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THE IMPACT OF THE PANDEMIC CRISIS ON THE FINANCING MECHANISM OF THE HEALTH CARE SYSTEM IN THE REPUBLIC OF MOLDOVA

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Abstract: Health care is one of the basic services guaranteed by the state companies. The level of spending on health, like those on education, can be considered an indicator of the level of development of a nation. Most countries with advanced economies allocate important resources to finance the health sector, as a premise for the healthiest possible generations and long-term sustainable development.

The COVID-19 pandemic is affecting everyone. Globally, millions of people have been infected with this virus, and hundreds of thousands have lost their lives.

The topic addressed is considered to be actual considering that in the Republic of Moldova the pandemic is putting increasing pressure on the health care and social protection systems, causing major interruptions of economic processes and limitations of social life, deepening inequalities and proving how vulnerable we are. The era of COVID-19 has transformed the healthcare system into an extremely important sector. In addition to increasing spending on the necessary health care and implementing all actions in a non-pandemic situation, additional resources are needed to prevent, spread and treat the coronavirus.

The Republic of Moldova has recognized the fundamental role of health protection, representing an essential condition that contributes to increasing the quality of life of the population, as well as to the development of health capital. The national security and economic development of the country largely depends on the functioning of an effective health care financing system in order to preserve the health of the population as the main productive force of society.

The main purpose of the paper is to analyze the impact of the pandemic crisis on the financing mechanism of the health care system in the Republic of Moldova.

The given research analyzes the total expenses for health protection and their structure in the Republic of Moldova. We also analyze the financing mechanism, during the pandemic crisis, of the health care system in the Republic of Moldova.

Key words: health care system, financing health care, COVID-19, pandemic crisis, Republic of Moldova.

JEL: H12, H51, I18.

Introduction

The Republic of Moldova has recognized the fundamental role of health protection, representing an essential condition that contributes to increasing the quality of life of the population, as well as to the development of health capital. The national security and economic development of the country largely depends on the functioning of an effective health care financing system in order to preserve the health of the population as the main productive force of society.

The main purpose of the paper is to analyze the impact of the pandemic crisis on the financing mechanism of the health care system in the Republic of Moldova.

To achieve the mentioned goal, the following basic objectives were drawn:

- studying concepts regarding the health care system;
- analysis of research on the financing of the health care system;
- analysis of the organization of the health care system in the Republic of Moldova in order to determine the sources of financing;
- analysis of total expenses for health protection and their structure in the Republic of Moldova;
- analysis of the financing mechanism during the pandemic crisis of the health care system in the Republic of Moldova.

To carry out the work successfully, several research methods were used: analytical method (data analysis and synthesis), comparison, historical and logical method, deduction.

The informational and methodological support of the research is the legislative and normative acts of the Republic of Moldova, the data provided by the Ministry of Health, the National Medical Insurance Company, the National Bureau of Statistics, as well as the works of local and international authors, etc.

The structure of the paper is designed to cover all research objectives. It includes two chapters, conclusions, bibliography.

Chapter I "Theoretical and methodological approaches regarding the financing of the health care system" refers to the development of the concept of health care and the concept of health capital. The analytical retrospective of the research on the financing of the health care system was carried out and the research of the organization of the health care system in the Republic of Moldova was carried out in order to determine the sources of financing.

Chapter II "Analysis of the impact of the pandemic crisis on the financing mechanism of the health care system in the Republic of Moldova" analyzes the total expenses for health care and their structure in the Republic of Moldova. We also analyze the financing mechanism during the pandemic crisis of the health care system in the Republic of Moldova.

The paper ends with the presentation of the conclusions. In the Conclusions, the main conclusions related to the conducted research are presented.

Theoretical and methodological approaches regarding the financing of the health care system

Development of the concept of the health protection system in order to capitalize on the health capital

When we talk about health, we actually mean health services. The other side of the health coin - prevention - is at the bottom of the list in most agendas (ŞNSPM, 2006). In general, health is not valued until the moment it is affected and a disease occurs, such as the COVID-19 pandemic that affected the whole world and at the same time opened the eyes of all public authorities how important health is for capitalizing and economic growth of a country.

We are going through a period in which we are faced with the increase in the costs of medical services and the increase in the impact of diseases on the entire population of the country. Although the slogan "prevention is cheaper than cure" may seem old-fashioned, we believe it is truer than ever. It is necessary to do health education and to promote health in the Republic of Moldova in accordance with international standards, especially of the European Union.

Health represents one of the sectors of major importance in the life of any society. Its importance is justified by the indispensable nature of the services it produces, the volume of resources it uses, the number of people it serves and the numerous links it creates with other fields of activity (Ețco, 2000).

The health of the population is a basic element in the harmonious development of the state and a key element of economic security, being in direct correlation with the state of the national economy and the political stability of society. Health is not only one of the basic human rights, but also a success of the welfare state, a necessary condition for the progress of modern society (Oprunenco, Popa, 2011).

Health care is a public service with special characteristics. First of all, the necessity of access to health protection for all individuals is known. Secondly, the probability of the risks and their magnitude, the multiple collective effects, with negative influences such as epidemics and pandemics or positive influences such as the prevention of diseases through vaccinations, must be taken into account.

The health care sector is also indispensable for the economic development of the state, contributing to the development of the medicine and medical equipment industry, offering a large number of jobs in the health field.

Thus, health protection is not only a medical assistance problem, but also a problem with a deep social and economic character.

Interpreting the health of the population through the prism of the socio-economic approach is related, in general, to the development of society and, in particular, the economy. Health care and the economy are interdependent, because the health of the population is essential for the economic development of the country. Health has an impact on economic performance, and this happens both at the country level and at the individual level.

It should be emphasized that, at present, the issue is not only about reforming the health sector, but also strengthening all activities in the health sector and modernizing it as a whole. The goals of the reform are the same - preserving and strengthening the health of the population, however, the tasks to achieve this goal differ. So, if the healthcare sector needs to address quality improvement issues.

All of the above allows us to consider the health care sector as a socio-economic system of the state, where health is not an end, but a means to achieve well-being and satisfaction of physical, cultural and spiritual needs. Therefore, the health of the population consists in the health of every citizen of the society. At the same time, the health status of a certain individual is determined by several factors, but by no means all of them are able to influence the health care sector as a whole. In this context, it is necessary to look for a new conceptual approach, when the health of the population, in the broadest sense, is the only objective criterion in the development of society.

Thus, health protection - is a complex, dynamic, functional socio-economic system that society

produces and uses at any stage of its development in order to protect and promote the health of each individual and the population as a whole. Health protection acts as an integral part of the level and quality of life, playing an important role in the economic development of the country, ensuring the reproduction and quality of the labor force, for creating the basis of socio-economic growth and social progress.

In science, a variety of approaches have been formed to define the concept - the health care system. In a broad sense, the health care system is seen as an integral part of population health care. In a narrow sense, it represents the totality of healthcare actions, carried out with the aim of maintaining and improving the health status of each individual and the population as a whole.

Researcher Lisitsin Iu. defines the health care system representing the system of public, social-economic and medical processes, which ensure the protection and high level of health of the population. In this sense, through the social orientation of the state's activity, the health care system continues to occupy a fundamental place in society (Лисицин, 2010).

Under the pressure of current circumstances, the health care system begins to be applied not only in the field of social assistance, but also acquires an economic characteristic, as it is associated with such economic processes as financing, management, planning.

The health care system can be seen as the totality of organizations and institutions, scientific associations, specialists and other subjects, whose activity refers to quality assurance and control, production, sale and purchase of medicines, medical equipment, medical services, as well as the implementation disease prevention measures. Also, this activity is associated with issues regarding the organization and financing of the health care system, aimed at ensuring a high level of training of health care specialists.

Medical services are considered by economic science as a set of goods and services that consumers use for their anticipated positive impact on their health. This reasoning is the basis of what is known in economic science as the theory of human capital.

Human capital is a concept that began to be studied in economics in the 50s of the 20th century by researchers Schultz Th. and Becker G., who initiated the modern theory of human capital. Within this theory, the authors treat educational expenses and health insurance expenses as investments that result in increased labor productivity and, implicitly, lead to the economic growth of a country (Shultz, 1972; Becker, 1994).

For the first time, the components of human capital are materialized in educational capital and biological capital. Both education and health expenditures are seen as investment as well as consumption. The investment being considered to be of a continuous character, aiming at either the development or the maintenance of the capital stock (Stoican, 2012).

Educational and health expenses are treated by Shultz Th. as investments, in order to increase labor productivity, implicitly economic growth, and progress in the field of health and education is the key variable of economic development. Thus, in the opinion of Shultz Th. a source of training and improvement of human capital is health services, being a major factor in the production of human capital. Considering that, health infrastructures and services affect people's life expectancy and vitality (Shultz, 1972).

In this sense, the correlation between the expenses for health care and the life expectancy of the population is formed, which determines the importance of studying the organization of the health care system of a country.

According to the author, from an economic point of view, health capital means the expenses incurred for the protection of health with the aim of increasing labor productivity in the future and contributing to increasing the incomes of both the individual population and the country as a whole.

Health capital being a component of human capital, represents the main value of a modern society as well as a fundamental factor in the country's economic growth. The formation of health capital requires significant expenditures from both the population and the state.

In this context, health capital represents the investments made in health that contribute to the reduction of illnesses and mortality, prolonging the working capacity of the individual and thus influencing the increase in the duration of the operation of the human capital.

One of the main indicators of the economic and social development of modern society is the level and quality of health services offered to the country's population. No branch of the economy, including health care, can normally exist and develop in conditions of insufficient financing of the health care system.

In the author's opinion, the health care system is the functional set of interdependent components considering the production and development of resources, organization of resources, financing, management of medical services and finally the provision of services, which determines the health status of individuals and the country's population with the purpose of capitalizing on health capital.

So, in the author's opinion, the connection between health capital and the health care financing system is a vital one, a fact that argues for their approach in the complex.

At the current stage, the socio-economic development of the country suggests an increase in the role of health capital, being the main factor of economic development, which implies the adaptation to specific requirements of the health care field, including increasing the satisfaction of the population with quality medical services.

Analytical retrospective of health care financing research

At the current stage, the need to research the financing of the health care system is motivated by the fact that the Republic of Moldova needs to increase the efficiency of the health care system from the perspective of attracting additional financial resources.

The peculiarity of research in the field of health care consists in the combined nature of financial relations and, as a consequence, financial resources. In this context, we consider it relevant to establish our opinion on the concept of financial resources of the health care system.

The financial resources of the health care system represent the totality of the monetary resources generated from the state budget, extrabudgetary funds, mandatory health insurance funds, voluntary contributions, used to strengthen the health of the population, as well as the development of the public

and private health system.

Șișkin S. mentions that, "the concept of the health care financing system is used to characterize the health care systems, taken into account from an economic point of view (budgetary, medical social insurance, private). The financing system includes individuals and organizations, associated through monetary relations with reference to healthcare" (Шишкин, 2003).

In this sense, we believe that the definition of the health financing system only from the point of view of the forms of resource allocation does not reveal all the elements and relations regarding the financing of the health protection system. The concept being used in a narrow sense, only as a totality of state financial institutions operating within the health care sector, which, in our opinion, is not quite complete.

In the author's opinion, there are a number of premises that underlie the discovery of the essence and content of the financing of the health care system:

- the purpose and objective of the financing refers to the increase in the quality of the health capital and the provision of medical services accessible to the population;
- all financial relationships;
- diversity of funding sources;
- participants who contribute to the formation, distribution and use of financial funds.

The local economists Hîncu R., Secrieru A. conceptually analyzed the sources of financing measures related to health protection, identifying the most important ones, such as: funds allocated from the budget (central or local); health insurance contributions; population resources and foreign aid. In the same way, the economic efficiency of the health protection activity was specified by reducing the period of incapacity for work due to illnesses, limiting the spread of diseases. Improving and maintaining health has the effect of increasing average life expectancy, increasing work capacity, saving important financial funds and finally, increasing national income (Hîncu, 2004; Secrieru, 2004).

Economist Stratulat O. conducted research on the concept of public spending on health, level indicators, structure and dynamics, as well as the efficiency of public spending on health. And regarding the financing of public expenditures for health, he specified that the volume of financial resources for health is influenced on the one hand by the needs of the population, and on the other hand by the economic possibilities of the state (Stratulat, 2001).

Tintiuc D. mentions the sources of financing the health system by identifying the budget financial means and the extra-budgetary financial means, the health system budget and the mandatory medical insurance funds being specified (Tintiuc, 2007). In the opinion of the author, this approach does not correspond to the reality of the market economy. Because, at the current stage, an increasingly important role in the financial assurance of the health care system belongs to private funding sources, as a complement to public funding sources.

That is why, for a clearer understanding of the mechanism of formation and use of financial resources of the health care system, it is necessary to search in detail the basic concepts regarding the financial mechanism of the health care system.

In the socio-cultural and economic context, health protection occupies a special place, because it reflects the relations, beliefs and obligations of the authorities towards society. That is why each state tends to develop its national health policy and strategy for the optimal use of financial resources based on cultural, social and economic premises.

The mandatory health care insurance model applied in the Republic of Moldova operates on the basis of mixed sources of financing consisting of:

- 1) insurance premiums paid by employers and employees;
- 2) amounts paid by natural persons not employed in the labor field;
- 3) transfers from the state budget for the categories of persons insured by the Government;
- 4) and other sources (Soltan, Moşneaga, 2010).

Every year the role of employees becomes more and more important in the financing mechanism of the health care system and in the following years it has the possibility to exceed the sources allocated from the state budget according to the volume of receipts to the mandatory medical assistance insurance fund. The effect of partial replacement of funds from the budget with other new financial sources is typical for a financial reform in the field of health care with a favorable action on its functionality (Soltan, Moşneaga, 2010).

The expert of the World Health Organization Kutzin Joseph characterized the financial reforms of the healthcare system in the Republic of Moldova as a "model - example" for countries in transition, highlighting the following results obtained within this reform:

- compared to 5 other CIS countries, in which the mandatory health care insurance was applied, in the Republic of Moldova, an adequate level of funding of the health care system was maintained;
- the presence of an effective approach to financial protection through the accumulation of financial resources both from the state budget and from the contributions of employers and employees, and natural persons (Soltan, Moşneaga, 2010).

Based on the National Human Development Report of the Republic of Moldova, it was mentioned that the transition processes have weakened the capacity of the health care system, negatively affecting its quality and accessibility. The consequences of the economic crisis of the 1990s led both to the reduction of the budget financing of state medical institutions and to the reduction of access to medical services. With the implementation of mandatory health care insurance and the application of the expenditure optimization mechanism, the financial situation of the health care system improved. However, there are also some failures such as the reduced coverage and limited services offered through the medical insurance system that reduce the access of vulnerable groups and individuals to quality health services (Vaculovschi, Vremeş, 2011).

The independent analytical center "Expert-group" carried out the investigation of the transparency and economic efficiency of the use of the funds of the national insurance company in medicine and highlighted that the introduction of mandatory health care insurance in the Republic of Moldova in 2004 allowed the revitalization of the health care system in that country period. However, medical

insurance is only one of the important elements for the efficient functioning of the health care system (Oprunenco, Popa, 2011).

According to the Health System Development Strategy for the period 2008-2017, one of the problems that needs to be solved is the financing of the health care system. Funding is one of the main factors that determine the sustainable functioning of the health system and creates favorable conditions for meeting the needs and demand of the population for quality medical services and the appropriate volume.

The general objective is to improve the financing of the health system and payment mechanisms for health services. The specific objectives are the following:

- 1) improving the financing of the health system;
- 2) improving the payment and contracting mechanisms for services;
- 3) increasing equity and transparency in the allocation of resources and financial protection of citizens (Government Decision nr.1471 of 24.12.2007).

We believe that transparency in the allocation of financial resources is very important as an objective regarding the improvement of the financing of the health care system, which will be achieved under the conditions of the development of statistics in the field of health care regarding the annual publication of indicators that analyze the level of financing of the health care sector through highlighting the role of each funding source, but also the efficient use of financial resources.

The necessary measures to achieve the objectives and expected results of improving the financing of the health system will be achieved through:

- increasing the funds of mandatory medical assistance insurance;
- ensuring state guarantees in participating in the financing of the health system;
- reviewing the participation capacities of local public administrative authorities in the development of the infrastructure of medical and sanitary institutions in the territory;
- the development of optional forms of insurance for the provision of services above the medical assistance package

In the author's opinion, increasing the funds of compulsory medical assistance insurance can be achieved by establishing financial instruments for the accumulation of financial resources, such as the vice tax applied to alcoholic beverages and tobacco.

The development of optional forms of medical insurance is indeed a necessary measure to improve the financing of the health care system in the Republic of Moldova, taking into account the severe insufficiency of financial resources in this area.

The National Health Policy represents a set of priorities and development directions in the field of health, stability through political decision, for a period of 15 years, in order to strengthen the health of the population and reduce inequities between different social groups and regions of the country (Government Decision nr.886 of 06.08.2007).

Achieving performance in the health care system is determined by the successful exercise of the 4 basic functions:

- administration;
- financing;
- generating resources;
- providing services.

One of the principles for achieving the objectives of the National Health Policy is the sustainable financing of the health care system and the generation of resources, which refer to the planning, mobilization and allocation of resources at all levels and are determined by the estimated needs for maintaining an adequate level of health, as well as for mitigating risk factors (Government Decision nr.886 of 06.08.2007).

Therefore, the development priorities of the health system in the Republic of Moldova that are outlined in the National Health Policy, the Health System Development Strategy include interventions for those areas of the health care system that are to be improved and perfected along the way.

Organization of the health care system in the Republic of Moldova in order to determine the sources of financing

One of the basic components of the health care system is its financing. The financing of the health care system refers to the accumulation of financial resources and their distribution with the aim of ensuring the provision of quality medical services for the population. The accumulation of financial resources is carried out from the point of view of the participants of the health care system in the Republic of Moldova.

The relations in the health care system are mainly carried out in monetary form (taxes, insurance premiums, compensations) as distribution and redistribution relations. The system of relationships in health care are based on the flows of financial resources used within specialized financial mechanisms.

The financial resources intended for health care are collected from several sources: general direct and indirect taxes accumulated in the state budget; local taxes accrued to the budget of local public authorities; the contributions of employees and employers, the contributions of people with free practice accumulated to the mandatory health care insurance funds, direct payments paid by patients for the use of medical services, optional medical insurances (Figure 1.).

The distribution of public financial resources is carried out through the participation of the intermediary National Medical Insurance Company (NMIC), and the private ones are carried out through insurance companies or through direct payments of the beneficiaries of medical services. Finally, the financial resources are used by the providers of medical services, which are public and private medical and sanitary institutions based on the contracts concluded with NMIC or insurance companies (Figure 1.).

The health care system in the Republic of Moldova is a system based on mandatory medical insurance, according to the insured's ability to pay, in which there are, however, other possibilities

for paying for medical services, apart from settlements between medical service providers and the public insurer, such as: optional medical insurance and direct consumer payments shown in Figure 1.

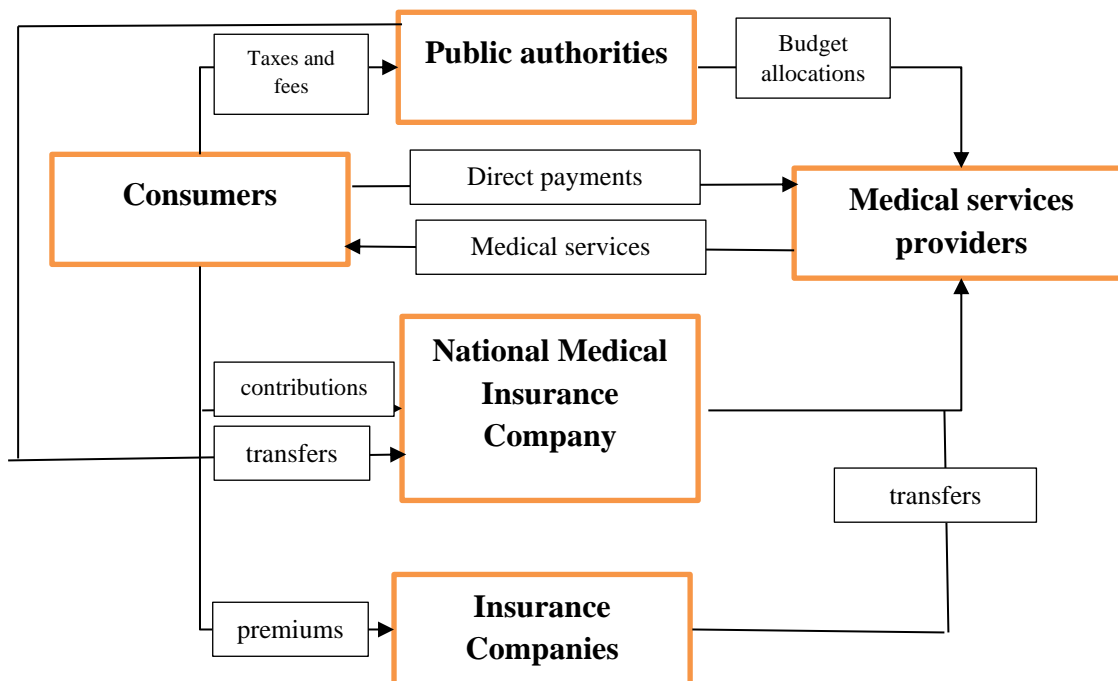


Figure 1 The health care system in the Republic of Moldova at the current stage

Source: Developed by the author according to source (Copăceanu, 2015).

The main participants of the health care system are:

1. consumers of medical services represent persons insured through mandatory medical insurance or optional medical insurance and uninsured persons;
2. medical service providers represented by public or private institutional providers (hospitals, family doctor centers, diagnostic centers, offices, etc.) and independent providers that provide health services such as professionals;
3. public authorities that are represented by the central administration (Government, Ministry of Health, Ministry of Finance) and local administration;
4. the national medical insurance company organizes, conducts and directs the process of mandatory medical assistance insurance by forming financial funds intended to cover expenses;
5. insurance companies act as insurers in the organization of optional medical insurance.

Characteristic for the local health system is the extension of the involvement of the state through the

existence of a public institution with the role of insurer. The advantage lies in the high level of risk distribution and coverage. But despite all this, the insufficiency of the financing of the domestic health care system is felt. That is why we appreciate the need for a conceptual approach regarding the typology of sources of financing the health care system existing at the current stage in the Republic of Moldova with the aim of elucidating certain new ways of financing that would improve the financial assurance of the domestic health care system.

The development of the research methodology of the funding sources of the health care system will be carried out following the specifics of the financing and operation of the health care system in the Republic of Moldova organized predominantly on the basis of the mandatory medical insurance model.

The main participants contributing to the financing of the health care system are:

1. The central and local public administrations that carry out the financing of medical institutions from the respective budgets (the state budget, the budgets of territorial administrative units) and cover the expenses for the persons insured by the state in the system of compulsory medical assistance insurance.

2. Employers (organizations from different sectors and forms of ownership) achieve financing through:

- the contributions of the mandatory medical assistance insurance for employees;
- voluntary medical insurance premiums for employees;
- payments for medical services provided by medical institutions to employees.

3. Consumers or beneficiaries participate in financing through

- mandatory medical assistance insurance contributions as a percentage or fixed amount;
- direct payments for medical services provided by medical and sanitary institutions;
- optional medical insurance premiums.

In the mandatory healthcare insurance system, consumers are divided into employed and unemployed persons, which determines specific peculiarities regarding the financing of the system. Mandatory medical assistance insurance for categories of unemployed persons is carried out from the state budget. And for those who are not included in the list, the insurance is carried out individually by procuring the mandatory medical assistance insurance policy. The volume of services provided under the mandatory health care insurance can be extended under the terms of the optional health insurance or through direct payments to the health care provider for the services provided (Law nr.1585-XIII of 27.02.1998). Voluntary health insurance participates in the financing of the health care system only theoretically. In this context, direct payments constitute the financial burden of consumers of medical services.

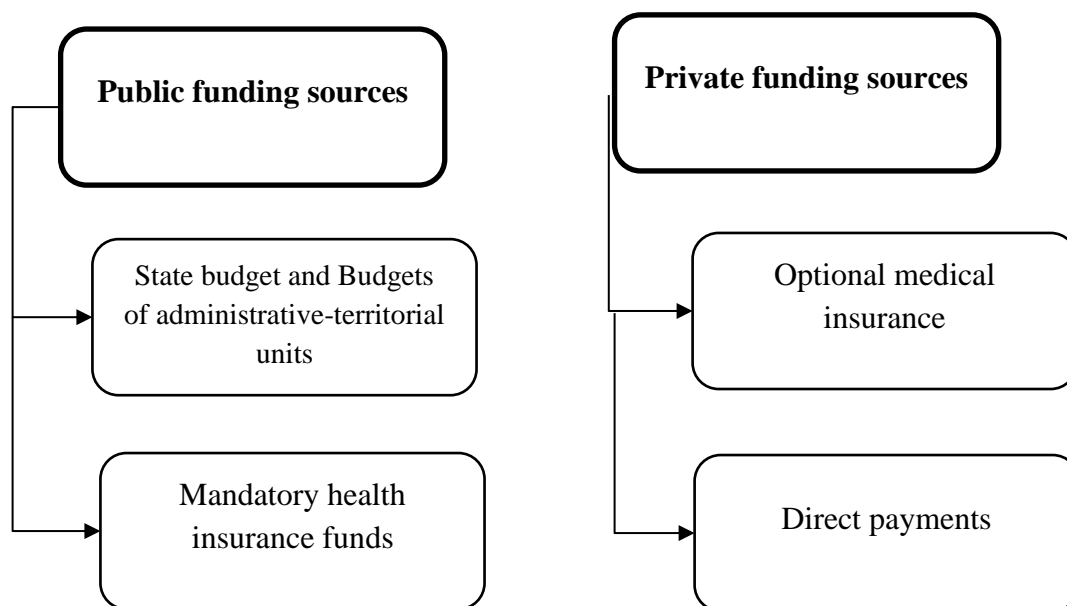


Figure 2 The sources of financing the health care system in the Republic of Moldova

Source: Developed by the author according to source (Copăceanu, 2015).

Based on the previously reported information, we proposed to identify the sources of financing the health care system presented in Annex 1 - The sources of financing the health care system in the Republic of Moldova at the current stage, being determined by the author sources of financing, participants in the formation of funds, payers of medical services and providers of medical services of the domestic health care system.

In the author's opinion, the financing of the health care system is based on the public and private sources of financing presented in Figure 2.

Mandatory healthcare insurance funds are intended to cover the costs of treating conditions conditioned by the occurrence of the insured events (Law nr.1585-XIII of 27.02.1998). Mandatory health care insurance funds are created in the order established by state regulations from the employer's payroll fund and by paying mandatory health care insurance premiums either by percentage contribution from salary and other rewards or representing a fixed amount. The size of the premiums is established annually in the law on compulsory health care insurance funds.

The financial sources of optional medical insurance are formed by the payment of insurance premiums by employers who insure their employees and the payment of insurance premiums by natural persons who insure themselves individually with insurance companies, being the consumers of medical services.

Direct payments are paid by consumers of medical services following the provision of services by medical and sanitary institutions. At the same time, direct payments can be paid by employers to medical institutions for the provision of medical services to employees.

In the Republic of Moldova, the sources of financing the health care system are not clearly identified.

In the author's opinion, the sources of financing the health care system can be grouped according to

the following classification criteria:

- According to the affiliation of the financial funds, they are: -Public financing sources, which include the financial sources of the central public administrations and local public administrations, the financial sources of the mandatory medical assistance insurances; - Private funding sources, which include financial sources of voluntary health insurance, direct patient payments, as well as health savings accounts.
- According to the type of insurance, the following can be identified: - Funding sources formed through insurance, which refer to mandatory and optional medical insurance; - Non-insurance funding sources, which characterize the financial sources of central public administrations and local public administrations, direct payments by patients.
- According to the origin of the financing sources: - Internal financing sources consisting of financial sources within the country; - External funding sources consisting of financial sources from other countries or organizations in the field of health care, in the form of donations, aid.

Based on the typology of the funding sources of the health care system, statistical information can be developed in the field of health that would highlight the origin of the financial sources and the expenses incurred in the field of health care.

Following the analysis of the characteristics of the main sources of financing of the national health care system, the research methodology of the financing of the health care system was developed, which allows the determination of the correlation between the financial relations and the financial funds (public and private) carried out between the participants in the financing of the health care system of health with the purpose of the need to develop the financial mechanism of health care.

In our opinion, the financing of the health care system refers to the accumulation of financial resources and their distribution with the aim of ensuring the provision of quality medical services for the population. The accumulation of financial resources is carried out based on the analysis of the funding sources of the health care system in the Republic of Moldova.

The distribution of financial resources from public sources is carried out through the participation of the intermediary National Medical Insurance Company, and from private sources the distribution is carried out through insurance companies.

Analysis of the impact of the pandemic crisis on the financing mechanism of the health care system in the Republic of Moldova

Analysis of the health care expenditures

Health care is one of the basic services of a society. The level of spending on health, like that on education, can be considered a reasonable indicator of the degree of development of a nation. Most countries with advanced economies allocate important resources to finance the health sector as a prerequisite for the healthiest possible generations and long-term sustainable development.

Taking into account the latest events faced by the population of the entire world, namely the pandemic caused by COVID-19, as a result of which the entire population of the globe suffered. All sectors of the national economy registered increases in public expenditures and decreases in budget revenues. The most affected being the health sector which registered an increase in expenses and during this

time the sources of financing in this sector also decreased, and the state being forced to resort to new urgent methods of financing this sector. This is understandable, as all state economies have used and are still using all the resources at their disposal to defeat this virus.

Next, to observe the impact of Covid-19 on health care spending, we will analyze Figure 2 and see how health care spending increased during the Covid-19 period:

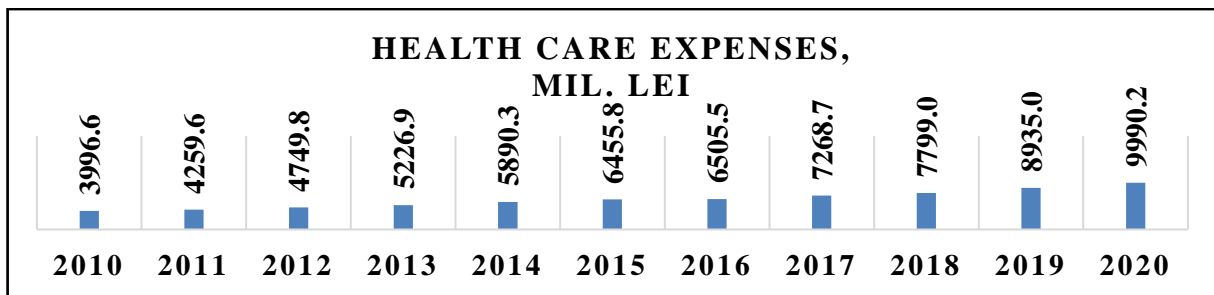


Figure 2. Evolution of expenses in the field of health care in the period 2010-2020

Source: Prepared by the author based on data from the National Bureau of Statistics.

According to Figure 2, we observe that in the period of 2010-2020 the expenses from the national public budget of the Republic of Moldova regarding health care, have maintained an upward trend, respectively they have increased from 3996.6 million lei in 2010 to 9990.2 million lei, during this period there was an increase of approximately 150%, and from year to year health care expenses increased by 6-15%.

The greatest trend of increasing expenses in the field of health care was recorded from 2018 to 2019 and 2019 to 2020, when expenses increased by 15%, compared to the previous year, it is observed that there is an increase in the financial resources from the state budget regarding health protection.

Next, in order to see what was the impact of the crisis caused by Covid-19, we will analyze what was the share of health care expenses in the total budget expenses (Figure 3).

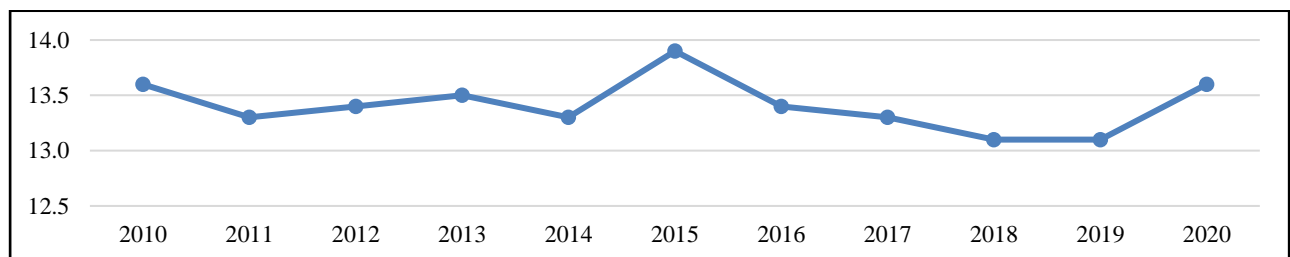


Figure 3 Evolution of the share of health care expenses in total budget expenses

Source: Prepared by the author based on data from the National Bureau of Statistics.

According to Figure 3, we observe that from 2010 to 2015 the share of health care expenses varied, their trend being unstable from year to year, but from 2015 to 2019 this trend was downward, which indicates that the state finances less and less money in this sector, but from 2019 to 2020 we observe an increase in these expenses, and this happened only because of the pandemic created by Covid-19.

In order to elucidate the specifics of the financing of the health care system in the Republic of

Moldova, we will reflect the trend of the share of health care expenses in the GDP in the period 2010-2020 (Figure 4), the years of reforming the way of financing the national health system through the creation of mandatory medical insurance funds.

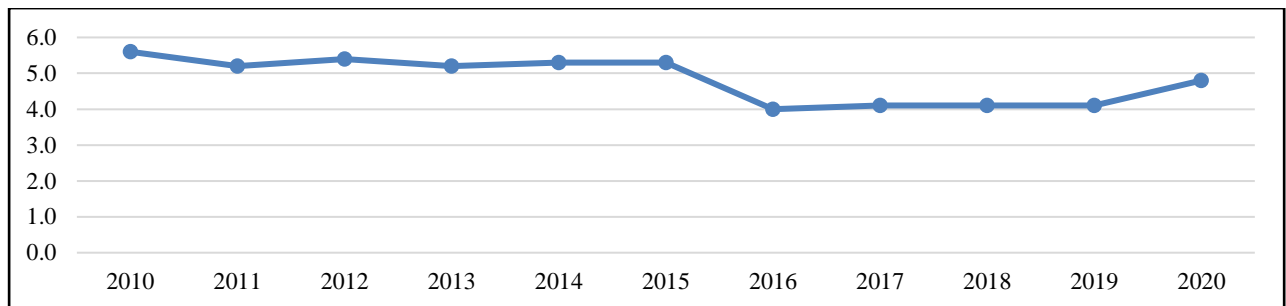


Figure 4 Evolution of the share of health care expenses in GDP

Source: Prepared by the author based on data from the National Bureau of Statistics.

The share of total health expenses in the gross domestic product reflects the possibility of financing the health system in the Republic of Moldova and shows a decrease in 2020 compared to 2010 by 0.8%. This was caused by several reasons, because in 2020 the Gross Domestic Product decreased and health care expenses increased. This was also caused by the crisis caused by the pandemic, respectively we obtained these values, being the fact given in Figure 4 is visible, from 2016 to 2019 this share was on a slightly upward trend, and from 2019 to 2020 we observe a sudden increase.

To see what changes have occurred in public health services for each individual citizen, we will perform an analysis of the evolution of health care expenditures per capita (Figure 5).

In Figure 5, we notice that in the period 2015-2020, health care expenses per capita were on an upward trend. The biggest evolution took place in 2018 to 2019, where they increased by 470 lei per person, also a considerable increase took place from 2019 to 2020, where these expenses increased by 457 lei. But this value is not a large one, because the population of the Republic of Moldova from 2015 to 2020 was on a downward trend, and health care expenses were on an upward trend (Figure 5).

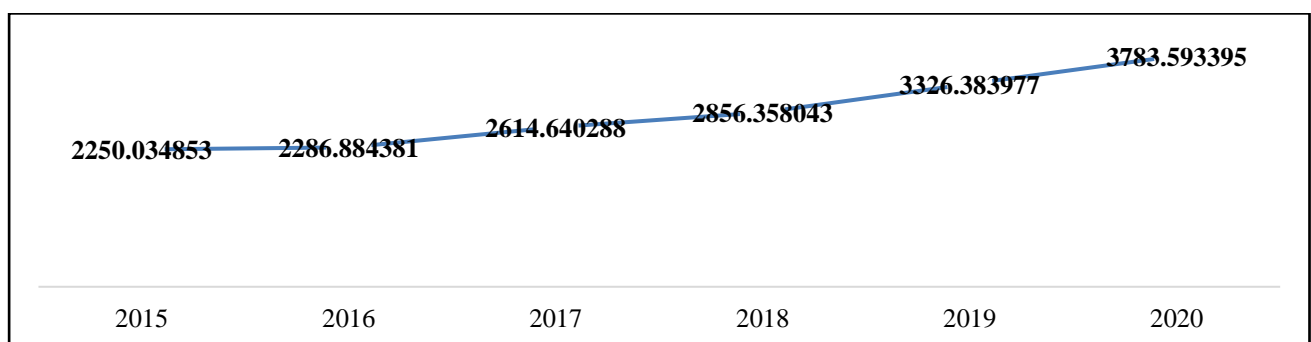


Figure 5. Evolution of public expenditures for health care per capita in the Republic of Moldova in the period 2015-2020

Source: Prepared by the author based on data from the National Bureau of Statistics.

The implementation of mandatory health insurance in the Republic of Moldova in 2004 established a new relationship between providers, financiers and consumers of medical services. Thus, the roles

of medical service providers/medical institutions and their financiers were delimited through the establishment of the National Medical Insurance Company, an institution called to assess and insure the risk of disease. The financial instrument for the accumulation and distribution of disease risk insurance resources, managed by the National Medical Insurance Company, are the mandatory medical assistance insurance funds, drawn up annually and approved by law by the Parliament of the Republic of Moldova (Cebotari, 2010).

Accumulations to the mandatory medical assistance insurance funds are provided from the following sources:

- transfers from the state budget;
- mandatory medical assistance insurance premiums, in percentage size, paid by employers and employees;
- mandatory medical assistance insurance premiums in a fixed amount paid by natural persons with permanent residence in the Republic of Moldova;
- compulsory medical assistance insurance premiums paid by foreign citizens and stateless persons without a stable domicile in the Republic of Moldova;
- other sources of revenues (Cobzari, *et al.* 2015).

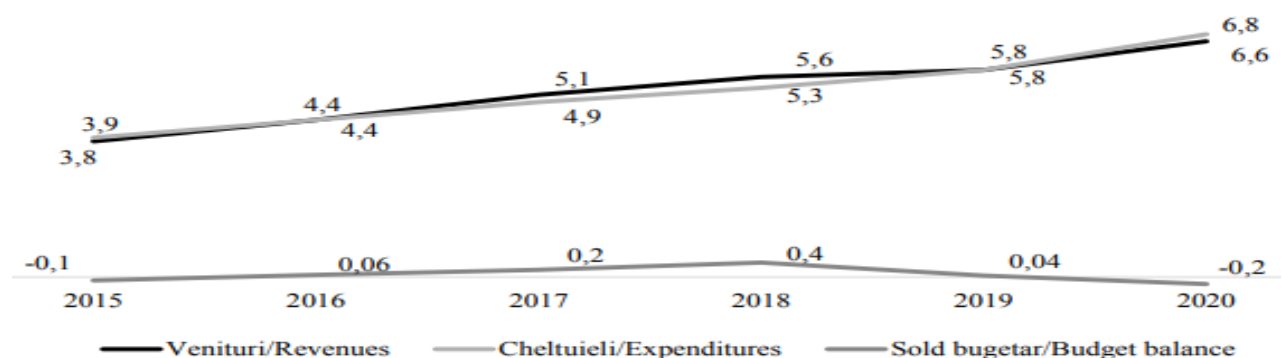


Figure 6. Evolution of the execution of the Mandatory Health Insurance Funds for the period 2015-2020, as of November 1, billion lei

Source: (ADEPT, 2020).

The allocation of means from the emergency funds is carried out based on Government Decisions, within the limits provided in the state budget for the respective funds and only through the central and local public authorities, corresponding to the area of competence. As applicants for means from the Government's emergency funds, both central and local public authorities, as well as budgetary institutions and non-commercial organizations can be. The evolution of MHIF execution in the period 2015-2020, as of November 1, which we present in Figure 6, shows that the budget deficit increased by 0.1 billion lei. Therefore, the volume of expenses exceeded the volume of revenues by 0.2 billion lei, as of November 1, 2020. At the same time, we mention that, in the reference period, both revenues and expenses increased approximately 1.7 times

Following the analysis, it was found that 2020 was affected by the crisis created by the Covid-19 pandemic. This is clearly seen in the previous figures, with the state making major efforts to combat, or rather to alleviate, the negative effects that have befallen the country. The government allocating large sums of money to combat it, because the negative effects occurred in all sectors of the national

economy, but the greatest damages, both financial and social, occurred in the field of health care, where dozens of people die daily they lost the fight against this virus (Petroia, Zubcova, 2020).

The financing mechanism of the health care system in the Republic of Moldova in the era of COVID-19

Preserving health and fighting disease are among the oldest concerns of man. Although the concern for health is as old as the human condition, nowadays we find that, more often than not, health becomes important to us only when it is lacking.

The coronavirus pandemic is the defining global health crisis of our time and one of the greatest challenges since World War II. The healthcare system in the Republic of Moldova, like that in most countries of the world, was not fully prepared to face the pandemic, being underfunded and understaffed, affected by the lack of clear protocols for the circumstances in question, insufficient technical and professional capacities, outdated infrastructure, limited medical equipment and supplies, poor logistics, fragile communication and trust.

In addition to the acute burden that COVID-19 is placing on the health system, many population groups are experiencing a lack of access to essential, routine health services due to the disruptive effects of restrictions, physical distancing and mobility limitations imposed in response to COVID-19.

COVID-19 is an infectious disease caused by the SARS-CoV-2 coronavirus, reported for the first time worldwide in December 2019, and in the Republic of Moldova on March 7, 2020 (Figure 7). Moldova faced a single wave of the pandemic, characterized by a steady increase in the number of infections, which ended with the start of vaccination against COVID-19 in March 2021 and the administration of the second dose of the vaccine.

The authorities of the Republic of Moldova reported on the spread of the virus at the end of January, after which the epidemiological situation of infection with the new type of coronavirus was examined by the Extraordinary National Public Health Commission (CNESP) on February 2, 2020. Depending on the degree of risk for public health, the Commission successively instituted from February 24 to March 13 alert level yellow, orange and red. The last one was assigned after 6 cases of COVID-19 had been confirmed in the Republic of Moldova, and the World Health Organization announced on March 11 the phase of pandemic transmission of the virus.

The main measures approved by the Commission concerned the suspension of the educational process, the suspension of regular air transport with the areas affected by the COVID-19 pandemic, the interruption of the activity of leisure, training and recreation institutions and religious gatherings. The increase in the number of cases of infection with the new coronavirus led CNESP to extend on March 15 the number of preventive measures by suspending international passenger rail transport and temporarily stopping commercial activity, with the exception of grocery stores, pharmacies and gas stations (alegeri.md).

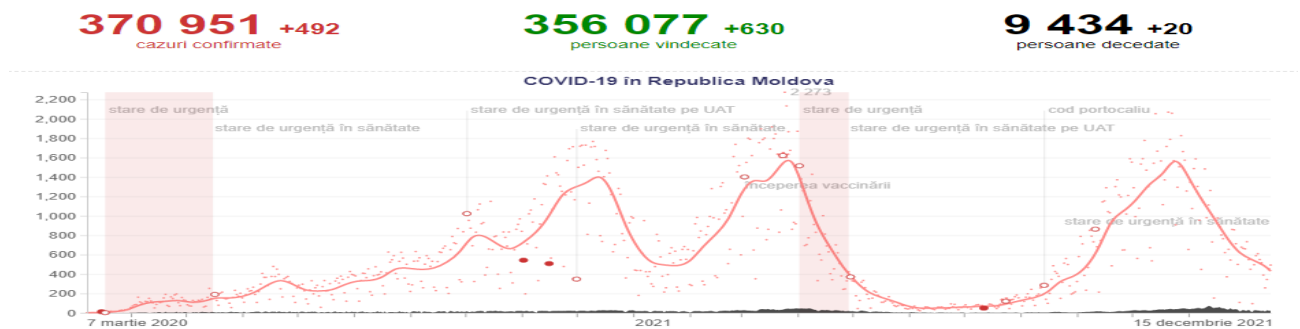


Figure 7. The situation of the COVID-19 pandemic in the Republic of Moldova during the period of March 7, 2020 - December 15, 2021

Source: (alegeri.md).

The dynamic of confirmed cases of COVID-19 was constantly rising during the state of emergency. From the beginning of the COVID period inclusively until December 15, 2021, more than 370,950 cases were confirmed in the Republic of Moldova, of which 356,077 people were vaccinated and 9,434 people died (Figure 7).

Vaccination is a method of prophylactic immunization against serious diseases, by inoculating a vaccine. The vaccination process against COVID-19 started in the Republic of Moldova on March 2, 2021 with the AstraZeneca serum and is being carried out in three stages, taking into account different population groups and the availability of vaccines.

The first stage targeted medical staff and people from foster care centers, the second – adults over 60, people with comorbidities, teachers and law enforcement employees. The third phase, fully launched on May 19, 2021, includes the general population. The initiation of the vaccination process and immunization with the second dose of the vaccine led to a sudden decrease in the number of infections with COVID-19 (Figure 8).

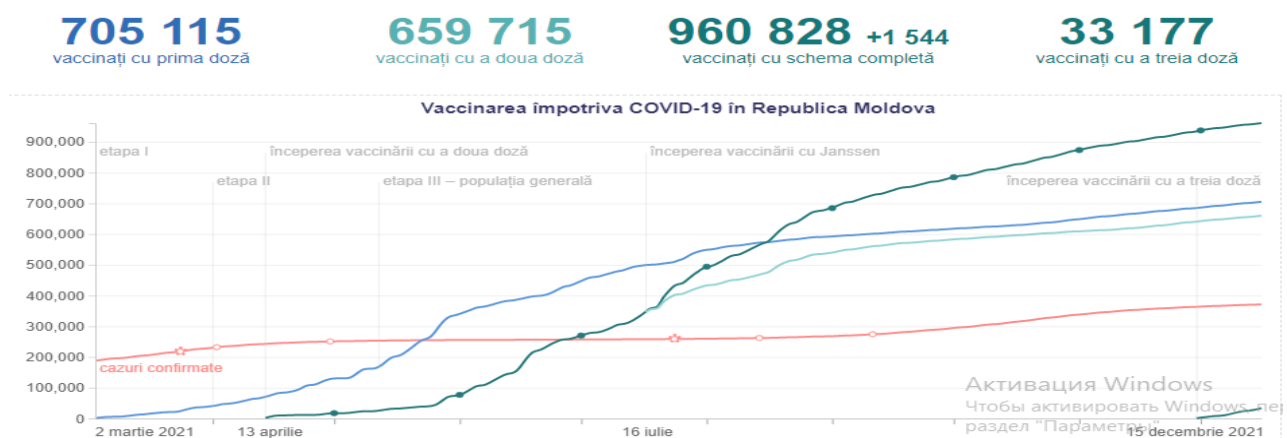


Figure 8. Vaccination against COVID-19 in the Republic of Moldova during the period of March 2, 2021 - December 15, 2021

Source: (alegeri.md).

Following the analysis of the figure mentioned above, we find that the number of people vaccinated

with the complete vaccine schedule in the Republic of Moldova is over 960,800 people, and 705,115 people are vaccinated with the first dose, 659,715 vaccinated with the second dose and 33,177 people vaccinated with the third dose.

A pandemic is a multilateral threat. In addition to the obvious impact on population health, pandemics also pose an important threat to the economy. In the Republic of Moldova, the era of COVID19 has transformed the health care system into an extremely important sector. In addition to increasing spending on the necessary medical assistance and implementing all actions in a non-pandemic situation, additional resources are needed to prevent, spread and treat the coronavirus. Therefore, they include: resources for consumables, protective equipment, laboratory tests, reagents, disinfectants and the additional remuneration of personnel directly involved in the process of combating this virus. These important costs can result in a comparable impact on population health, as all economic factors are directly correlated with key health outcomes (Petroia, Zubcova, 2020).

The government reacted to the pandemic by adopting a package of fiscal budget measures. In the health care sector, additional financial means have been allocated for the procurement of the necessary medical and protective equipment. In order to financially support these measures, three amendments to the Law regarding State Budget for 2020 no.172/2019 were adopted, which reflect a more flexible framework of budgetary and fiscal measures, including to support the other components of the national public budget, such as be the local budgets, the state social insurance budget and the Mandatory Medical Insurance Fund (MMIF). Thus, the allocations of budget funds provided for a medium term 2021-2023 by Government Decision no. 776 of 28.10.2020 include the following measures to support the health care sector:

- purchase of protective equipment - 41.4 million lei, measures provided from the Government's emergency funds;
- the allocation of financial means for equipping hospitals with medical equipment/devices and reusing medical spaces – 100.0 million lei, from the loan from the Development Bank of the Council of Europe;
- the allocation of financial means for patient transport units, medical and protective equipment, other critical expenses – 422.6 million lei, from the World Bank loan account;
- the 30% increase in the salaries of medical personnel starting from September 1, 2020 – 519.5 million lei and the granting of a salary increase for pre-hospital emergency medical assistance staff trained in providing medical assistance to people who meet the criteria of the COVID-19 case definition – 65 .4 million lei (Petroia, Zubcova, 2020).

Health care financing in the era of Covid 19 was largely due to donations from other states with vaccines, as a result of the direct purchase of the Republic of Moldova or through the COVAX platform (Figure 9). The COVAX platform is a global initiative that facilitates equitable access to vaccines against COVID-19, free for 20% of the population for the 92 countries that are part of the initiative, or purchased at preferential prices.

#	Sursa	Total	AstraZeneca	Pfizer	Sinopharm	Sputnik-V	Sinovac	Janssen	Moderna
1	Achiziționare directă	502 580		402 480			100 000	100	
2	China	150 000			150 000				
3	COVAX	283 590	108 000	125 190					50 400
4	Emiratele Arabe Unite	2 000			2 000				
5	Letonia	30 000	30 000						
6	Lituania	26 500	26 500						
7	România	506 220	405 600	100 620					
8	Rusia	306 000				306 000			
9	Statele Unite ale Americii	302 400						302 400	
10	Turcia	70 000					70 000		
	Total	2 179 290	570 100	628 290	152 000	306 000	170 000	302 500	50 400

Figure 9. Providing the Republic of Moldova with a vaccine against COVID-19

Source: (alegeri.md).

The vaccination campaign against COVID-19 in the Republic of Moldova is carried out with seven types of vaccine, six of which with the administration of two doses - Vaxzevria (AstraZeneca), Comirnaty (Pfizer), Sinopharm, Gam-COVID-Vac (Sputnik-V), CoronaVac (Sinovac) and Spikevax (Moderna). The Janssen vaccine, developed by the Johnson & Johnson company, is administered in a single dose starting on July 16, 2021. From the start of the immunization process to December 5, 2021, 1,645,940 doses have been used, and the vaccination rate has reached the threshold of 28.9% (Figure 10).

Vaccination against COVID-19 is free and recommended by all national and international health institutions, being an effective method to stop the pandemic. Vaccinated persons can check and download the vaccination certificate in electronic format on the certificate-covid.gov.md platform.

#	Vaccin	Recepționat	Administrat	
1	AstraZeneca	570 100	581 610 +2 628	100,0%
2	Pfizer	628 290	371 734 +17 270	59,2%
3	Sinopharm	152 000	83 300 +1 561	54,8%
4	Sputnik-V	306 000	206 959 +2 041	67,6%
5	Sinovac	170 000	104 002 +2 393	61,2%
6	Janssen	302 500	298 285 +4 912	98,6%
7	Moderna	50 400	50 +50	0,1%
	Total	2 179 290	1 645 940 +30 855	

Figure 10. Vaccine doses received and administered in the Republic of Moldova during the period of February 27, 2021 - December 5, 2021

Source: (alegeri.md).

In this hard and difficult period for all, the Republic of Moldova, in addition to vaccine donations, received donations from 43 external financiers and 509 internal financiers of essential medical products, such as personal protective equipment, ventilators and thermometers, medicines, tests, consumables and accessories, medical devices, etc. in a total amount of 897 542 369.4 lei, of which 95% of the amount goes to external financiers and 5% to internal financiers (Figure 11).

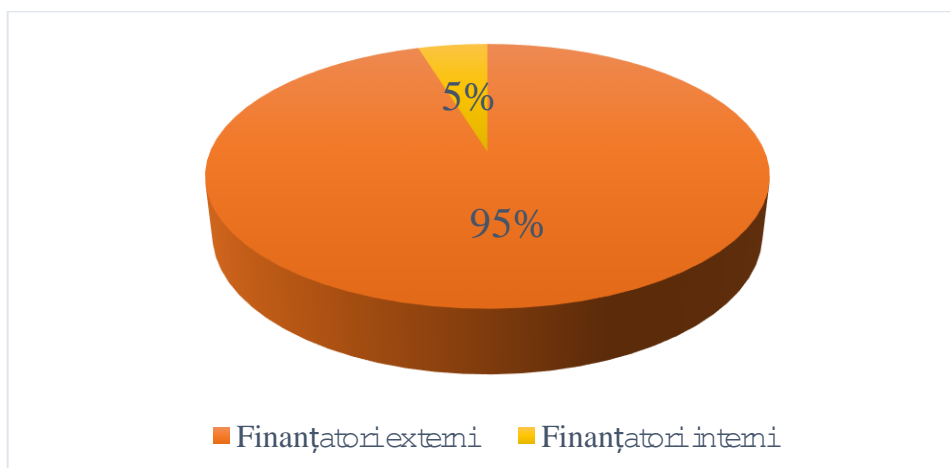


Figure 11. External and internal donations offered to the healthcare system of the Republic of Moldova in the fight against the COVID-19 infection until October 12, 2021

Source: Developed by the author based on source (Ministerul Sănătății, 2021).

The Government of Germany occupies the 1st place in the top 15 external financiers who have offered donations to the healthcare system of the Republic of Moldova in the fight against Covid-19 until October 12, 2021, followed by the Government of Romania with over 20%; United Nations Children's Fund by over 9%; European Union over 6%; Government of India with 5.93%; Government of the People's Republic of China with 5.90% etc. (Figure 12).

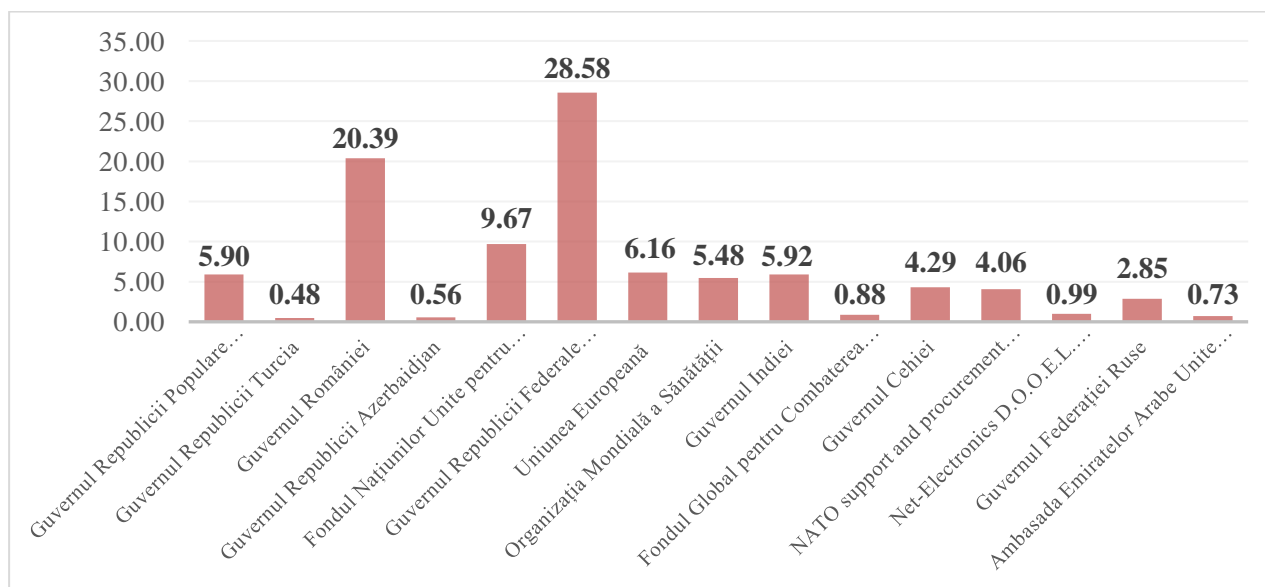


Figure 12. Top 15 external financiers who have donated to the healthcare system of the Republic of Moldova in the fight against Covid-19 until October 12, 2021

Source: Developed by the author based on source (Ministerul Sănătății, 2021).

The pandemic crisis represents a major challenge for the entire international community, which is barely accumulating the necessary experience in combating the COVID-19 infection, exchanging information and cooperating with specialized international organizations. The first lesson, learned immediately after the outbreak of the crisis, is that in a globalized world the adequate response to the pandemic challenge can only be a complex one, on different levels at the national and international

level.

In the Republic of Moldova, the prevention of the spread of the COVID-19 infection and its effects required the adequacy of the legislative framework regarding states of emergency, existing at the time of the outbreak of the pandemic, as well as an extraordinary financial and administrative effort, with a major impact on the social-economic processes on short term, as well as on citizens' incomes, without knowing the medium and long-term impact.

The crisis highlighted that the Republic of Moldova has a legal framework according to international standards for the management of various states of emergency. The organizational effort of the authorities was appreciable, but the efficiency in combating the spread of the COVID-19 infection proved to be low. The main problem in managing the crisis was the decision to limit population testing. (ADEPT, 2020).

Conclusions

Funding is one of the main factors that determine the sustainable functioning of the health system and creates favorable conditions for meeting the needs and demand of the population for medical services of adequate quality and volume. The correct and timely application of the system's financing regulatory levers allows increasing the fair access of the population to medical services, ensures the rational and efficient use of resources and favors the positive motivation of medical service providers. In the socio-cultural and economic context, health protection occupies a special place, because it reflects the relations, beliefs and obligations of the authorities towards society. That is why each state tends to develop its national health policy and strategy for the optimal use of financial resources based on cultural, social and economic premises.

Currently, the healthcare sector, both in the Republic of Moldova and throughout the world, is in a very difficult situation, because all the countries of the world are facing the new type of virus that has taken over the entire world economy. The Government of the Republic of Moldova being forced to allocate large sums of money to combat this virus. The pandemic highlighting all the negative aspects faced by the medical system in the Republic of Moldova, thus the Government had to identify new financial resources in order to combat the virus, putting the pandemic and its combat in the first place.

We are also aware of the fact that the Republic of Moldova is going through difficult times, because in addition to the fact that we are a developing state, the health care system is one that in some places slows down, but also the unconsciousness of people who do not want to respect the quarantine measures, make the fight against this virus for the Republic of Moldova seem like a movie with a tragic ending.

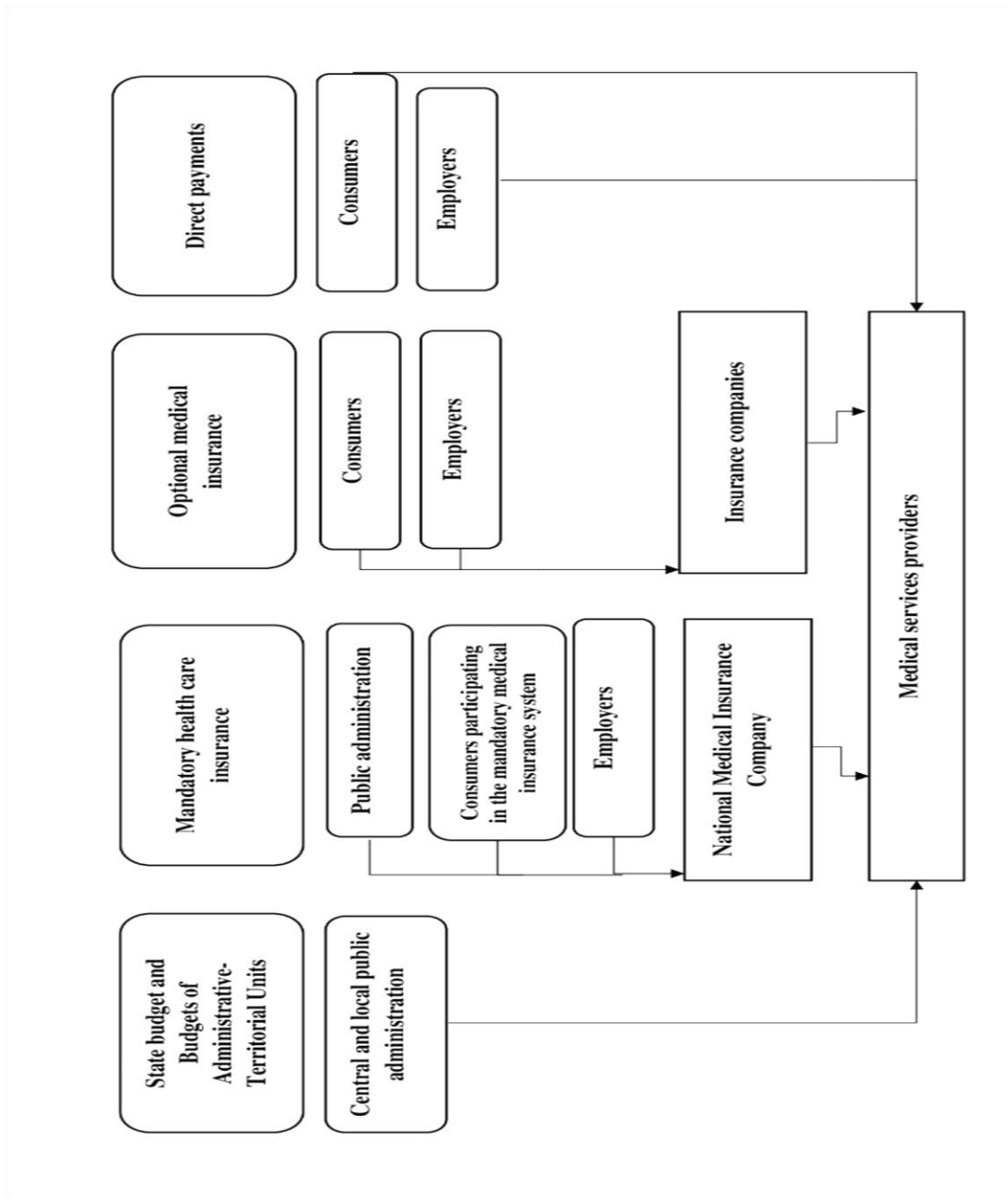
Thus, the years 2020 and 2021 become the most affected years in the last period of time, and they are the years with the highest expenditures in the field of health, both in real terms and in terms of their share in GDP.

For these reasons, in order to return to the state of well-being again, together with the state, we as citizens must also contribute to combating this virus, and not necessarily through financial sources but through emotional sources, and to comply with all the rules that we assert ourselves and fight this invisible enemy.

And as a result of fighting this virus, funding in the field of health care will also decrease, and those financial resources will be used to solve other problems at the macroeconomic level, which in time will bring us both economic and social stability.

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Annex 1 Sources of financing the health care system in the Republic of Moldova at the current stage

Source: Developed by the author according to source (Copăceanu, 2015).