are good in the availability of medical services.

In Norway, quality inspections take place, there have been modernized health registers and the clinical databases (based on HTA) and was introduced the e-prescriptions. (WHO, 2013b) Finland has a very good score for the lowest expenditures in the European Union.

Denmark has introduced eHealth sub-discipline and is among the few countries in Europe that offer to patients the freedom of choice of medical treatment in any countries, member of The European Union. The quality of medical services offered is marked by the number of stars of the hospitals, as it happens in the case of hotels. Patients can obtain a direct connection with the hospital manager with a single click on the link existing in the online system. (Björnberg, 2014).

For prevention, the best medical systems are in Ireland, Norway, Sweden and Spain. (Björnberg, 2014) Croatia has "islands of excellence" in health care system and could become a popular country for health tourism. (Björnberg, 2014)

Figure 1. Healthcare quality measured as outcomes
Source: Euro Health Consumer Index 2014 Report, page no. 36
Three countries from Europe (Spain, Italy and U.K) have many centers of excellence in health. The transparency of information about healthcare quality, are especially in Germany but also in countries such as Slovakia, Portugal, Netherlands. Catalogs with quality ranking are in countries like Cyprus, Hungary and Macedonia. In France, the weeklies Le Point and Figaro, make public the information about best clinics of the national territory. Macedonia and the UK are trying to introduce a list of the best 100 doctors. Regarding the right to the second medical opinion, only the health systems in Belgium, Austria, Czech Republic, Croatia, Poland, offers this opportunity for patients without the need for an additional cost. (Björnberg, 2014) The healthcare quality measured as outcomes, regarding Euro Health Consumer Index 2014, is exposed in the figure 1. Regarding the best clinics that are included in the online catalogs, there are some countries that have this practice, such as Portugal, Britain, Germany and France. The catalog is accessible and indicate the rank of the hospital quality and its results. The waiting lists have been removed to some extent in several European countries, by introducing the possibility of medical reservation: Italy, Spain, Portugal, the Baltic States, the Nordic countries, Macedonia, Hungary, Denmark, Luxembourg, U. K. There are countries where you can pick up drugs from pharmacies based on electronic sent medical prescription. In Scandinavia, Holland, Iceland, Denmark, UK, Scotland, Spain and Romania this concept does not exist in theory. Countries where patients can see the doctor without an initial appointment are: Serbia, France, Italy, Portugal, Belgium, Bulgaria, Hungary, Macedonia, Malta and Cyprus. (Björnberg, 2014)

In Austria, the health system is decentralized. There is local governance. The social funds are determined by the occupation. There is progressive taxation. The German medical system has the highest levels of medical supply, including in rural areas. This system is effective through the technique in ambulatory care and through the reduced waiting time. (WHO, 2013a)

In Italy has increased the life expectancy and the infant mortality has declined due to immunization campaigns applied to the babies under 24 months (measles, whooping cough, tetanus). The medical system it is focused on prevention and therapies. In Italy there is a high degree of regional autonomy in providing care for health. It has been introduced a new instrument of governance (National Healthcare Information System), based on a common coding language and a common classification in order to ensure the monitoring and the efficient exchange of information between central and regional level, in order to compare the quality and the efficiency of the services (WHO, 2013a) In the Spanish health system there are 17 independent regional health systems that own core competency in health planning and health care. The professionals are involved in the management processes. The decentralization it is promoted. (WHO, 2013a)

In Cyprus, 83 percent of the population has free access to health care. The public sector provides some ambulatory and care services that are not available in the private sector. (WHO, 2013a) Ireland had introduced the legislation that prohibit the smoking at the workplace. With a budget of over 13 Billion euros, it is the largest employer in the state, with more than 65 000 people in direct jobs and 35 000 employed in the voluntary hospitals. The primary care is free for poor people. (WHO, 2013b)

In Sweden, there is traditionally local self-government and municipalities have assumed the responsibility of caring the patients that have physically disabled. The structural reforms are implemented by the County Councils and less through the national legislation. The system provides financial incentives to promote primary care, psychiatric care, care for old people. The emergency care was concentrated in small hospitals. (WHO, 2013b)

In the UK, the National Health System (NHS) will reinvest 20 billion pounds. A key element of the government policy will be to extend the workforce (50,000 doctors and 100,000 medical assistants) (WHO, 2013b) In the most European countries the acces to the medical file of the patient is allowed, but in some countries is restricted, such as: Spain, Italy, Portugal, Greece, Malta or Cyprus, Lithuania, (Björnberg A, 2014)
in order to protect both the patient integrity and the confidentiality of data. Only the patients from Nordic Countries, Austria, Luxembourg, the Netherlands and Finland can benefit for the European Directive on cross-border healthcare in the same economic conditions that are in their country. I should mention that the conditions of the enrollment increased in 2013. Most patients do not benefit from this European Union right. (Björnberg A, 2014)

Albania achieve performance in health services through zero waiting time and in Serbia the new government is trying to eliminate the corruption from the health system (the massive payments to doctors). Greece massively decreased the cost for healthcare (Björnberg A, 2014). The transparency in providing information about the pharmaceuticals it is in most countries in the EU. Few information exist at the European level about the circuit of pharmaceuticals in the medical system. In Scotland to access the medical data, is very easy but in some cases this data are not compatible with the European standards and worldwide standards (WHO, Eurobarometer). (Björnberg A., 2014)

4.2 The negative aspects of European health systems

I chose to present what I have considered relevant as negative aspects of several medical systems from Europe. These medical systems cannot be used for the purpose of a transfer of know-how, but we can apply the phrase: "Let's learn from the mistakes of others."

In France there is a lack of coordination between hospital and ambulatory (outpatient) services. The system passes through structural reforms. The specialists want to create regional health agencies, with fundamental role for ambulatory system, for hospital and social care. (WHO, 2013a)

In Greece, medical system is highly centralized in decision making. The management structures are inefficient. Information management systems are missing and there is an uneven regional distribution of resources and of the level of care. Tax evasion is high. (WHO, 2013a)

In Latvia the medical treatments are expensive. (WHO, 2014)

In Finland, although the medical system is good in overall, there are long waiting lists and are perceived as problematic: the high level of decentralization, the lack of expertise, the geographical inequalities to access the services, the lack of national and regional cooperation. (WHO, 2013b)

To complete the diagnostic analysis at the macro level, is added a number of recommendations formulated by the experts from medical field. This recommendations are considered very important to achieve a high level of performance, thus:

1. Eleven EU states received recommendation for reform, for sustainability and cost-effectiveness, for the practiced tariffs and for primary outpatient care; (European Commission, 2014c)
2. It necessary to know the strengths and weaknesses, using e-Health in personalized healthcare and using the health technology assessment; (European Commission, 2014c)
3. Improved coordination on health systems performance assessment (HSPA), along with monitoring the efficiency of health investments but also using data from Eurostat and the OECD, by EU Member States; (Council of the European Union, 2014)
4. Developing the terms of reference (ToR) and the rules of procedure for the expert group formed at the European level for Performance Evaluation of Health Systems (HSPA), noting that Member States are not required to participate. (European Commission, 2015)
5. Increasing the awareness of medical errors; The context in which data are collected, should be identified. (European Commission, 2014a)
6. Measurement and monitoring of performance and cost-effectiveness of the health systems but also comparing the cost-effectiveness of all European health care systems, taking into account the changes in lifestyle among countries (Rijksinstituut voor Volksgezondheid en Milieu, et al, 2014)
7. Increase the access to cross-border medical expertise (European Commission, 2014b)
8. Health promotion (Ottawa Charter) through actions such as: changing unhealthy behaviors, education and social communication, reorienting health services to prevent diseases, risk communication and more. (Cucu, 2103)
9. Correct identification of the population needs to establish priorities for allocating resources correctly (Popa, 2010)

5 The results of the empirical analysis and data interpretation

Through analyzing data from medical field, the information contained in the diagnosis analysis at the macroeconomic level but also the expert’s recommendations, is found that there are a lot of contradictory ideas and contradictory semantic constructions, that i generically called them: the paradoxes of European medical system. I mention that the interpretation of these paradoxical concepts was structured in three levels of importance, depending on the frequency of their use in the specific literature of the medical field. After disseminating the results, i identified 24 paradoxes of European health system that may limit and influence the performance level desired, as it follows:

5.1 High level

1. The paradox of performance notion
   Fundamentally, in the public sector there are a number of difficulties in defining the notion of performance: the meaning of the concept of performance; the difficulty in how to achieve performance and the identifying of the criteria and performance indicators. (Profiroiu et al)
   How we can determine the level of performance if this concept is so complex and difficult to be estimated? How can we improve the performance level of medical care if there are difficulties in defining the concept of performance?

2. The paradox of determination the performance level

When we analyze the performance level of a system, in this case the medical system, we can make a ratio between the subjective quality (an index composed by the terms: bureaucracy, transparency, effectiveness and corruption) and public expenditures. This mode of analysis is applicable in the case of public administration, but also it may be applied in the public medical sector. The reviews conducted by experts have shown that there is still a weak link between the subjective performance and the expenditures. The measurement of financial performance it can be done mainly in the economic public services and less in the medical system. (Profiroiu et al)

The paradox of the mentioned ideas is: What is the most important element that can determine the performance level? Which aspects of the medical performance can be measured and evaluated? I should mention that in general, the performance of the medical system it is evaluated through the medical costs involved.

3. The paradox between the scientific research and the performance level achieved
   Even though it seems a paradoxical situation, it is not, because according to the study conducted by the Corlan, it was observed that there is a close connection between the professional capacity of a hospital and its scientific capacity to investigate and publish articles in the medical field. (Corlan, 2012)

4. The paradox of data collection
   Even though at the European level, the European Union Commission had established a set of indicators to measure and monitor the health system performance (ECHI), the paradox is that only after long-time we will observe which is the level of the comparability and accuracy of data. (European Commission, 2014c)
   The evaluation of the efficiency of health systems remains a complex process. The question is: How long it will be necessary to obtain the best interpretation of the data obtained? The paradox is that there is not a unitary data collection system at European level, even though the European Commission is making efforts in this regard. Rather than a well-defined system with definitions and specific concepts there is a common approach of
healthcare performance at the European level. (Björnberg A, 2014) It results the uncertainty expressed through this question: There is a hidden interest for not create a unitary data collection system at the European level? Are placed intentionally impediments in order to not exist a uniform reporting? It could be visible some anomalies, some certain vulnerabilities if there will be a precise system of data collection, perfectly unitary? The specialists had mentioned that health system performance is influenced by the decisions taken, by the results achieved and less by the indicators that measure the health status. Health status is influenced by lifestyle and environmental factors. It results the interrogative paradox: Why is mentioned so often the interest to create a system of indicators at European level, while is so difficult to be implemented? For this type of paradox I could mention the Scottish medical system, where the data are not compatible with European standards and worldwide standards (WHO, Eurobarometer, ECHI). The information are not provided at the hospital level. The information are provided overall. (Björnberg, 2014) The contradictory question is: How we can measure the medical system performance if the data provided are not compatible with the official standards? Moreover, introducing the new indicators that are used in the ECHI system, some countries starts to show problems of survival in the European medical top. (Austria, Germany, Italy, Spain). (Björnberg, 2014)

5. The paradox of implementing the medical information system
The integrated information system is a part of the concept eHealth (Stamatian et al, 2010) and includes computerized hospital departments: administrative, financial and clinical. Even though it is so necessary, the paradox is that such a system is relatively difficult to be created because there are a high levels of information that must be available for a long time. The medical domain is difficult to be informatized because of a large number of involved actors.

6. The paradox of measuring the level of healthcare accessibility
Even though the medical assistance must be available for all (according with one of the principles enunciated by the European Social Chapter), the paradox is that access to healthcare is difficult to be measured and there is not an adequate methodology at European level to monitor and to promote the best medical practices. (European Commission, 2014c)

7. The paradox of cross-border healthcare
Even though the cross-border healthcare represents a right of every citizen, member of the European Union, for most patients this right does not exist in practice. Instead of being simplified the registration conditions to benefit from the cross-border healthcare, the registration conditions have increased in 2013.

8. The paradox of the medical personnel demand
This paradox is very common at the nationwide level, because the demand for medical personnel has increased and the phenomenon of migration is increasing. The uncertainty in this case it is completed by the informal payments to doctors that are the highest in the European Union. What actually determine the migration of medical personnel? How would prefer the medical personnel to be remunerated? There is a hidden tendency for a low base salary and for high informal payments?!

9. The paradox of doctors number
Even though in 2012, in Greece there was registered the highest number of doctors per 1,000 inhabitants, this aspect has not generated a high level of performance. (OECD, 2014) The number of doctors does not necessarily affect the quality of medical care. The trained doctors and the level of doctor involvement influence the quality of care. Paradoxical situations were in countries such as Hungary, Slovak Republic and Czech Republic, where, even though in 2012 were the highest number of consultation at the doctor in Europe (OECD, 2014), the reported performance results, were not very high.

10. The paradox of medical personnel migration
Even though it seems an inexplicable fact, paradoxical and difficult to be understood, the same countries had absorbed the medical staff: the United States, Australia, Canada, Germany and United Kingdom. Experts had noted that more than three quarters of doctors who have migrated, are in Canada and the United Kingdom. (Covaliu et al, 2012) Results a paradoxical situation: even though the migration is beneficial for the countries where occurs, for the other states, from where the personnel are emigrating, the situation is not so good and the demand for medical personnel had increased.

11. The paradox of hospital competence level
Another paradox it is to classify the hospitals according to their level of competence, as World Bank recommended. There are hospitals that are included at the highest level of competencies (level one, the first category) even though the diseases that are treated are not in a very acute phase. Common disorders are treated in general. In this level are included the emergency hospitals. There are many types of pathologies (psychiatric disorders, degenerative diseases, dermatological diseases, infectious diseases) that are not treated in the medical units that are included in the first level of competencies. (Corlan, 2012) In this case, the uncertainty is: How we can evaluate the level of the hospital competence as maximum, although the complexity of the diseases is relatively low and easy to be treated?

12. The paradox of health policy in Romania
Even though the health services are subsidized and some pharmaceuticals are compensated, the financial protection is not so good. Three out of four patients with low-income, must pay out of pocket for medical care they need. The average rates of compensation are the same for the rich and for the poor. The paradox is that even though it is necessary to support all the social categories, the subvention benefits are focused for the rich class or middle class, in accordance with the analysis of the World Bank, 2011. (Ministry of Health, Romania, 2014)

13. The paradox of the health profile in Romania
According to statistical data, even though the demand for medical personnel had increased, the number of doctors and nurses is decreasing (emigration phenomenon has increased). Even though the demand for hospitalization had increased, the number of beds it is in a down trend. Even though the number of tuberculosis illness cases had increased, the number of tuberculosis units had decreased (only 2 units at the national level). Informal payments from patients to healthcare professionals are the highest in Europe and the health expenditures per capita, are on the last place in Europe. More than this, 50% of patients are hospitalized in emergency, irrespective of the cause of hospitalization. (Ministry of Health, Romania, 2014)

14. The paradox of unlimited demands of medical services reported to limited resources
The most visible paradox of the medical system is the high demand for medical services and medical supplies and the limited resources. Taking into account this obvious anomaly of the medical system, why cannot be done efforts to exist a balance between supply and demand?

15. The paradox between the medical need, the medical offer and demand for health services
Another interesting paradox, result from the overlapping between need, demand and supply of services (modified after Stevens and Rattery). This paradox may exist in the structure of medical system. This paradox contain another three types of paradoxes as those mentioned by the author Constantinescu, in three areas: zone 1: there are needs but without supply and demand, zone 2: there is demand, but without needs or offers, zone 3: there is offer, but without needs or demands. The convergence of needs, requirements and services form an ideal situation. (Frum et al, 2011) We can include in this ideal situation the structure of the medical system. Another paradox is that the health services form an imperfect market with demand and supply, as specialists have said. There are a number of considerations that lead to the impasse
of this market and require the government intervention (Constantinescu, 2012) even though paradoxically many specialists argue the decentralization of the medical system.

5.2 Medium level

16. The paradox of the concept "patient safety"
Another paradox that can occur is related to the interpretation of the concept of "patient safety". The concept of patient safety culture first appeared in the United States. According to the literature, this concept is to improve patient safety by encouraging the reporting of his own initiative guardians events which could have a negative impact on them (Domnariu, 2012). The paradox comes when medical personnel avoid to report certain situations or limit certain mistakes for fear of being punished, thus putting patient safety at risk.

17. The paradox of waiting times
Even if the increased waiting time remains a problem faced by European medical system, the paradox is that there has not been established a clear definition of (European Commission, 2014c) what it means. Directive 2011/24 makes the health systems to be more accountable with the access to healthcare through greater transparency of the concept of "undue delay" in anticipation of a treatment. (Comisia Europeana, 2014d)

18. The paradox of the number of beds and hospitalization time
Since 2000, in all EU countries, there has been a decrease in the number of beds, except in Greece, Germany and Austria who had the highest number of beds/inhabitant (OECD, 2014), but not also the highest level of performance. For a better analysis of this indicator (number of beds/reported to population) should be linked with the number of hours of hospitalization. The paradox is that a long-term hospitalization does not necessarily ensure a more effective treatment. Important is the quality and not the quantity of time used. However, in literature, there is a direct link between rates of discharge and number of beds. (OECD, 2014) For this type of paradox we can mention the example of Germany, where the focus is on quantity rather than quality of medical care. There are more general hospitals than specific and specialized hospitals.

19. The paradoxes of the expenditures in European health system; the paradox of investments
Annual expenditure per capita on health care varies from a country to a country. There are countries such as Norway, Switzerland and Luxembourg (graph below) that allocate more than 6,000 $ annually and countries like Albania that offer 600 $. Countries in Western Europe and in the Nordic area have expenditures between 3,000 and 5,000 dollars (Björnberg, 2014) The practice demonstrates a direct link between spending per capita for healthcare and a high level of performance of the health system. The question in this case is: The performance of the others structural elements of the entire public sector may be affected? There should be an equitable distribution of costs for all components of the entire system of public administration. Even though Britain invests heavily in health, over 1 million patients are registered on waiting lists. Even so, the system is considered in the opinion of some authors, as one of the most social system and less expensive in Europe. (Stanciu, 2013) In Romania, the 20 years of reform have generated increased spendings for medical services. By following the paradox consists in the quite ambiguous correlation between existing financial resources and quality of care. According to the Euro Health Consumer Index, a visible performance means responsibility in treating patients and a lowest level of corruption. (Björnberg, 2014) There are many countries that even though have small and medium incomes, provide advanced medical services. The ambiguity it can transposed into the following question: What can generate a satisfactory level of performance? How can this be assessed properly? Another example for this kind of paradox is in Ireland, where costs for medication are high and also in Luxembourg where patients treat themselves in neighboring states, because there is not a own system of
primary care even if it is the richest country in the European Union. (Björnberg, 2014) Although it seems a paradox, studies have shown that the costs allocated for patients care are bigger, the greater is the inefficiency in which health care is provided.

20. The paradox of social insurance system (public vs. private) There is an unequal relation between insurers and taxpayers because the health services funding for students, unemployed and some categories of pensioners is supported by the employed population. This situation is actually an anomaly of the social insurance system. Overall, the system helps to increase decentralization and the various ways of choosing the delivery of health services. The paradox comes when it is expected to achieve an increase in performance through the private sector participation in the health insurance system, without taking into account the fact that the private health insurance is not available for all categories of people. In this case appears again the inequality of health insurance services. (Constantinescu, 2012)

21. The paradox of public-private partnership The paradox is related to the confidentiality of medical care that seems to preoccupy people more than solving the problem in question. Health insurance companies call for proof of treatment before payment and thus creates some bottlenecks. The public-private partnership plays a role in increasing the quality of health insurance but through a so-called passive approach, in the opinion of the authors. The paradox is that this passive approach generates long waiting lists and rationing decision remaining in the responsibility of the physician. (Constantinescu, 2012)
5.3 Low level

22. The paradox of medical innovations and diagnostic methods
The using of methods of diagnosis, imaging and treatment, involves the increased costs. Although there are several diagnostic methods (computed tomography or magnetic resonance imaging) only magnetic resonance imaging uses no ionizing radiation. This technology (without ionizing radiation) has been used in 2012 in Italy, Greece, Finland and Cyprus. The smallest units relative to population, were in Hungary and in Romania. However there is no ideal number of such facilities. The paradox is that a large number of units can generate an excessive use and an excessive use may have undesirable effects on health. (Constantinescu, 2012)

23. The paradox of immunization programs
Even though at the European level, vaccination programs are among the safest and most effective public health interventions to provide protection against diseases (OECD, 2014), the paradox is that in Romania, vaccination programs may not successfully be implemented because the degree of trust of the population is low.

24. The paradox of the hospitalization that may be avoided
Although it seems a paradox, the DRG data (Diagnosis Related Groups) consistently shows that a significant proportion of patients admitted in emergency hospitals in Romania, have diseases that might be treatable in ambulatory or through family medicine (ex. hypertension, asthma, uncomplicated diabetes, medium otitis
The rate of hospitalization could be avoided or diminished if the patients could understand the importance of the emergency hospital. (Ministry of Health, Romania, 2014). All the mentioned paradoxes, are exposed in a simplified manner, in the figure 3.

From the created scheme, it can be seen that there is an interdependence between the paradoxes of the health system and a causal link between them. Through the understanding of what contain the notion of performance, we can determine the elements that form the performance level. The data collection, may also help to a good interpretation of the performance level. The data collection can help the implementation of a complex information system. This system, already implemented, can show the level of accessibility of medical services, level measured by the used indicators. The accessibility of the medical system is provided by well-trained medical staff. This accessibility ensure the patient safety. The relation between supply, demand and need for medical services, may also influence the measuring of accessibility level. The patient safety it is influenced by decreased waiting time, hospitalization to time, the expenditures on the methods of diagnosis, the immunization, screening and the avoidable hospitalization. What we can see clearly is that the whole scheme has as its starting point, the understanding of the performance notion. The performance level it is influenced by the health policy but also the level of performance may influence the quality of the health profile.

6 Discussions and conclusions

Even though there are a number of concepts, terminologies, indicators and recommendations that are appreciated at the European level, the identified anomalies cannot be cancelled. On the contrary, using this concepts, we may increase the uncertainty and the utility of the objectives that are established to create a performant medical system. Big expenditures for health does not mean the best results. The easy access to data at the national level, does not necessarily reflect their compatibility at the European level. The phenomenon of emigration affect the medical performance of the countries involved and the migration phenomenon creates certain gaps in healthcare access at the European level. We can increase the performance of the medical system through massive investments but we may weaken the performance of other structural components of the entire public administration system. The medical performance is more influenced by the decisions taken on time and less through the used and reported indicators. The medical performance is not directly proportional with the number of doctors, is rather influenced by the well trained doctors and by their ability to empathize with the patients. The performance of medical system it is influenced by efficiency of the treatment not by the hospitalization duration. The evaluation of medical system performance remain a complex, difficult and expensive process. At nationwide level, we can notice the paradox of the health profile, because the number of doctors had decreased and the emigration of medical staff had increased. In Romania, the financial protection is not for the poor, informal medical payments are the highest in Europe and the expenditures for health are the lowest in Europe. In Romania, many patients are treated in emergency system even though is not absolutely necessary and in overall, the health system performance is weakened.

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